WASHINGTON STATE READS:
What Nature Boy Takes to the Beach

WSU’s Legacy of Shock • A Campus Murder Mystery • Selling Gig Harbor
features

22 Book Season: Washington State Loves Its Literature
by Hannelore Sudermann
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BEST BOOKS ABOUT WASHINGTON
RAISING GOOD READERS
OUR SUMMER READING SMORGASBORD

28 Shock Physics: Power, Pressure, and People
by Hannelore Sudermann • photos by Robert Hubner
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33 Bear Bones: A Murder Mystery
by Hannelore Sudermann
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field notes: Republic of Georgia

39 In Search of the Wild Chickpea
by Fred Muehlbauer • photos by Walter Kaiser
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Professor Dave Bahr is part of a team of researchers developing a microscopic engine that converts this heat into electricity. Smaller than a dime, the P3 engine is poised to change the way laptops, cell phones, PDAs, and other portable electronic systems are powered.

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NEWS FROM YOU

ONE THING that makes university magazine editors unique is, we spend an inordinate amount of time brooding about class notes. We also think a lot about the many different purposes our magazines serve.

This issue of Washington State Magazine is being mailed to 126,400 WSU alumni. A year from now, that number will have grown by about 5,000. Because we like hearing from you and passing your news on to your fellow alumni, these numbers translate into a whopping amount of information. As a result, we need to make a few changes.

We receive information about you from a variety of sources. Some, by letter, e-mail, and notes attached to Alumni Association forms, are sent directly by the subject. You got promoted. Had a new baby. Got married. No problem. This information continues to go into Class Notes.

Other news comes to us more indirectly, through news releases, clipping services, the grape vine, and so forth. And here’s where we need to make a change. We always take note of this information, for it often gives us story ideas. However, for Class Notes, from now on we will only run information sent by the subject, his or her spouse or partner, a friend—or a news release sent by the subject’s employer. We will not be translating information from news clippings or other indirect sources to Class Notes. Otherwise, if you send us the info, we’ll run it.

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We realize that some of you still might not have online access. Of course, you can still submit your news to your local alumni association (usually via the senior editor of your association’s newsletter). But if you can submit your information online, it will help us better handle a steadily increasing amount of information from Cougars worldwide.

One more thing—this one a little more delicate. This past year, we ran approximately 200 obituaries. We realize all of these people are important and that many of them maintained close ties to their alma maters. Every time we’re asked to run an extended obituary, we have to make a judgment call. Who “deserves” that space? Well, they all do. But obviously, we don’t have that kind of room. At the risk of seeming too rigid, we’ve decided all deceased alumni will get equal mention, a short note in the “In memoriam” section. But if you have a change of address, or if you know some way we can verify it—for example, indicating the newspaper and issue in which it originally appeared. We’ll be reviewing it. Then go into a searchable database online. An edited version will also appear in the print magazine.

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Ford no longer works in the woods. As director of the nearby Forest Learning Center at Mount St. Helens, it is his job to tell the dramatic story of the forest’s stunning comeback to visitors from around the world. This May 18, as the reawakened volcano attracts new interest, Weyerhaeuser will host the “signature event” at the center to commemorate the eruption’s 25th anniversary.

From deep inside the sylvan sanctuary, it’s difficult to imagine the devastation that blew across this forest and killed 57 people on May 18, 1980. If Mount St. Helens had remained cooked for 24 more hours, the blast would have killed hundreds more workers on private timberlands outside of a restricted “red zone.” One of those casualties of a delayed eruption might have been Ford himself.

On the morning of May 19, 1980, he was scheduled to burn logging slash to prepare a clear-cut for replanting. That site was within the blast zone, the 150,000-acre company area where the overwhelming force and searing heat of the eruption killed every tree.

Instead, the mountain blew the day before, at 8:32 a.m. on a placid Sunday. That morning Ford was digging razor clams from the surf near Long Beach when his wife heard the news on their car radio. Driving back toward Longview, Ford caught his first glimpse of the massive plume of ash while rounding a bend along the Columbia River.

Just 30 days after the eruption, Ford and three coworkers planted the first tree seedlings in the blast zone to see how they would fare. This winter the first truckloads of logs rolled off the devastated slopes to become lumber—and Ford has settled into his new job as director of the Forest Learning Center.

Many people, including prominent scientists, doubted the scarred land would ever generate another two-by-four. Ford helped prove them wrong.

In 1980, he was forester for Weyerhaeuser’s large Camp Baker district, which included the 68,000-acre company area owned inside the blast zone. The district is part of the massive St. Helens Tree Farm, which the company has owned for more than a century.

Ford managed “a scale [of reforestation] that we had not done on the Douglas and noble firs native to the Cascade Mountain slopes. Planters started at the fringes of the blast zone, where the ash was only two inches deep, compared to the two-foot drifts closer to the crater. Today, the dynamic forest soils have swelled up the ash. The logging of those replanted forests that started this year inside the blast zone is known as commercial thinning, which provides valuable lumber and pulp while pruning the remaining 160 trees per acre to become top-grade timber within 15 years. Forestry has changed nearly as much as the Mount St. Helens landscape in the 33 years since Ford graduated from Washington State University and returned home to work in rainy southwest Washington.

“You didn’t see anything like this in the woods in the ’70s and ’80s,” Ford says, watching a modern harvester machine buzz a standing tree into two cut-to-order logs in less than 30 seconds while barely leaving a tire track on the soil. “This is a perfect, perfect time to be a forester.”

Besides new technology, says Ford, Weyerhaeuser adheres to tougher environmental laws, certifies all of its operations for sustainable forestry practices, and mandates stricter safety rules that have made the profession less treacherous.

Back in the ’60s, Ford went to WSU on scholarship to wrestle, a solitary sport that took him to the 1969 nationals. He still officiates high-school matches in his spare time. He went into the similarly solitary field of forestry, because aptitude tests suggested he was most at home in the woods.

So at first there seems a bit of irony in his current position as founding director of the 10-year-old Forest Learning Center, which Weyerhaeuser operates in a partnership with the Washington State Department of Transportation and the Rocky Mountain Elk Foundation.

“I chose the field to be out in the trees and away from people,” Ford says, pulling into the center with a commanding view of Mount St. Helens. “Now what do I do? I manage a center that gets 250,000 visitors a year.”

“There’s nobody with the history of the area like mine,” he says. “You eventually reach a point where you want to tell people about it.”

—Eric Apalategui

University buys ADAMS MALL

Washington State University recently bought the two-story brick building for $1.5 million and has retained Corporate Pointe Developers to redesign the site and manage it for the next 30 years.

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University buys Adams Mall

Washington State University recently bought the two-story brick building for $1.5 million and has retained Corporate Pointe Developers to redesign the site and manage it for the next 30 years. "It's part of the College Hill revitalization project," says, pushing into the center with a commanding view of Mount St. Helens. "Now what do I do? I manage a center that gets 250,000 visitors a year."

In 1909 it opened as a schoolhouse and became the center of the College Hill community. In the '90s it was made into a shopping center for retail and restaurants and a hot night spot at the heart of the Greek system. And this summer, Adams Mall will go through another transformation.

Just 30 days after the 1980 Mount St. Helens eruption, Dick Ford and three coworkers planted the first tree seedlings in the blast zone to see how they would fare. This winter the first truckloads of logs rolled off the devastated slopes to become lumber—and Ford has settled into his new job as director of the Forest Learning Center.
saying that from a technology standpoint is very difficult."

Since fewer asparagus spears are destined for canning this spring, more are available fresh. Now is the time to look for the Washington asparagus in markets and grocery stores. Our season started in April and should last through June, says Bouchey.

The Larousse Gastronomique advises selecting asparagus with stems that are firm and uniformly colored. It may be stored in the refrigerator for a day or two, and is best kept upright in a dish with about an inch of water. Also look for it to be uniform in size. "It’s kind of an old wives’ tale that the larger, plumper spears are tougher than the slender spears," says Bouchey.

"That’s not true. The problem is they’re hard to cook at the same time."

—Hannelore Sudermann

This artist’s conception shows Titan’s surface with Saturn appearing in the background through Titan’s thick atmosphere of mostly nitrogen and methane. The Cassini spacecraf t flies overhead with its high-gain antenna pointed at the Huygens probe as it nears the surface. Artistic license has been used to exaggerate the size of the orbiter, the sharpness of the icy features, the lift of Saturn’s rings, and the visibility of the planet through Titan’s atmosphere.

ILLUSTRATION BY CRAIG ATTEBERY, COURTESY NASA/JPL-CALTECH.

...ends well

For another month now, workers have been cutting over Bouchey’s fields, bending and bobbing as they hand pick asparagus shoots. Bouchey’s fresh crop goes to grocery wholesalers, and he urges readers to ask their retailers to stock more fresh Washington asparagus. Though most of his crop is headed to major stores, some stays home. “I love it,” he says. “My new favorite way is grilled at the barbecue.”
T O P P E N S I E R - A R E A F A R M E R Kevin Bouchey has an affinity for asparagus, which his family has been growing since 1979. “It’s a funny crop,” says Bouchey, who also farms wheat and potatoes. “In a given farm year, you usually grow a plant and then harvest the crop later. Asparagus is kind of back and forth. But it’s a fun crop to raise.”

Asparagus is harvested in the spring, when its first shoots come through the earth, long before the plant has the benefit of maturing. Asparagus officially comes from the lily family, along with leeks, garlic, and onions. It was first cultivated 2,500 years ago, and through out history has been considered a delicacy. Today, it is the quintessential Northwest vegetable, usually served on a plate with a pink wedge of salmon.

Asparagus is native to Europe, North Africa, and parts of Asia. Though now a staple of French cuisine, asparagus wasn’t grown in France before the 17th century, when King Louis XIV developed a taste for it. In England, for a time, the spout was called “sparrow grass” a name that has lingered on increasing the vegetable’s shelf life and developing methods to mechanically harvest and pack the crop. Asparagus is the only local crop that has to be harvested entirely by hand.

“When in season, I do everything I can around it,” he says. “It has such a subtle flavor profile, it matches really well with a lot of other regional ingredients.” Sometimes he marinates the spears in a vinaigrette and serves them grilled alongside halibut or salmon, other times he purées them in a hazelnut cream soup. “I haven’t done it up in a dessert yet, but who knows.” He also uses it as a foil for rich dishes like his Cougar Gold scallop tart. “That’s not true. The problem is slender spears,” says Bouchey. “It’s kind of an old wives’ tale that the larger, plumper spears are tougher than the slender spears,” says Bouchey. “That’s not true. The problem is they’re hard to cook at the same time.”

For a number of months now, workers have been culling over Bouchey’s fields, bending and bobbing as they hand pick asparagus shoots. Bouchey’s fresh crop goes to grocery wholesalers, and he urges readers to ask their retailers to stock a better variety of asparagus. Though most of his crop is headed to major stores, some stays home. “I love it,” he says. “My new favorite way is grilled at the barbecue.”

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PANORAMAS

FOOD AND FORAGE

Asparagus is in! The best time to find fresh Washington asparagus is at market from April through June. Most days, University of Idaho professor of engineering Dave Atkinson (BS, ’89, PhD, ’98) sits quietly in front of a computer screen. The astrophysics expert, who as a kid loved learning about outer space, is thoughtful and soft spoken. Looking in his nonscripted office stacked with science papers and textbooks, you wouldn’t think that for a few hours last winter, he was at the center of an interplanetary drama.

For 18 years, Atkinson has been quietly concocting an experiment to measure the winds on Titan, one of Saturn’s moons. And last winter he had one in-a-lifetime shot at putting his painstakingly crafted project to use.

To those who may wonder why one might want to measure the weather on Titan when we can’t even get it right here on earth, Atkinson says, “Exactly!” Studying Titan is like getting to know one of Earth’s long-lost siblings, says Atkinson. Nearby planets and moons are valuable laboratories for learning about our own planet, because they make it possible to compare experimental conditions—spinning slowly versus spinning faster, ocean on the surface versus no ocean. Like Earth, Titan spins on its axis. We may be able to learn more about our own planet’s weather by looking at this moon.

In 1987, Atkinson devised a simple experiment to measure wind speed and direction on Titan. The Huygens probe was to be parachuted onto the atmosphere, emitting radio signals as it fell. Using methods similar to the way in which one determines wind direction by observing the movement of an overhead kite, Atkinson and his colleagues planned to use the Doppler shift of the radio signal to mark the probe’s path and assess wind speed and direction. The probe was aboard the Cassini spaceca
finally about to get some answers. "We were all very excited," says Atkinson. But as the data started coming in late that afternoon, Atkinson noticed a red message on his computer screen, indicating that while the receiver on Cassini was turned on, Atkinson’s instrument on the orbiter remained off. He and his team waited for it to switch on, growing increasingly nervous as the minutes wore on. All the other experiments on the probe were running. But some, no one had given the simple command to turn on Atkinson’s experiment. And because the events they were witnessing had occurred six hours before, they could only wait helplessly for the red message to go away, watching as the probe made its way to the surface. Here was a thoroughly dedicated and conscientious group that had worked for years to make the mission a success. And now, it seemed, that work was being undone, simply because the telecommand to turn on the experiment had been forgotten.

How do you describe the feeling of watching 18 years worth of work come to nothing? Shock. Numbness. A sinking in the stomach. Atkinson wanted to cry, to punch something. His colleagues on the experiment left to get a beer. In that moment of failure, these scientists realized that for all their sophisticated instrumentation and high-tech gizmos, they remained, after all, fallible human beings. "These missions are incredibly hard," Atkinson says. "These are very dedicated people, but they are real people, and they sometimes mess up. You have to be ready for the fact that sometimes it doesn’t work.

But on that January day, the Cassini team wasn’t quite ready to concede failure. An hour after despairing in despair, they came together again, this time with a glimmer of hope. Hadn’t the telescopes on Earth picked up radio signals? Atkinson had had the same thought.

"We’ve still got data," these have to be the happiest words a scientist exploring distant planets can hear.

Over the next 10 days, the researchers studied the signals that had come in. They rewrote software. At first, they couldn’t read the data. What they ended up with is a "sparse" data set, but a data set nonetheless. Instead of the eight measurements per second they had planned for, they got one measurement every 10 or 20 seconds with one gap of 1,500 seconds. Still, it was enough to make rough measurements. The researchers found that the winds on Titan blow in the direction the planet spins, from west to east. In the upper reaches of the atmosphere, wind speeds are about 200 to 250 miles per hour. In a zone about 30,000 kilometers above the surface, the winds decrease inexplicably. Closer to the surface, wind speed drops to almost nothing.

"Things worked out as well as possible," says Atkinson. "This was an unbelievably successful mission. All of a sudden, we were really able to salvage something worthwhile."
“We were all very excited,” says Atkinson. But as the data started coming in late that afternoon, Atkinson noticed a red message on his computer screen, indicating that while the receiver on Cassini was turned on, Atkinson’s instrument on the orbiter remained off. He and his team waited for it to switch on, growing increasingly nervous as the minutes wore on. All the other experiments on the probe were running. But somehow, no one had given the simple command to turn on Atkinson’s experiment. And because the events they were witnessing had occurred six hours before, they could only wait helplessly for the red message to go away, watching as the probe made its way to the surface. Here was a thoroughly dedicated and conscientious group that had worked for years to make the mission a success. And now, it seemed, that work was being undone, simply because the telecommand to turn on the experiment had been forgotten.

How do you describe the feeling of watching 18 years worth of work come to nothing? Shock. Numbness. A sinking in the stomach. Atkinson wanted to cry, to punch something. His colleagues on the experiment left to get a beer. In that moment of failure, these scientists realized that for all their sophisticated instrumentation and high-tech gizmo, they remained, after all, fallible human beings.

“These missions are incredibly hard,” Atkinson says. “These are very dedicated people, but they are real people, and they sometimes mess up. You have to be ready for the fact that sometimes it doesn’t work.”

But on that January day, the Cassini team wasn’t quite ready to concede failure. An hour after despurring in despair, they came together again, this time with a glimmer of hope. Hadn’t the telescopes on Earth picked up radio signals? Atkinson had had the same thought.

“We’ve still got data.” These have to be the happiest words a scientist exploring distant planets can hear. Over the next 10 days, the researchers studied the signals that had come in. They rewrote software. At first, they couldn’t read the data. What they ended up with is a “sparse” data set, but a data set nonetheless. Instead of the eight measurements per second they had planned for, they got one measurement every 10 to 20 seconds with one gap of 1,500 seconds. Still, it was enough to make rough measurements. The researchers found that the winds on Titan blow in the direction of Saturn. But how much? And at what speed? In the upper reaches of the atmosphere, wind speeds are about 200 to 250 miles per hour. In a zone about 1,000 kilometers above the surface, the wind decreases inexplicably. Closer to the surface, wind speed drops to almost nothing.

“Things worked out as well as possible,” says Atkinson. “This was an unbelievably successful mission. All of a sudden, we were really able to salvage something worthwhile.”
HAPPY 25th, KZUU!

IT WAS A ROCK ‘N’ ROLL idea in a Bee Gees world.

In 1977, a time of flared pants and patchwork shirts, a small group of determined students at Washington State University wanted a voice that could reach beyond campus. They wanted an outlet that wouldn't commercial, one that didn't play Billboard's top hits, and one that wouldn't dream of playing ABBA or Wings.

KZUU-FM was born of the idea that stems back to the station's earliest days. "Music was very important," he says. "It was a very big part of the students' social life, sort of their intellectual lives out of class."

The students wanted the station to be available throughout Pullman and to play to the eclectic tastes of the college audience, offering progressive rock and jazz. "Our motto was 'Anything but Top 40,'" says Etherton.

What the students were proposing was an independent, student-run, 10-watt FM station based in the CUB and run with the help of ASMWSU—a place where they could be involved with student activities even if they didn't fit in with the WSU Student Association. The station manager sits in a chair with his legs crossed beneath him and says he thinks he's ruined for the rest of his life. "I took away real-life experience in terms of how to get something done and in terms of engineering a radio station," he says.

Today the DJs leave notes to another on the covers of the CDs and albums with information like, "be there listening," says Guay. "We try to involve students even if they didn't fit in with the WSU Student Association. It was 'Anything but Top 40,'" says Etherton.

So when WSU Extension Information worker Robert Seahorse (73-75 E&M) told a broadcasting class that students could start a real station of their own, "about five or six students sat straight up," he says. They came to him after his talk and asked for help.

"You have to remember, it was the late 70s. People didn't have PCs, they didn't have laptops, they didn't even have televisions in their rooms," says Seahorse. "What they did have was stereo sets. They all had an FM receiver."

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tions in which children have been exposed to violence. Research shows that following a violent incident there is only a short window of opportunity available to offset the effects of the incident on a young mind. If a child has witnessed a violent incident, police will call in an individual trained by CAFRU to help the child reduce the trauma. This may involve drawing or playing with dolls to reenact the situation, or simply talking through what happened. The theory, says Blodgett, is that such activity gives the child distance and perspective.

CAFRU has trained about 3,000 such professionals in the Spokane area. Under a grant from the Centers for Disease Control, CAFRU also addresses violence in the workplace, such as harassment or stalking. “What we’re finding in our survey,” says Blodgett, “is that 60 percent of respondents say they know of a violent work event that affected one of their coworkers.”

Ten percent of women say it’s happened to them. One percent say they’ve had to have medical treatment because of violence that occurred in the workplace.

Add to this the nearly 99 million in annual healthcare costs related to domestic violence in Spokane alone, and the more than two million emergency-room visits that occur each year across the nation because of domestic violence, and the nature of domestic violence as a public-health problem becomes clear.

In other words, says Blodgett, “If we start with dollar value, this is not a bleeding heart issue.”

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So when WSU Extension Information worker Robert Searfoss (73 M Ed.) told a broadcasting class that students could start a real station of their own, “about five or six students sat straight up,” he says. They came to him after his talk and asked for help.

“You have to remember, it was the late 70's. People didn’t have PCs, they didn’t have laptops, they didn’t even have televisions in their rooms,” says Searfoss. “What they did have was stereo sets. They all had an FM receiver.”

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What the students were proposing was an independent, student-run, 10-watt FM station based in the CUB and run with the help of ASWSU—a place where they could be involved with student activities even if they didn’t fit in with the WSU football team and Performing Arts programs.

Finally, during the 1977-78 school year, the students won approval through a Federal Communications Commission for air space. They were approved in 1979.

“It was pretty exciting going through the whole thing,” says Henry Hueyts (79 Eng.). “I took away real-life experience in terms of how to get something done and in terms of engineering a radio station.”

Today the DJs leave notes to one another on the covers of the CDs and albums with information like, “Our motto was ‘Anything but Top 40.’”

The DJs may be playing mostly CDs instead of vinyl now, and the programming happens with the help of a computer, but little else has changed. “If you’re not school-spirited, it’s a place where you can feel like you belong,” says Heather Ebba Maih, who is DJ Hezza on air.

All the work is volunteer, and the 24-hour studio runs on about $5,400 a year. “It pays for our office supplies,” says Guay. “Thankfully, all the music is free.” And thanks to the Internet, KZUU has more than a local audience. The station has listeners as far away as Australia. “No matter when you’re broadcasting, there’s always someone out there listening,” says Guay.

So happy 25th birthday KZUU, 90.7 FM. Maybe we’re a year late, but hey, rock ‘n’ roll isn’t about being on time. —Hannelore Sudermann

I T S A B O U T 0.2 B C D ' S 16 A R A N D 0.5 P E R C E N T 0.2 T O 0.5 P E R C E N T.
the European Union and Chile. The program has a consultant working full-time at Fort Lewis, managing its energy program. But the core of the Energy Program is in providing expertise and information in renewable energy and industrial technology. It also operates call centers and information clearinghouses.

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A couple of years ago, the Department of Energy’s Oak Ridge National Laboratory evaluated the outreach of these clearinghouses, addressing cost-benefit ratio. The result, says Link, was $20 in energy savings for every dollar expended on the program.

David Barberdi. He constructed a wooden peg board with rubber bands and balls to show the kids how stretch receptors work. When pressure was applied to the rubber bands, a pair of wooden blocks opened a gate that allowed the balls to flow through the gate, thus signaling the brain. In the Green division, under-graduates Matiya Rupp and Cheley Tadema won first place with their model, “The Axonal Highway.” Their project taught the kids about proteins that are responsible for transporting things long distances along tracks called microtubules. The kids themselves became the transported objects, and raced down the rope-like tracks to deliver their chemicals to and from the cell body.

The student judges based their evaluation of each model on how well they understood the concept being demonstrated, how well the students explained the concept, and if the model was “fun.” “Fear Factor” by Stylia Meghan won first place in the faculty division by demonstrating the brain’s fight or flight response. The highlight of “Fear Factor” was an eight-foot boa constrictor. Also, a laboratory rat was a popular attraction at the exhibit, “How to Use Your Rat Brain.”

The NEURO 430 students were competing for a trip to Washington, D.C., where the best project will be presented before neuroscientists at the annual meeting of the Society for Neuroscience. The Kids Judge! event, sponsored by VCAPP, the WSU President’s Office, the Dana Alliance Brain Initiative Foundation, and the National Kids Judge! Partnership, coincided with National Brain Awareness Week, March 14-20.

The fifth-graders completed surveys before and after the event to evaluate their perception of neuroscience. Even if they do not remember where the neocortex is located, many of them returned to their elementary school classes with a newfound passion for science. “In the course of one day,” says Sandi Rehbo, assistant director of the neuroscience program and coordinator of Kids Judge!, “science evolves from being something the kids dread to something that is fun.”

—Tim Steury

JELL-O BRAINS and boa constrictors draw kids to science

FIFTH-GRADErs from seven area school districts bustled into the CUB ballroom recently for the third annual Kids Judge! Neuroscience Fair. After the participants met with their brain team—neurons, dendrites, boutons, memory, synapses—they made a visit to the Jell-O brain station where they chose from a variety of anatomically correct flavored gelatin brains. And then to work. Clipboards in hand, the children evaluated 14 educational models developed by Washington State University NEURO 430 students, faculty, and graduate students.

The projects focused on hands-on activities through which students could learn about the function and physiology of the brain. David M. Rector, assistant professor in the Department of Veterinary and Comparative Anatomy, Pharmacology, and Physiology (VCAPP), who teaches the NEURO 430 course, emphasized creating projects simple enough for fifth-graders to understand.

“It’s crucial that scientists are able to communicate complex ideas in a way that is understandable to the general public,” says Rector. The first-place winner for the Blue project division was “Sense of Touch,” by senior pre-med student David Barberdi. He constructed a wooden peg board with rubber bands and balls to show the kids how stretch receptors work. When pressure was applied to the rubber bands, a pair of wooden blocks opened a gate that allowed the balls to flow through the gate, thus signaling the brain.

In the Green division, under-graduates Matiya Rupp and Cheley Tadema won first place with their model, “The Axonal Highway.” Their project taught the kids about proteins that are responsible for transporting things long distances along tracks called microtubules. The kids themselves became the transported objects, and raced down the rope-like tracks to deliver their chemicals to and from the cell body.

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For more information:
www.energy.wsu.edu
1-800-872-35-68

GIG HARBOR
Laureen Lund markets the town she loves

Laureen Lund ‘82 (Comm.) recently celebrated her fifth anniversary as the person who sells Gig Harbor to the world. She seems to do her job well. At least, that’s why I’m sitting in her office in Gig Harbor’s city building in mid-August.

“The best use of our dollars is public relations,” she tells me, without a trace of irony or triumph. “If I can get somebody to do an article, it costs me nothing.” I let that sink in for a minute. So—do I feel exploited?

Nah, not at all. I’m having a fine time.

As for Lund, she just seems very pleased that she’s initiated another person into the pleasures of Gig Harbor. It doesn’t take a lot of effort on her part to convince me that this is a dandy little town. After the long drive across the state and the Tacoma Narrows Bridge, I had gravitated instinctively to the Tides tavern for lunch. That’s perfect, says Lund. So was the deep-fried halibut.

A great number of people have discovered Gig Harbor since members of the U.S. Exploring Expedition, commanded by Captain Charles Wilkes, rowed into the harbor in longboats and a captain’s gig, seeking shelter from a storm in 1841. But I still feel that little thrill of discovery as I walk down Harbor-view later in the afternoon to pine over small boats for sale. When I head back downtown, I notice for the first time this enormous presence looming across Puget Sound. We call it, “says Lund, referring to the image of the mountain on the city’s logo. We never refer to it as ‘Rainier’ just the mountain.”

Twenty-three years after the brief visit by the Wilkes Expedition, Samuel Jerich arrived as the first American settler. More specifically, the first of many Croats. Even today, the town is divided among the “-ich’s” and the “-ich’s,” and many of the street signs end in “-ich.”

Many of the settlers who followed Jerich took up fishing, establishing the town’s main identity for a hundred years. Although pleasure boats now outnumber fishing boats, especially in August, when many of the bigger fishing boats are in Alaska, fishing still defines the town. Even though that’s changing, no one, least of all Lund, wants to change it any faster.

“We feel that people in need will feel that they are loved and respected, whether its through business or school or hospitals,” says Lund. “That’s why so many people have come to this town.”

Laureen Lund of Gig Harbor, a community of 3,800, has been able to improve the town’s image, and attract visitors, tourists became an official strategy for the town only five years ago, when Lund was hired full-time. What made her salary and mis-

PHOTOGRAPHY BY MARVIN D. BOLAND, COURTESY OF THE GIG HARBOR PENINSULA HISTORICAL MUSEUM.

GIG HARBOR PENINSULA HISTORICAL MUSEUM COLLECTION OF BARBARA SCHAPKA. 

LAURENCE CHEN
JELL-O BRAINS and boa constrictors draw kids to science

FIFTH-GRADEs from seven area school districts bustled into the CUB ballroom recently for the third annual Kids Judge! Neuroscience program has a consultant working full-time at Fort Lewis, managing its energy program. But the core of the Energy Program is in providing expertise and information in renewable energy and industrial technology. It also operates call centers and information clearinghouses.

If you call a Department of Energy 800 number with any sort of energy-related question, a phone rings in the Energy Program building. A variety of information clearinghouses answer questions ranging from the very basic to the very technical—questions having to do with alternative fuels, heating and cooling, codes and standards, electrical motors, and renewable energy. During the first six months of last year, the program handled about 10,000 inquiries, says Lee Link, who manages the clearinghouses. The inquiries came from everyone from homeowners to engineers for utility companies.

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In “the course of one day,” says Sande Rehl, assistant director of the neuroscience program and coordinator of Kids Judge!, “science evolves from being something the kids dread to something that is fun.”

“Part of our strategic plan is to retain our maritime heritage and not become anything Disneyland-isch,” says Lund. She refers to the image of the mountain on the city’s logo. “We never refer to it as ‘Rainier’ just ‘the mountain.’”

“Talent is public relations,” she tells me, without a trace of mock. “It can get somebody to do an article, it costs me nothing.”

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“Part of our strategic plan is to retain our maritime heritage and not become anything Disneyland-isch,” she says. Even though downtown merchants have long tried to attract tourists, tourism became an official strategy for the town only five years ago, when Lund was hired full-time. What made her salary and mis-
tion possible was the building of a handful of hotels, such as the Wesley Inn, where I am staying—and which is quite nice. Every lodging establishment in Washington with more than 15 rooms collects a lodging tax, from which Lund’s funding, and that of other marketing directors, is drawn. “Early on, there was some resistance,” she says. Some feared becoming a Leavenworth, a small town that, in order to draw tourists, is purposefully quaint. People who work at occupations other than waitressing and t-shirt peddlers are still quite visible in Gig Harbor.

So how exactly does one go about selling a community to the world?

Step number one is understanding how to target people who would be interested in this community, says Lund.

This is not really a family destination, she says. Rather, it’s more appealing to business travelers, couples, and retirees. Having determined the visitor demographics, she can target the town’s appeal.

“Our goal is to drive our strategic plan,” she says. One of the goals laid out in the plan is to increase overnight stays by 35 percent by 2008. “Last year, we increased by 11 percent.”

One thing that could help boost that rate is the opening of what Lund refers to as “Bridge Number 3.” The effect of the original Tacoma Narrows Bridge in 1940 was short-lived, as “Galloping Gertie” fell famously into the Sound after only a few months of channeling people to the Kitsap Peninsula. But Bridge Number 2, which opened seven years later, permanently connected Gig Harbor to the mainland.

Now the people of Gig Harbor anticipate the effect of Bridge Number 3, which opens in 2007, with decidedly mixed feelings, which stem from the understanding that doubling the capacity of the existing bridge will lure more people. We talk, Mike Davis ’78, the town’s new police chief, joins us. He contemplates the additional traffic across the bridge that will transport undesirable. Currently, the major crime in Gig Harbor is identity theft. Will that increase with the opening of Bridge Number 3? We’ll see, says Davis.

Bridge or no bridge, the area is changing. Costco is planning a new store, as are a number of other businesses. One welcome addition is a new hospital that will serve Gig Harbor and Port Orchard. Interestingly, says Lund, the hospital will have no maternity ward. Research showed that people who live in Gig Harbor are generally beyond child-bearing age.

What this means to Lund is that younger families simply cannot afford to live here. Median household income in Gig Harbor is $34,915, compared to $45,776 for the state. Median age for Gig Harbor is 37, compared to 33.3 for the state.

“We want to be a community that’s diverse enough that there’s housing for everybody,” she says. “We want to be a community. But that’s a hard thing.”

“We’re not very ethnically diverse either,” she adds. “We’re pretty darn white.”

So maybe we can’t all afford to live in Gig Harbor. But we can still visit, right?

Let’s say, I propose to Lund, that I return next weekend with my wife. What would we do?

“Well, you’ll go to the Tides for lunch,” she says. And then dinner at the Beach House. Or at the new Bix 25. (Not wanting to get back in the car, I find a new Italian restaurant, Terracciano. Magnifico!) On the first Saturday of each month is the Art Walk, a tour of the galleries. But you can do that on your own, she says. Be sure to take a guided kayak tour, she continues. The family that runs the kayak center is very knowledgeable of the ecosystem of Puget Sound.

After shopping and hitting all the galleries, got out of town, she says. Explore the outlying areas. Take a picnic to Key Peninsula. Go to the most beautiful state park in Washington, Penrose Point, 15 minutes from town.

And definitely visit the excellent historical museum. “Also,” she concludes, “this is a good place to do nothing.”

Have a beer, she suggests. Read a book. Watch the boats go by.

—Lisa Strozyk

For more information: www.gigharborchamber.com 888-553-5438

Jim McKe an makes poetry of a powerful time

POETRY IN MOTION he wasn’t. At least not on the basketball court, even though 6’9” Jim McKe an, his fadeaway jump shot, and his rebounding still holds the single-game Far West Classic rebounding record of 27, set against Princeton in 1967 were anchors of the rebirth of Washington State University men’s hoops in the mid-60s. “He didn’t have real good feet and was not a great athlete,” Marv Harshman, WSU’s head coach at the time, said a couple of weeks before the start of this year’s NCAA tournament. But that wasn’t the whole story.

“He had great hands, and he...
tion possible was the building of a handful of hotels, such as the Wesley Inn, where I am staying—and which is quite nice. Every lodging establishment in Washington with more than 15 rooms collects a lodging tax, from which Lund’s funding, and that of other marketing directors, is drawn.

“Early on, there was some resistance,” she says. Some feared becoming a Leavenworth, a small town that, in order to draw tourists, adopted a foreign persona.

“Step number one is understanding how to target people who would avoid the grossest forms of tourism possible,” says Lund. “So how exactly does one go about selling a community to the world?”

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This is not really a family destination, she says. Rather, it’s more appealing to business travelers, couples, and retirees. Having determined the visitor demographics, she can target the town’s appeal.

“All the things I do are driven by our strategic plan,” she says. One of the goals laid out in the plan is to increase overnight stays by 35 percent by 2008. “Last year, we increased by 11 percent.”

One thing that could help boost that rate is the opening of what Lund refers to as “Bridge Number 3.”

Number 1, which opened in 1990, was created by the original Tacoma Narrows Bridge in 1942 was short-lived, as “Galloping Gertie” fell famously into the Sound after only a few months of channeling people to the Kitsap Peninsula. But Bridge Number 2, which opened seven years later, permanently connected Gig Harbor to the mainland.

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The effect of the original Tacoma Narrows Bridge in 1942 was short-lived, as “Galloping Gertie” fell famously into the Sound after only a few months of channeling people to the Kitsap Peninsula. But Bridge Number 2, which opened seven years later, permanently connected Gig Harbor to the mainland.

On the first Saturday of each month is the Art Walk, a tour of the galleries. But you can do that on your own, she says. Be sure to take a guided kayak tour, she continues. The family that runs the kayak center is very knowledgeable of the ecosystem of Puget Sound.

After shopping and hitting all the galleries, get out of town, she says. Explore the outlying areas. Take a picnic to Key Peninsula. Go to the most beautiful state park in Washington, Penrose Point, 15 minutes from town.

And definitely visit the excellent historical museum. “Also,” she concludes, “this is a good place to do nothing.”

Have a beer, she suggests. Read a book. Watch the boats go by.

—Tim Steury

For more information:
www.gigharborchamber.com
888-553-5438

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Jim McKean makes poetry of a powerful time

POETRY IN MOTION he wasn’t. At least not on the basketball court, even though 6’9” Jim McKean, his fadeaway jump shot, and his rebounding have carried him to the single-game Far West Classic rebounding record of 37, set against Princeton in 1967 were anchors of the rebirth of Washington State University men’s hoops in the mid-60s.

“He didn’t have real good feet and was not a great athlete,” Marv Harshman, WSU’s head coach at the time, said a couple of weeks before the start of this year’s NCAA tournament. But that wasn’t the whole story.

“He had great hands, and he

THE WAY HE WAS

Jim McKean ’68, ’74
using his best to block Law Alcindor

PHOTO BY BILL RAY / TIME LIFE PICTURES / GETTY IMAGES

SPORTS|SEASONS
He understood what he could accomplish with his head,” Harshman said.

Usually our best sports books are by writers or journalists who have never experienced athletic competition at a high level. McKean is different. He played for a team that during the years of UCLA Lew Alcindor—later Kareem Abdul-Jabbar—was second only to the Bruins in what was then the Pac Eight conference.

The pair competed during the 1966-67 and 1967-68 seasons. McKean completed his three varsity years at WSU with 1,411 points and 844 rebounds—school records. Twice he was selected as a reporter for the old Washington State Collegian—now lives.

“Jim’s got to be the tallest poet around,” Heathcote said. “For athletes they have to be external; poetry has to be internal. The skills—focus, concentration, and history at Indiana University, Owen V. Johnson teaches journalism and history at Indiana University, where he also announces swim meets and an occasional basketball game. His writing becomes the poetry he lacked as a player. He leaves us with messages that are variously heart-warming and challenging.

“Jim McGauley, who won a gold medal in the 1936 Olympics and who later married a University of Washington football star.

In his new book, Home Stand: Growing Up in Sports, Jim McKean weaves together a series of essays about growing up in the Pacific Northwest in the late ’50s and early ’60s.

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BATTLE OF THE BIG MEN

Jim McKean remembers that everything he read and heard about UCLA’s seven-foot-one-inch Lew Alcindor proved to be true. “He was so coordinated, so graceful. He just played in a different dimension,” says the former Washington State basketball center, a year older and four inches shorter than his foe. Alcindor would lead UCLA to three consecutive NCAA titles. He was a late bloomer and had much to learn. “Jim got him as a freshman,” Harshman said. “He learned more as a freshman from Jud than he had in all of high school.”

The “Jud” chapter makes it clear how Heathcote later achieved success, including an NCAA championship, at Michigan State, where, curiously enough, McKean’s book is published. College basketball fans anywhere will find that chapter alone worth the purchase of the book.

“Jim’s got to be the tallest poet in the world,” Heathcote said by phone from Spokane, where he now resides. “He introduces another video that McKean notes. “I was in Los Angeles watching a UCLA game film, which McKean watches with his daughter. For McKean, too, the years fall away. His daughter sees him the way he was, not the way he remembers he was.

Unlike most sports-related books, this is a book that can be read multiple times and in multiple ways. Each time you’ll find different messages. Read it slow for its poetry, or read it fast for its prose. Read it at one sitting to absorb its overarching themes, or read it one chapter at a time to enjoy its storytelling qualities.

If you were a student at WSU in the 1960s, you should read this book. If your parents were students at WSU in the 1960s, you should read this book to understand the time they lived in. If you’re a sports fan, you should read this book.

If you’re not included in those categories, read it anyway. —Owen V. Johnson ’68

played with his head,” Hardeman said.

“He understood what he could accomplish. He was the ultimate team player.”

In his new book, Home Stand: Growing Up in Sports, Jim McKean (’68, 74 M.A.) weaves together a series of essays about growing up in the Pac-10, the’70s and early ’80s, coming to terms with his father and his family, and playing basketball at WSU, where his sensitive soul began to feel the cultural and political changes sweeping across the U.S., including the Vietnam War protests and the civil rights movement.

“It was a powerful time for us,” McKean told me by phone from his home in Iowa.

His writing becomes the poetry he lacked as a player. He leaves us with messages that are variously heart-warming and challenging. “What I tried to do in my book is address sports in each essay, make each autobiographical or memoir-like, and arrange them in a loose chronology,” McKean noted. Usually our best sports books are by writers or journalists who have never experienced athletic competition at a high level. McKean is different. He played for a team that, during the years of UCLA Lew Alcindor—later Kareem Abdul-Jabbar—was second only to the Bruins in what was then the Pac-8 conference.

In 1966-67 McKean and his Cougar teammates defeated the Bruins and USC on the same weekend. That didn’t happen again until Dick Bennett and his players turned the trick in 2004.

In 1964, Marc Hardeman, “sipping coffee from a china cup [McKean’s] mother reserved for holidays, days, [and] a plate of cookies balanced on his knee,” recruited McKean to come to Pullman.

There McKean met Jud Heathcote, the new freshman coach that Hardeman had recruited the same year. In the chapter, “Playing for Jud,” previously included in the distinguished volume of Best American Sports Writing for 2003, McKean describes the way Jud taught his charges how to play Division I basketball.

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“Jim’s got to be the tallest poet in the world,” Heathcote said by phone from Spokane, where he lives today. I should stop here to point out that I grew up in Pullman and matriculated at WSU the same year as McKean did. Heathcote was my golf and tennis teacher in those longago days when coaches actually were teaching members of the faculty. I also knew him in 1969 as a reporter for the old Pullman Herald and as sportscaster for WSWS, as it was used to be called, where I called two of the games McKean discusses in this book. This was a re-creation, during which I sat in the studio in the bowels of Arts Hall, pretending I was in Los Angeles watching a game in which Alcindor scored 63 points, 28 of them in the last four minutes, long after McKean had fouled out.

McKean has so successfully caught Heathcote in operation that, as I read, I found pictures forming in my mind, complete with the rhythm of Jud’s speech and body that McKean has captured.

In writing this book, McKean was helped by the scrapbooks of his career kept over the years by his late father. Those scrapbooks provided the facts of McKean’s career, of course, but they provided much more than that. They stimulated McKean’s mind to recall the sights and sounds of his life—how, for example, from the locker room to the old Bohler Gymnasium court, the team had to go upstairs by the old swimming pool, and then through the crowded smoky hallways outside the gym.

Members of the WSU English faculty stimulated McKean’s interest in writing, especially in poetry. He credited Profs. Howard McCord and Herb Antons particularly, but also recalled John Ehrtime and John Eiedad, the chair of the English department in which McKean majored.

He started out teaching at Columbia Basin College, while continuing to play amateur basketball, including regular games against inmates in the penitentiary, where he also tried to help would-be writers. He considered a coaching career, but decided against it, because he would have had to devote himself totally to it at the expense of writing. “I was surprised when he quit coaching to concentrate on his teaching,” Heathcote said.

After he left the Pacific Northwest, McKean earned a master’s degree in the Writer’s Workshop at Iowa, as well as a Ph.D. at the same institution. He still lives in Iowa City, but he teaches at Mt. Mercy College in Cedar Rapids.

McKean says he’d like to put the lie to the idea that athletes can’t be good poets.

“The skills—focus, concentration, and intensity—are the same,” he said. “For athletes they have to concentrate on their sport, poetry has to be internal.”

Stephen Dunn, a key player on Hofstra’s best basketball team ever (it compiled a 23-1 record), won the 2001 Pulitzer Prize for poetry, McKean noted.

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In preparing for Alcindor’s first visit to Pullman in January 1966, coach Marv Harshman (’55, ’74 M.A.) took full advantage of McKean’s height. McKean was a late bloomer and had much to learn. “Jud got him as a freshman,” Hardeman said. “He learned more as a freshman from Jud than he had in all of high school.”

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The College of Business and Economics is building an innovative professional development center, thanks to a generous gift from Scott E. Carson ’72, his wife, Linda, and their children.

The Professional Development Center will open its doors in Todd Hall in August. It will be adjacent to the Boeing Wireless Classroom of the Future, another project made possible through Carson’s work and contributions from The Boeing Company.

“The center will provide WSU students professional and leadership development opportunities to supplement their academic programs and prepare them for the best internship and career placements,” said CBE dean Len Jessup. “Thanks to the vision and continued generosity of the Carsons, we are ready to create and equip this world-class center to prepare the thousands of future leaders that are our students today.”

The new center will feature two fully equipped, simulated corporate board rooms and two executive offices where students can practice professional presentations and interviews. Students will participate in coached exercises to build their strengths in leadership and team building. In addition, the videotaping of mock interviews with faculty and visiting corporate recruiters will help students perfect their presentation skills.

An alumnus of the WSU business college, Scott Carson joined Boeing after graduation and moved steadily through a series of leadership positions. In December 2004, he was named vice president of sales for Boeing Commercial Airplanes. Prior to that, he served as president of Connexion by Boeing. Carson is a member of the WSU Foundation board of governors and the College of Engineering and Architecture advisory board. He chairs the WSU Foundation’s Corporate and Foundation Relations Committee and the CBE’s National Board of Advisors.

According to Jessup, the Professional Development Center will offer WSU students an opportunity to hone their interview and presentation skills through coached exercises and mock interviews.

For more information about home game weekends, check out: football-weekends.wsu.edu

1-800-GO-COUGS • wsucougars.com
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According to Jessup, the Professional Development Center will be a testament to the leadership the Carsons and their children, four of whom are alumni or current students, have shown with regard to the University. “Scott and Linda have always been first about students,” Jessup said, “advocating for applied learning opportunities that will make each student more marketable, give each the skills to add greater value to future organizations, and ultimately position each to be successful personally and professionally.”
**Book Season**

**Washington State loves its literature**

Jennifer Woodward and Geooffrey Harris like to linger in the basement stacks, in a section of Holland Library called the Deweys. The two Washington State University students play a game amidst the eight-foot shelves. They hunt for the oldest book among the titles still filed under the library’s old Dewey decimal system. Heading off in different directions, they ease into the rows of shelving, find a target amid the worn and faded covers, delicately extract it, and lean in a page or two to find the date of publication.

The sweet smell of old paper, the steady hiss of the climate control punctuated by a “Hey” as one of them spots an early 1800s engineering manual or the other a color-plated biography of Mary Queen of Scots—“That’s our idea of a good date,” says Woodward.

Harris spent his first three weeks in Pullman just exploring the library. Now, he says he can direct you to the right shelves for American history, or economics, or mythology. Even with hours of exploration behind them, Harris and Woodward can still get caught up among the shelves. “I’ll go in to find something, I’ll get distracted, and three hours and several books later I’m back onto my subject,” says Harris. Woodward: “I’m a Third Street kind of reader. Notwithstanding, the rest of the country has stopped reading books. At least that’s how the National Endowment of the Arts tells it after releasing its latest survey last summer. Warning of “an imminent cultural crisis,” the NEA survey points out that literacy reading has suffered a steady decline. In a survey conducted in 1982, close to 57 percent of adults were reading literature, which the NEA defines as fiction, poetry, plays, and novels. In 1992 that number had dropped to 54 percent, and in 2002 it fell to 46.7 percent. The survey, which is based on U.S. Census Bureau polling over 20 years, notes that the rate of decline has accelerated, particularly among the young.

Surveying more than 17,000 adults primarily over the phone, the study went on to break down readership based on social, economic, educational, and racial guidelines. Women read more than men, while Americans read more than those from other races, wealthier people read more, and more educated you are, the more likely you are to read literature. Still, the amount of literary reading of any of these groups has dropped in the past decade.

The survey showed that fewer than 57 percent of respondents read any type of book in the previous year, down from nearly 61 percent in 1992. The NEA concludes that with the most precipitous declines in younger readers, we could be losing a generation of readers.

The survey and its key findings are in no way a guide to what should be done, says Garrick Davis, a spokesman for the NEA. It simply chronicles that there has been a decline in reading among Americans over the past 20 years. The NEA’s call for concern hasn’t quite prompted reading experts to raise the alarm. But it has enhanced the discussion of all things books: what, where’s being published, and how the industry is changing. It also prompted us here at Washington State Magazine to look at reading in our home state and ask the experts where we in Washington fit in the world of words.

“I don’t think it’s a food survey,” says Eric Anctil, a professor of education at WSU. “If fiction reading declining? Absolutely, says Anctil. “But I don’t think it’s the crisis that the NEA made it out to be.” The survey neglects whole categories of books like history, biography, and creative non-fiction, he says. “It’s not really addressing reading habits. It’s looking at whether people read fiction.” Anctil has stacks of books on his desk and by his bed, most of them non-fiction. “And I get a ton of magazines a month,” he says. Look around Washington for examples of communities that read. It says. You see people browsing in bookstores on their lunch hours. They’re ensconced in coffee shops with a book, a magazine, or a Sunday paper on the weekends. They’re the kids who stop by the library on their way home from school and the commuters who wouldn’t dream of boarding a bus or a ferry without a book in hand. Anctil’s advice to look around is echoed by other readers, writers, and professors. Washington is a state that loves books. It holds both big book festivals and intimate author readings. It has book groups, poetry clubs, and a potpourri of independent bookstores.

Last year, according to a University of Wisconsin study, Seattle ranked as the second most literate city in the country, right after Minneapolis.

With a legacy of literary masters like Theodore Roethke and Mary McCarthy, Washington has long been a place for talented authors to find an audience. Washington Territory by Robert E. Ficken. An account of the 36 years Washington Territory waited for statehood and the railways to connect its east and west sides. (WSU Press)

The Nez Perce Indians and the Opening of the Northwest by Alan M. Josephy. A well researched history of the years from the time of Lewis and Clark to the defeat of Chief Joseph in the late 1800s. (Mariner Books)


Puyet’s Sound: A Narrative History of Early Tacoma and the Southern Sound by Murray Morgan. The story of Tacoma from Vancouver’s arrival in 1792 to the establishment of Fort Lewis in 1916. Filled with local characters and major events for the state. (University of Washington Press)

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For purchasing information, visit wsm.wsu.edu.
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Best books about Washington

Want to know more about the state of our state? Here’s a selection of the best books about Washington, recommended by Glen Lindeman, editor of WSU Press.

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by Hannelore Sudermann • illustration by David Wheeler
about enhancing quality of life, he says. "I'm trying to create community gathering places."}

Author Kim Barnes ('85 M.A. English) spends her evenings in a big leather chair, a stack of books and magazines on the table beside her. If the writer turns antsy, she can look through the trees that cradle her home and sometimes watch a flock of geese drift over the rolling fields of the Palouse. More often than not, though, she's watching a flock of words drift across the page of some new literary mower or manuscript from a friend or former student.

Barnes remembers the hula hoop raised by the NEA survey last summer and thought it was silly. "Everybody I know reads," she says. "My dad barely graduated from high school, and no one read more than he did."

Almost since the country's founding days, America has been a society that reads across social strata. With public schools, libraries, and democratic equality, everyone had the right to read and access to books. Alexis de Tocqueville touched on this in his Democracy in America, noting that the "trading classes" had a taste for literature and a hunger for a wide range of materials. By contrast, he writes, an aristocracy has only a small class of selective readers.

In 1997 Barnes was a Pulitzer finalist for her nonfiction work, In the Wilderness: Coming of Age in Unknown Country, for which she also won the Pacific Northwest Booksellers Association award. Much of her work falls into a category that wasn't discussed in the NEA survey.

"There's a great deal of reading going on right now, and it's in all kinds of nonfiction," she says. "The historical nonfiction market is enormous. Look at the best-seller lists." She points to recent biographies of Benja-

min Franklin and Andrew Jackson. Not only is that good reading, it's helping with an kind of historical literacy, she says.

Barnes has a great view from her perch as an author, creative writing professor at the University of Idaho, and Idaho State Writer in Residence. She has visited with readers throughout the Northwest and gotten a sense of what books mean to them. "People love the physical presence of books," she says. "They love the smell. They love to own them. That's not going to change."

The Northwest is a natural place for readers, especially with book cities like Seattle, Portland, and Sacramento. There's a critical mass of readers there, a healthy bookstore selection, and great opportuni-
ties for book promotion. "There's a tremendous community of readers and writers in the Northwest," Barnes says. "It's far-flung. And there are pockets of readers in every rural com-
munity. They're folks who meet at the library, loggers, farmers, wives, teachers."

When Clyde Holloway ('73 B.S. English) visits his book store each morning, he's thinking about the state of reading in the country. As owner of So Many Books, he's thinking about the multitude and variety of new and used stores that line his shelves, that customer who's always looking for something about Zen Buddhism, and whether the local book group will be settling into its meeting room that night.

Before going into the book busi-

ness, Holloway sold medical sup-
plies. It wasn't a job he loved, so

WASHINGTON STATE MAGAZINE | SUMMER 2005

25
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and enlightenment, she says. But book
culture is not limited to the big cities.
Barnes is often invited to small com-

Pamela Smith Hill started reading
to her daughter when the child was
just three months old. It was a habit
the children’s book author continued
almost daily, moving on to picture
stories, then to books with words, and
finally short stories and novels. Until
middle school.
“One day, she looked at me and
said, ‘Mom, I can do my own read-
ing now,’ ” says Smith Hill. “I was
crushed.”
Though she had lost an avid lis-
tener, Smith Hill had created a lifelong
reader.
Serious readers, especially young
ones, are in decline, according to
a National Endowment for the Arts
survey published last summer. The
survey, titled Analysing at Risk, notes
the greatest declines are in young adults.
Of those aged 18 to 24, 35.7 percent
fewer are reading now than their
counterparts in 1982, and in the 25 to
34 group, there is a 29.2 percent drop.
The study notes apparent problems in
keeping literary reading appealing to
teens. It cites a National Institute for
Literacy study that says a small
percentage of 15 to 17 reading for fun
daily in 1999 than in 1984 and that a
smaller percentage of teens saw adults
reading in their homes.
And today with movies, video
games, soccer practice, and video
lessons, it’s much less likely a child
will have the energy or even the time
to just pick up a book.
But that trend can be reversed, say
experts. And parents can play a greater
role in developing regular readers.
Start early and start with the sim-
splest books. “When you’re reading to
a child, it’s a good idea to point to the
words,” says school-library director
Claire Gatrell Stephens (’78 Speech
Ed.). “It trains their eyes to move from
left to right.”
Gatrell Stephens, author of two
texts for teachers on how to choose
and use children’s books, serves as
media director at the Freedom High
School library in Orlando, Florida. Her
most recent, Picture This: Using Picture
Story Books for Character Education in
the Classroom, was published last year.
Of those aged 18 to 24, 35.7 percent
fewer are reading now than their
counterparts in 1982, and in the 25 to
34 group, there is a 29.2 percent drop.

Raising good readers

There’s a great deal of reading
going on right now, and it’s in all kinds
of nonfiction,” she says.
“The historical
nonfiction market is enor-
mous. Look at the best-seller
lists.” She

Smith Hill notes a crossover
in youth and adult genres. Many works,
such as Harper Lee’s ‘To Kill a Mockingbird’
were written for grownups, but became
appealing to literature for kids. “The
review is true with books like Huckle-
berry Finn and the Harry Potter series,” she
says, noting that the British pub-
lisher of the latter has produced the
novels with subtler jackets
for adults.
Smith Hill also recom-

Phyllis Shier (’85 M.A. English) spends her evenings in a big
leather chair, a stack of books and maga-

Author Kim Barnes (’85 M.A.) sees a growing demand
for literary non-fiction among readers in the West.
Her autobiographical in the Wilderness: Coming of Age in
Unknown Country was a very popular book.

about enhancing quality of life, he says.
“T’m trying to create community
gathering places.”

Raising good readers
see the failure of these festivals as signs of reading’s demise. Maybe the festivals failed because there’s so much for readers to do. A rich diet of literary events can be found throughout Washington. Seattle, for example, is home to readers’ and poetry series, countless book clubs, and even very specific literary organizations like the Northwest Classics Society, whose members share a passion for Homer.

Also, new book festivals and literary events are popping up like mushrooms around the state. The most notable success is Get Lit in Cheney and Spokane. This April, the Eastern Washington University Press celebrated its seventh annual Get Lit festival with salmon poaching, David Sedaris, and Rita Dove and Bita Dava. And in past years it has attracted national notables like Garrison Keillor, Dave Barry, and Kurt Vonnegut. It’s a good time to be a reader. The independent bookstores are finding new ways to capture and serve their customers. A Book for All Seasons in Leavenworth started hosting summer book camps for young fans of the writer. And we sold out all of the camps, so this year we’re thinking about adding two more weeks,” says owner Pat Rutledge. Island Books on Mercer Island hosts a monthly book group, with a meaty reading list that this winter included Mountains Beyond Mountains by Tracy Kidder and Elizabeth Costello by Nobel Prize-winner J.M. Coetzee. These events, reading programs, and book personalities are all valuable social and cultural resources, says Chamblish. People should make the effort to use them. Alan Bannister, historical and genealogical expert, says: “Pick up a week a book.”

On back campus, when they’re not in the Dewey, Woodward and Harris might not be able to pull one book out of their full homework schedule. But that doesn’t mean they don’t have time for a little Robert Burns poetry or a seafaring adventure. And they have a list of books they’re planning to read this summer, he says: “Pick up a week a book.”

Independent bookstores are like people—they have their own character and style. They serve readers in ways the big stores can’t. They offer a wide selection in one room and set them in motion.”

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That’s NOT to say something isn’t at risk. The small bookstores, the town libraries, the school libraries all stand in jeopardy of competition and budget cuts. The number of independent bookstores nationwide is dropping, says Chamblish, noting that the Northwest has been affected, too. In 1994 the booksellers’ group had 345 members and in 2004 counted just 246. Last year, two of Washington’s hallmark cultural festivals disappeared from the Seattle scene: the Northwest Bookfest and the Seattle Fringe Festival. The Bookfest started out in 1994 with one good idea, two enthusiastic organizers, and minimal funding. “It was cheap, it was grungy down on the docks there, it was cold, and it was a rousing success,” says Chamblish. The event boasted best-selling authors, and some years attracted as many as 25,000 readers. But the bookfest changed locations several times, lost local backing, and finally just ran out of money. Last spring organizers announced the end of the event. As if that wasn’t dire enough, the 13-year-old Fringe Fest, which celebrated the local not-so-mainstream arts scene, also ran into money problems. It struggled to pay its artists from the previous year and finally closed up shop. Still, those in the bookstore don’t

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he and his wife Beth started with their vast collection of books at home as used stock, ordered some new books, and pulled together a small bookstore in the laid-back Uptown Village neighborhood, which has a bustling market and holds a variety of shops, eateries, and antiques stores.

While he loves to read, Holloway struggles to find the time. His solution: “I gave up my sleep to do my reading.”

Being in the business of books has brought Holloway closer to his neighbors and his community. He takes a special joy in seeing a young reader dive into his shelves on a hunt for something special.

“In my sleep to do my reading.”

But that doesn’t mean they’re reading nothing else. A rich diet of literary events can be an effective way of keeping the reading habit alive. A startlingly alternative version of the plant profitable and bring the workers on-board. “Life without books really wouldn’t be life,” he adds.

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free and enterprising expression of what we have. The book is frightening and breathtaking."

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SHOCK PHYSICS

POWER, PRESSURE, AND PEOPLE

When Washington State University’s Shock Physics Laboratory first opened a half-century ago, it focused on a fairly new field—looking at what happens to an object under intense, immediate pressure. Bright graduate students brainstormed exotic experiments which they fired through a 40-foot-long gas gun housed in the basement of the Physical Sciences Building. High pressure and short timescales were the key ingredients.

Back then, the program was supported by national defense money, had ties to the nuclear industry, and produced scientists who went on to work at national laboratories like Sandia, Livermore, and Los Alamos.

Today the guns are still in the basement. The students are still concocting complex experiments. And the lab still has ties to the keepers of the nation’s nuclear stockpile. What has changed is the notion of what is fast and what is short.

The laboratory has evolved into a large institute with its own $12.4-million building. It encompasses a cadre of top scientists and some of the newest and best equipment, cameras, and computers for the research field and now gets millions of dollars in federal research support. Most recently, it received an $18-million extension on a Department of Energy grant and $6.5 million from the Office of Naval Research to expand applied shock research to Spokane.

“This is truly a multidisciplinary research organization,” says Yogendra Gupta (’72 Ph.D. Phys.), director of WSU’s Institute for Shock Physics. With the scientists and students from the University’s physics, chemistry, and engineering departments, and with millions in defense funding for research, “we have a terrific amount of freedom here to do what we want to do.” And what Gupta wants to do is conduct first-rate fundamental science, produce first-rate scientists, and perform work in conjunction with the national laboratories.

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Often in science, simplicity is elegance. Shock physics is a simple idea.
is the physics of what happens to material that has been hit with a wave of shock, like a meteor slamming into a hillside. At WSU, shock waves have traditionally been made by giant guns that shoot one object into another with such force and speed and precision that the impact can, at least for an instant, change the physical and chemical properties of the target object. Now the equipment here has been expanded to include laser/shock and high-pressure laboratories.

The Institute for Shock Physics pairs big curious kids with big fabulous toys. Their object. Now the equipment here has been made by giant guns that shoot one a meteor slamming into a hillside.

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Simple, yes. But these experiments are connected to a problem so big and complex that few want to think about it, and most have forgotten it exists. Pullman, an oasis of education in the rural west, is very much the minds of leaders in the national nuclear security scene. Feeding the future

When Yogi Gupta looks at new graduate students, he wants to see more than just grades and resumes. He wants to see them explore. He watches how they work in the labs and how willing they are to try different things before settling on a course of research. He looks beyond their basic scientific ability to gauge their curiosity, their resourcefulness in building their own experiments, and their excitement. One of the biggest challenges facing this nation now is the lack of U.S. citizens studying science and engineering,” says Gupta. And when it comes to shock dynamics the challenge grows to needing well-educated scientists who are willing to take risks, he says. “I view myself as a symphony conductor. And you know, a good symphony needs good musicians,” he says. On the floor below his office the musicians are bent over their workbenches piecing together a target or dashing between workshops and labs with tools in their hands, preparing to fire an experiment. One winter afternoon, student Brandon Lalone carried into the lab a projectile he needed to tweak once more before running his laser shock experiment scheduled a few days out. Seth Root zipped by into the low light of a nearby room and pushed a couple of buttons on a machine. He explained he was adjusting the light that will help him see how benzene, a highly flammable liquid, reacts under the pressure of a shock wave. “My whole experiment is going to last less than two microseconds,” Root says of the project he has spent a week preparing and an entire day just setting up. He looked up from the computer and laughed. “You know, in my three years here, my total experiment time is less than one second.”

Meanwhile, in a nearby laboratory, chemist James Patterson, a postdoctoral researcher, works with RDX, a highly explosive material. While RDX can be volatile when mixed with other explosives, it’s no danger in the amount Patterson uses, as he studies what happens to the material when it is shocked at different pressures.

Patterson admits that preparing for experiments can be somewhat tedious. He needs a crystal of RDX that’s only 400 microns thick, just four times the thickness of a strand of human hair. “It doesn’t just come that way. I have to hand polish it,” he says. “It takes me eight to ten hours to do it. I just turn my brain off and sand. Then I look up and realize it’s almost time for lunch.”

The key thing to remember for all these experiments, says Patterson, is that you really need to know where you’re going, and what to look for. “You can’t do a shot in the dark,” he says, then laughs. “Though you could say we sit in the dark when we do our shots.”

When it comes to explaining exactly what happens here under Gupta’s watch, even some University leaders struggle with the words.

Gupta says he has no problem summarizing what takes place at the shock institute. “Do you want the one-minute version, the five-minute version, the one-hour version, or the 50-hour version?” he says, throwing up his hands. “The fact of the matter is we are about scientific excitement.”

It’s clear Gupta loves his work, he loves his students, he even loves the fancy hand-tufted carpet on the floor of his new office, which he’s quick to say was a gift and didn’t come from any taxpayer dollars. “This is a passion, not a job,” he says, gesturing to the building around him and the students below.
Hixson, now a Los Alamos research leader, looks back fondly on the days he and his classmates would perform tests with the four-inch-diameter gas gun in the basement. A single thesis would take a year or two to organize, and there was always an edge of worry that when the gun fired, the sensors might not work and you’d have to start all over again. And though the work was demanding and rigorous, there was a playful rivalry among the classmates.

“It was a very vital effort back in the ’70s,” he says. “And there was a lot of competition to fire the gun.”

Today Hixson uses shock dynamics to better understand the detonation behavior of high explosives. He also keeps an eye on the four-inch gas gun, which, like the national labs, has physicists working with chemists and engineers to perform experiments. While the research there is important, the University’s main contribution to the national scene is developing the next generation of guardians of the country’s nuclear stockpile, he says.

Other experts agree. The government leaders in the beltway aren’t thinking 15 years out, they may not even be thinking past the next budget cycle, said Jay Davis, nuclear physicist and former director of the U.S. Defense Threat Reduction Agency, when he was on campus in 2003. It’s up to the academic and industrial communities to think ahead, he said. In fact, American scientists are now designing new nuclear arms that are meant to be more stable, reliable, and long-lasting. They are planning to finish designs in the next five to ten years.

WSU and other schools work closely with the national labs. Besides producing scientists, the schools perform auxiliary research and develop new techniques.

WSU’s ties with Sandia helped garner the giant two-phase gun that sits along the east wall on the bottom floor of the institute. It was a gift for the new shock facility, and engineer Cory Bakeman (’04 Mech. Eng.) has been piecing it together since last May. Having a gas phase as well as a gunpowder phase makes the gun faster and more powerful. It will allow for experiments at three times the impact the lab can achieve now. “We needed it. They had it and weren’t using it,” says Gupta of the gun. It arrived in pieces packed in crates, stacked in boxes, and sometimes just loose with a label. The one thing it didn’t come with was assembly instructions.

The biggest components, the barrel and frame, are the heart of the equipment, but much of the rest Bakeman has had to design and build. “The job entails kind of all the aspects of engineering,” he says. “It’s like putting a puzzle together with half of the pieces gone.”

Federal agencies and national laboratories like Lawrence Livermore, Sandia, and Los Alamos have an interest in seeing Washington State University’s program and others like it succeed. “They are a key component for developing people for us and techniques,” says David Crandall, head of research and development for the National Nuclear Security Administration. “It’s just the kind of place we need to have connections to and we need to have trained scientists from.” A few years ago, the NNSA adopted WSU as its principal university for shock physics work.

The connection joins WSU with a small, select group of schools, including Burgers, Cornell, the University of Texas, and the University of Nevada Las Vegas, which all have a number of scientists working with support from the NNSA. A nuclear weapon has as many parts to it as a Toyota, Crandall says. “It’s more complicated in some ways and less complicated in others.” The hardest part to understand is the initial phase, when an explosion triggers a nuclear reaction, he says.

Nuclear testing in the United States was halted in 1992. Since then, the keepers of the national stockpile have had to work out experiments to determine how the weapons are aging. They have to figure out how to keep them effective and how to protect them from accident or terrorist design, says Crandall. And they have the complicated job of figuring out how to do all this without ever setting off one.

The heart of a nuclear weapon is the behavior of plutonium, uranium, and neutrons. The scientists must perform simulations to figure out what to do with the nuclear weapons if they have problems or to protect them from being set off accidentally or by sabotage. The other part of their job is to ensure those weapons can work, or as Crandall describes it, maintain the deterrent.

In the next 10 to 15 years, as the stockpile ages, simulations will be increasingly important, says Crandall. Precise physical measurements, higher-energy physics, and how materials move and behave at very high pressures and densities are tied to shock physics, he says. “It turns out to be a key element in all of them.”

“The public really doesn’t want to talk about nuclear weapons very much, but citizens do expect the president and governmental organizations to do the right thing,” says Crandall. That includes maintaining a nuclear deterrent that’s safe, protected, and dependable without nuclear testing, he says. “We need shock physics, and there are not many institutes that do it.”

Shock scientists and engineers steadily flow through the Pullman institute to visit with Gupta, check up on the research, and advise the students, who are grateful for the attention and the chance to rub elbows with the leaders in their field.

The students who come out of the shock institute are sound scientists, says Gupta. “When they leave here they are independent thinkers.” He warns them not to bask in their successes while here. It doesn’t matter if they’ve made one great breakthrough; it will be forgotten in a couple of years. “What’s important is they keep on doing wonderful things for the next 20 years.”

Gupta jokingly tells their potential employers that if they don’t like their new hires from WSU, “they can send them back.”

They never have.
Hixson, now a Los Alamos research leader, looks back fondly on the days he and his classmates would perform tests with the four-inch-diameter gas gun in the basement. A single thesis would take a year or two to organize, and there was always an edge of worry that when the gun fired, the sensors might not work and you’d have to start all over again. And though the work was demanding and rigorous, there was a playful rivalry among the classmates. “It was a very vital effort back in the ’70s,” he says. “And there was a lot of competition to fire the gun.”

Today Hixson uses shock dynamics to better understand the detonation behavior of high explosives. He also keeps an eye on the gas gun lab, which, like the national labs, has physicists working with chemists and engineers to perform experiments. While the research there is important, the University’s main contribution to the national scene is developing the next generation of guardians of the country’s nuclear stockpile, he says.

Other experts agree. The government leaders in the beltway aren’t thinking 15 years out, they may not even be thinking past the next budget cycle, said Jay Davis, nuclear physicist and former director of the U.S. Defense Threat Reduction Agency, when he was on campus in 2003. It’s up to the academic and industrial communities to think ahead, he said. In fact, American scientists are now designing new nuclear arms that are meant to be more stable, reliable, and longer-lasting. They are planning to finish designs in the next five to 10 years.

WSU and other schools work closely with the national labs. Besides producing scientists, the schools perform auxiliary research and develop new techniques. WSU’s ties with Sandia helped garner the giant two-phase gun that sits along the east wall on the bottom floor of the institute. It was a gift for the new shock facility, and engineer Cory Bakeman (’84 Mech. Eng.) has been piecing it together since last May. Having a gas phase as well as a gunpowder phase makes the gun faster and more powerful. It will allow for experiments at three times the impact the lab can achieve now. “We needed it. They had it and weren’t using it,” says Gupta of the gun. It arrived in pieces; packed in crates, stacked in boxes, and sometimes just loose with a label. The one thing it didn’t come with was assembly instructions.

The biggest components, the barrel and frame, are the heart of the equipment, but much of the rest Bakeman has had to design and build. “The job entails kind of all the aspects of engineering,” he says. “It’s like putting a puzzle together with half of the pieces gone.”

Federal agencies and national laboratories like Lawrence Livermore, Sandia, Los Alamos have an interest in seeing Washington State University’s program and others like it succeed. “They are a key component for developing people for us and techniques,” says David Crandall, head of research and development for the National Nuclear Security Administration. “It’s just the kind of place we need to have connections to and we need to have trained scientists from.” A few years ago, the NNSA adopted WSU as its principal university for shock physics work.

The connection joins WSU with a small, select group of schools, including Burgers, Cornell, the University of Texas, and the University of Nevada Las Vegas, which all have a number of scientists working with support from the NNSA. A nuclear weapon has as many parts to it as a Toyota, Crandall says. “It’s more complicated in some ways and less complicated in others.” The hardest part to understand is the initial phase, when an explosion triggers a nuclear reaction, he says.

Nuclear testing in the United States was halted in 1992. Since then, the keepers of the national stockpile have had to work out experiments to determine how the weapons are aging. They have to figure out how to keep them effective and how to protect them from accident or terrorist design, says Crandall. And they have the complicated job of figuring out how to do all this without ever setting one off.

The heart of a nuclear weapon is the behavior of plutonium, uranium, and neutrons. The scientists must perform simulations to figure out what to do with the nuclear weapons if they have problems or to protect them from being set off accidentally or by sabotage. The other part of their job is to ensure those weapons can work, or as Crandall describes it, maintain the deterrent.

In the next 10 to 15 years, as the stockpile ages, simulations will be increasingly important, says Crandall. Precise physical measurements, higher-energy physics, and how materials move and behave at very high pressures and densities are tied to shock physics, he says. “It turns out to be a key element in all of them.”

“The public really doesn’t want to talk about nuclear weapons very much, but citizens do expect the president and governmental organizations to do the right thing,” says Crandall. “That includes maintaining a nuclear deterrent that’s safe, protected, and dependable without nuclear testing, he says. “We need shock physics, and there are not many institutes that do it.”

Shock scientists and engineers steadily flow through the Pullman institute to visit with Gupta, check up on the research, and advise the students, who are grateful for the attention and the chance to rub elbows with the leaders in their field.

The students who come out of the shock institute are sound scientists, says Gupta. “When they leave here they are independent thinkers.” He warns them not to bask in their successes while here. It doesn’t matter if they’ve made one great breakthrough; it will be forgotten in a couple of years. “What’s important is they keep on doing wonderful things for the next 20 years.”

Gupta jokingly tells their potential employers that if they don’t like their new hires from WSU, “they can send them back.”

They never have.
A man atop a tractor was the first to spy a patch of black in the weedy growth beneath an old apple tree. Fighting off wasps, he went in for closer look. It had black hair, was covered in bugs, and, by the smell of it, had been dead for a while. His curiosity gave way to disgust, and he went looking for his supervisor.

It must have been easy to drop the body in this part of Pullman, a section that sees so little traffic. The old county road where locals once dumped worn tires and broken stoves was now research land where hardly anyone but the groundskeepers ventured. But somebody had an ugly secret to hide. This is where he left it.

This is a strange tale of death and dismemberment, links to a legacy of forensic investigation, and lots and lots of bugs. Farm manager Fred Loaiza was among the first to see the victim up close. The worker who grabbed him and drove him out to the site wouldn’t say what he had found. When they got to the secluded spot, Loaiza rolled down his window. “It was like a wall slamming me in the face with that stench,” he says. He could tell by the mass of black fur that it was a bear. Loaiza called campus police. They called the state Department of Fish and Wildlife. A game agent soon arrived to study the scene. He determined the creature had been killed, harvested for parts, and then illegally dumped. Before driving off, the agent advised Loaiza to leave the carcass and let nature take its course.

That was something the farm manager couldn’t do. “It was right in front of our equipment yard entry,” he says. He asked his crew to “go out there and scrape the bear up,” adding that the remains were like Jell-O. They moved the carcass to a hay field. “Then someone said, ‘we’ve got to bury it,’” he says. “I agreed. I was worried that someone else would discover it.”

So they returned with a backhoe and left the bear several feet beneath the ground.

Loaiza figured that was the end of the strange story. But then, he had yet to meet Bethany Marshall.

BUGS AND BODIES

Assistant professor Bethany Marshall is a small, intense woman with hair like fine copper springs. Her office is a museum of oddities, with maps, a skull, framed moth specimens, vials of soil, and a half-eaten bag of Mission tortilla chips stuffed under the desk. Her bookshelves are filled with a standard selection of biology texts spiced with titles like *Maggots, Murder, and Men* and *Death’s Acre*. Near her computer, she has taped up a bumper sticker that says, “Friends help you move. Real friends help you move bodies.”

Marshall came here four years ago to teach entomology. She describes her professional journey to WSU as a “twisty path” that included teaching junior high in Chicago and earning a Ph.D. in entomology at Michigan State University. While she was working on her doctorate, she stayed connected with the Chicago school and created science outreach programs for the students. She also found herself consulting with officers about bugs and the role they play in decomposition, a field still fairly new to crime solving.

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who are not necessarily looking at vet or medical school, she says. “Through their needs, I started the forensics club.” Over the past few years she has arranged for field trips with real homicide investigators and hard-core training in “man-tracking,” which once took her students on a backwoods manhunt near Priest Lake, Idaho. She also put them through her own forensic entomology experience, using real pigs as victims. “I have this relationship with the [WSU] swine center,” Marshall explains. She collects stillborn piglets and larger pigs that had to be put down. She deposits or buries many of the carcasses at Smoot Hill, a research preserve north of Pullman, where they can attract a “carrion community” of insects, mostly maggots, beetles, and flies. Other pigs get placed at special sites in northeast Washington and Idaho to be used in training professional investigators.

While forensic entomology is a relatively new field in the United States, the first recorded example of someone using insects to solve a crime dates back to 13th-century China. In 1235 A.D. Sung Tzu, a Chinese death investigator, wrote a book in which he described the story of a victim in a small village who was slashed to death with a sickle. After interviews failed to turn up a suspect, the local investigator asked the townspeople to bring their sickles to a meeting and lay them out. Just one drew flies, probably because there were traces of blood on it. The evidence pointed to the sickle’s owner as a prime suspect and prompted a confession.

At WSU, the history of forensic entomology goes back to the late Professor Paul Catts. In the 1980s and early 1990s, he and a few colleagues around the country pioneered the use of bugs in American criminal investigations. “They called themselves the ‘Dirty Dozen,’” says his wife, Dana Catts. Part of their mission was to encourage the use of insect evidence and to teach investigators the proper way to handle the bugs at a crime scene. Often evidence like maggots and flies were ignored or even washed off the body. Catts and his colleagues wanted officers and medical examiners to realize that insects could help pinpoint things like time of death, location of the crime, and location of wounds.

Catts set out to formalize forensic entomology, putting together guidelines and criteria for training experts in the field. Then he wrote the book on the subject. With Neal Haskell at Purdue University, Catts assembled Entomology and Death: A Procedural Guide, a small spiral-bound booklet to help scientists and officers use insects in their forensic investigations. Illustrated with Catts’s own whimsical drawings, the book details everything from how to get insects from a crime scene—“collect only those stages of insects which can be seen readily on the body”—to how to testify at a trial—“be objective, nonpartisan and scientifically honest.”

As a professor, Catts was an internationally recognized expert in parasitology and medical entomology. His expertise included insects that survive on living flesh. He worked to make the study of insects palatable to his students. He is perhaps most famous in Pullman for the “insect luaus” he threw for his students, where the menu often included honey bee pupae fried in garlic, tempura cockroaches, and cricket tacos. Catts held the buggy smorgasbord to get the students over their big anxieties about insects.

From his fly and live flesh work, it was a natural progression to dead flesh, says Richard Zack, a WSU colleague. “If you’re doing research on maggots in a body, you can see where you would get into forensic entomology.”

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has inherited Catts’s legacy. Like the well-known professor, she eagerly drops a group of students with a passion for forensics work into the ground to dig through soil and pick through bugs. She is constantly seeking opportunities to help local officers use insects in their investigations.

She makes time for extracurricular work, including several cold cases from King County and a recent murder nearer to Anatomy. In the latter, she played a role in helping officers identify a suspect. Marshall has also taught officers around the state the art of recognizing the signs and symptoms of a crime.

Marshall’s greatest success is that she infused a small group of students with a passion for forensics work and an appreciation for bugs.
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About the size of a human, it was killed somewhere else, dumped in one spot for a number of days, and then moved to a shallow grave. Knowing they would find useful insects at both sites and that there was a possibility of turning up new evidence in the bear’s death, Marshall pushed University of Washington and state game officials to let her and 10 students dig up the site of the first dumping and later exhume the victim.

“When she called me, I said, ‘Wow, you’re just like CSI,’” says Madonna Luers, spokeswoman for the Washington Department of Fish and Wildlife. Marshall’s was such an unusual request, getting permission for her wasn’t easy, especially since a crime had occurred, and an official investigation was underway.

Even if the person responsible for the bear’s death was a hunter with a license, to remove parts and waste a carcass is illegal, as is dumping it where he did, says Luers.

Because the paws seemed to be missing, game agents suspect the bear was harvested for parts that would fetch several hundred dollars on the black market. The paws, for example, are used to make soup as an Asian folk-medicine remedy for respiratory problems.

After some deliberation, the game department officials decided that since the bear remains could be a learning tool and they no longer needed the carcass for their investigation, they could give her access.

Once Marshall knew she had the bear, she completely changed her curriculum to focus on the animal. Where Louiza saw Jell-O, Marshall saw opportunity. She did her students, who quickly picked up her enthusiasm for the project. “This was a real case for us,” says Tiffany Schmitz, a senior majoring in psychology who plans to go into forensics work. “We wanted to see if we at all could help figure out how the bear had been killed.”

On two separate days this past fall, the students willingly combed over the initial dump site and the burial site and painstakingly sifted through the soil for evidence of insects and other materials. They created grids on the ground with string and markers and set to with trowels, shovels, and vials. On September 18, they went after the bear. The small forensics crew started mid-morning out at the edge of a field, next to a hog-wire fence. While the rest of campus was folding down tailgates and firing up barbecues prior to the 2 p.m. football game against Idaho, Marshall and her crew were digging in with shovels, nets, and bags.

“We soared the ground for live insects, took soil samples, and then worked our way to ground zero,” says Schmitz, who recalls the day as cold and overcast. “As we started to pull up soil samples, we could immediately smell the decay.”

Without taking a break, they worked straight through the morning. Four hours in, they got to their first signs of fur. “At this point, we’re not even using trowels, we’re using brushes,” says Marshall.

While the scene was gruesome and the smell awful, the students kept working. “At this point, the science really overtakes the yuck factor,” says Marshall.

Clearing away the cover of soil, several students climbed into the pit to lift out the bear. “It was pretty far along, but a surprising amount of tissue was left,” says Marshall. As they were putting the bear into body bags, Schmitz noted that all the students were treating the remains with extra care. She understood why. “I thought, this could be somebody. A real person,” she says.

The tissue was then gone, and the relocation by tractor could have caused new breaks and damage, making it more difficult to determine what injuries the bear had at the time it was dumped.

Still, the team found no evidence of a bullet. The bear was taken to WSU’s Veterinary Hospital to be X-rayed. It’s possible the bear wasn’t shot, but that it died by some other means, says Marshall.

With that information and some other leads, the game agent is still hopeful of catching the bear’s killer, says Luers. Laws were broken, an animal was killed and dismembered, and the bear is still a priority for the fish and wildlife department.

Though they haven’t yet solved the mystery of who brought the bear to the campus, Marshall says the team’s efforts were a success. “We were able to actually see in the ground what we’ve been talking about in class,” she says. She was able to give her students a real mystery to solve.

The bear lives on as a tool for teaching. Marshall left the hide on a hillside to weather through the winter, and she works on digirhinos in plastic to speed decomposition so future students can study them. And the hundreds of insects they collected now reside in vials in her laboratory.

Her greatest success is that she infused a small group of students with a passion for forensics work and an appreciation for bugs. An expedition to the Republic of Georgia

On a trip that in itself was a rare adventure into the Republic of Georgia, plant collector and former USDA scientist Walter J. Kaiser and I tracked down a rare species of wild chickpea (garbanzo). Our expedition last June to the former Soviet state took us to the heart of the Caucasus mountain region to explore and collect the wild chickpea.

An expedition to the Republic of Georgia. ©2005. Walter Kaiser examines the much-hunted chickpea, which he found rooted on a rocky hillock among grasses and Summit. recaulosus trentum
Ateni, Georgia, south of Gori.

ABOVE, RIGHT: Fred Muehlbauer collects seeds from the perennial chickpea on a steep, rocky slope near the village of Ateni, Georgia, south of Gori.

To the north, the Black Sea to the west, Russia over mountains to the north, and Azerbaijan to the east, Georgia is a place of mountains and valleys where many of our modern cereal and legume plants that are close relatives of the pea, lentil, and chickpea crops grown in Washington. It was a rare treat to go searching there, since for so many years Georgia has been under Soviet rule and closed to western scientists like Walt and me. Scouring the landscape with the help of Georgian botanist Maia Akhalkatsi of the Georgian Academy of Sciences in the capital city of Tbilisi, we easily found a wild pea species and a wild lentil species and made note of the beautiful wildflowers growing around us. But our most exciting and difficult find was the wild garbanzo, which we nearly missed in the rugged terrain.

We had a general location of the plant, left to us by botanists who explored the area years ago, but not a specific site. So we parked and hiked into the mountains. Our hunt had us scrambling up steep hillsides and sometimes actually scaling the mountainsides. About an hour of searching, we considered giving up. We were even in the car driving away, when Walt said, “We should go back.” I agreed. We convinced Maia and our driver to turn around.

About an hour into our continued search, Walt called out that he had found it. A huge stand of this wild chickpea. It was on a slope covered with rocks about the size of my fist. It was so steep and rocky, we had to lie on our sides to keep from sliding down. But that was good news, because the plant was apparently thriving in a niche where competing plants could not survive. As I crawled closer, I could tell the wild chickpeas were healthy, in full flower. They had many pods with viable seeds that we readily and happily collected. We celebrated that night with a bottle of good Georgian wine.

Collecting wild pea seeds in the Republic of Georgia

George has been a place of social struggle for two centuries since its annexation by the Russian empire in 1801. Although the state declared independence in 1918, during the Russian revolution, the Soviet Union moved in after three years. In fact, Soviet dictator Josef Stalin was born in the Georgian city of Gori. But he didn’t do the country any favors, executing thousands of Georgian nationalists. A statue of the dreaded dictator still dominates the city center.

Georgia finally became independent after the breakup of the Soviet Union in the early 1990s. Independence didn’t ease the country’s situation. Today it has a struggling economy and is still troubled with groups that want independence from the central government.

Bordered by Turkey and Armenia over mountains to the south, the Black Sea to the west, Russia over mountains to the north, and Azerbaijan to the east, Georgia is a place of mountains and valleys where many of our modern cereal and legume crops were domesticated as long as 10,000 years ago. This region is rife with the wild ancestors of barley, wheat, peas, lentils, and chickpeas, all of great interest to plant scientists for their potential for providing genetic material that could improve their cultivated cousins. In many cases these ancestors have genetic traits, like physiologic structure and disease resistance, that are lacking in our conventional crops. Crossing the wild species with our domestic plants could transfer those characteristics to our field crops and possibly increase yield or cut down on chemical inputs.

However, seed material from the Caucasus region has been missing from the U.S. Plant Germplasm Collection and has been unavailable for crop improvement research projects like ours. Walt and I had long wanted to visit Georgia to rectify that, but until recently, the country’s political problems had made it nearly impossible to travel there to collect plants for use in our research.

The prospect of getting samples of the wild species in the Caucasus became a reality with the breakup of the former Soviet Union and the willingness of scientists in Georgia to assist in our collection efforts. Our visit to Georgia was planned in close collaboration with Maia Akhalkatsi. Our route through the country was somewhat restricted by poor road conditions and recurring troubles in certain provinces.

Still, we covered about 6,000 km during our exploration. Dr. Akhalkatsi knew the country well and where the specific target species, Pisum, Lens, and Cicer, might be found. The Botanical Gardens of the Institute of Botany also had many species of plants from Georgia and a small collection of cultivated accessions of pea, lentil, and chickpea, of which we were able to obtain samples.

Besides the wild chickpea, we found several types of wild peas, two of which we discovered near the ruins of old churches. I think they may have been used in gardens tended by monks in earlier times. We also found and collected wild faba beans, numerous vetches, and other forage legumes. The military road, built during the Soviet time to connect Russia with Georgia, took us to the highlands near the Russian border, but its poor condition made it clear that the Georgians were not interested in keeping it passable. Nevertheless, the trip was worth the effort. In that highland area, we found an impressive array of wild flowering plants, including orchids, rhododendrons, and lilies.

The area is pristine and beautiful, with mountain meadows full of wild flowers and unusual species of plants. The lands of Georgia are a destination for botanists and naturalists from throughout the world. However, in keeping with the times and to help quench the world’s appetite for oil gas, a long pipeline is being built to transport the valued commodity from Azerbaijan to the Mediterranean Sea, where it will be pumped into tankers for worldwide distribution. While the pipeline may bring money into this struggling region, it may also threaten fragile ecosystems and endanger the wild and rare plant populations like our chickpea. We hope that in the coming years of development there, the wildland races of grains and legumes can be protected.

Fred Muehlbauer is a USDA/ARS research geneticist housed in the Department of Crop and Soil Sciences at Washington State University.
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The area is pristine and beautiful, with mountain meadows full of wild flowers and unusual species of plants. The lands of Georgia are a destination for botanists and naturalists from throughout the world. However, in keeping with the times and to help quench the world’s appetite for oil and gas, a long pipeline is being built to transport the valued commodity from Azerbaijan to the Mediterranean Sea, where it will be pumped into tankers for worldwide distribution. While the pipeline may bring money into this struggling region, it may also threaten fragile ecosystems and endanger the wild and rare plant populations like our chickpea. We hope that in the coming years of development there, the wildland races of grains and legumes can be protected.

Fred Muehlbauer is a USDA/ARS research geneticist housed in the Department of Crop and Soil Sciences at Washington State University.
Molly McNeil ’05

Fourth-generation Cougar.
Aspiring elementary school teacher.
Loves the Nordstrom Anniversary sale.
A small-town kid with big-time dreams.
Member of the WSU Alumni Association.

“I joined the Alumni Association because I felt it was the right thing to do. My parents are Life Members, and I come from a long line of Cougs. I even joined before I graduated!”

Membership Matters.
Join Today:
Washington State University Alumni Association
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 TRACKING THE COUGARS

Sue Rahr graduated from Washington State University in 1979 with a degree in criminal justice. In January 2005 she was promoted from King County chief of field operations to sheriff. She is the first woman to be sheriff of King County. The following is excerpted from an interview with Washington State Magazine’s Hannelore Sudermann, February 22, 2005, at the King County Courthouse.

Take your opportunities.
I was engaged to be married right after I graduated from college. My husband and I set a wedding date, sent out invitations. Everything was ready to go, and I got a call early in July from the Sheriff’s office saying, “You have a job; we’re going to hire you.” I said, “Great, when?” She said, “July 23.” I said, “I’m getting married July 28th.” She said, “Either now or next year.” I called my fiancé and said, “Guess what? The honeymoon’s cancelled. The good news is I got a job. So we’re not going to starve, and we’re going to be able to buy a car.”

Find your own path.
I thought that there were more women in law enforcement at the time. I didn’t realize I was really at the front end. When I started working, my first assignment was at the southeast precinct. The women’s locker room was a janitor’s storage room that had been converted. To get to the women’s locker room, we had to walk through the men’s locker room. Luckily I came from a big family with a lot of boys, so seeing men in their underwear wasn’t that shocking.

Show your mettle.
I was 22 years old. I had a very sheltered life. I think my new coworkers looked at me like, “What’s she doing here?” But once I started working side by side with them, they became very accepting. I got in my first fight just three or four months on the job. Once that happened, I think everybody, myself included, breathed a sigh of relief.

Know yourself.
It was one of those “aha” moments, I guess. I worked alone in a patrol car. I had to learn right away that when I was doing my job I had to survive by my verbal skills or my physical skills. I got a call about a drunk man at a mini-mart disturbing customers. He wasn’t a huge guy, but he was pretty stocky, like 5’11, maybe 180 pounds, pretty muscular. He was drunk, drunk and obnoxious, and bothering people. Well, I walked up to him, and I was feeling pretty full of myself, and I was going to use my excellent verbal skills to convince him that he would be better off to just let me give him a ride to detox than to arrest him. I was trying to reason with him. As I was trying to talk with him, he ballied up his fist and just slugged me as hard as he could on the side of my head. And it didn’t hurt. This was the “aha” moment for me.

Use your anger.
As soon as he hit me, I was instantly angry. All I could think of was “You s.o.b., I’m trying to be nice to you, and you hit me.”

WASHINGTON STATE MAGAZINE | SUMMER 2005 43
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me. As soon as the anger hit, the adrenalin rush was right there with it. With the adrenalin rush came a real surge of strength and resolve to take care of business with this guy. It was very clear right away that this was not going to be a nice ride to detox. So I lunged into action. I lunged forward, grabbed him by the hair, pulled him down and kicked him right in the groin as hard as I could. The next “ahah” moment was, he was just crumpled and fell to the ground. And that felt great. That was a real turning point both for me and my coworkers. Once they could see we were there to work and you weren’t afraid, that’s all they wanted.

Balance career and family. It’s a very hard career to mesh with a family. I am lucky to have had the opportunity to speak to groups of women and tell them, “Don’t think you can have it all.” When my kids were little, I went through a time of being very angry with what I called the feministic movement. When I was in college what I read and what I believed was, you can have it all, and by God, if you want to have it, you are going to have it as a career as well as a family. And as soon as my first son was born, I remember thinking, “Oh forget it, I changed my mind. I don’t want a career. I want to stay home with my baby.” It took me several years to come to terms with the career decision I had made. What I discovered was I had to make concessions on both sides. I had to go into career assignments that were less demanding when my kids were younger. When I am not at work, I am home. I am focused on my family. I think that’s how I came to some peace with my view of life. I think that’s why I’m home, I’m 100 percent home.

Hang on to your faith. When there have been points in my professional life where I have completely lost faith in humanity. When I was working sex crimes, I became an animal lover. I thought, “Animals don’t do these things. Animals are so superior. Humans are so disgusting.” Having kids really helps at home. Our family is really very traditional and very different. When my boys were little, I was the PTA president. I could see all these wonderful good things going on in the community. That really helped to offset the bad things that I was seeing worked as a cop. I remember basic training starting around one year. There was the flag salute and kids in uniforms. I just had tears running out of my eyes, thinking, “This is so good.” I didn’t have that. I think I would be a lot more cynical than I am.

Be ready. Training was on the short list to be sheeplike was actually kind of an awkward time. I had my job to do running field operations, and Dave Reichert was still the sheriff, and people were making some assumptions. It was a little awkward there until the transition actually took place. I think that during the course of my 25 years opportunities have come available to me. I’ve got two kids that are grown, and I keep telling them, “Make your own opportunities.” I think there is a lot of truth to that. There’s a little bit of luck in it, too. If you prepare yourself well, you can take advantage of an opportunity when it comes along. I certainly haven’t sat back and waited for things to be dropped in my lap. The whole idea of things being dropped on you is that’s all they wanted. To work and you weren’t afraid, both for me and my coworkers.

He and his fellow paramedics typically responded to emergency calls by driving as fast as possible to their destination. If they arrived in fewer than seven minutes, they were doing well. Usually, though, they weren’t fast enough. Only about 20% of the 200 people they tried to save survived. But as one of the developers of the most popular portable defibrillator, Cole has since contributed to saving tens of thousands of lives.

Tracking the Cougars

Hang on to your faith.

Because it required less energy, the defibrillator developed by Cole and his research group could be lighter and smaller by a factor of five, making it portable— and ubiquitous.

CLINT COLE (’87 B.S. Comp. Sci., ’00 M.S. Elec. Eng.) vividly remembers the drama of trying to save lives as a paramedic in the 1980s.

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More than six feet tall and a little uncomfortable at his desk, Cole looks more like a firefighter than the inventor, CEO, and college instructor he is now. A native of Issaquah, he first came to Washington State University in 1979 to study computer science. He also became a campus fireman. Soon he realized that academics weren’t his priority. So for the next five years, he traveled the country working as a paramedic. He returned to WSU in 1985 and received his undergraduate degree in 1987.

Cole was working toward a master’s degree in electrical engineering, when he heard his advisor talking with a Hewlett-Packard representative one day about a project to develop a new defibrillator. So he went to work for Hewlett-Packard, designing chips and circuit boards for the new machine. From there, he went to Seattle-based Physio-Control, joining a small team of research engineers who were looking for cheaper and easier ways to restart a stalled heart. But the company was under constant investigation by the federal government, and Cole and his fellow researchers were asked to focus their work on re-engineering manufacturing processes.

Meanwhile, Cole and the team found a way to make a portable defibrillator. Over several months, they told their bosses about it, insisting that they needed to start the work immediately. Finally, one member of the team threatened to quit and take the research group with him.

In a matter of days, the entire group of five found themselves unemployed, and in 1992 they started a company called Heartstream.

Heartstream’s innovation entailed the use of a biophase wave form to deliver a defibrillation shock without the energy requirements of earlier defibrillators. Because it required less energy, the machine could be lighter and smaller by a factor of five, and therefore portable. It hit the market in 1996, and soon after, the group sold Heartstream to Hewlett-Packard.

The number of machines sold has now exceeded 100,000—and they’re everywhere. No longer is it necessary to wait the crucial seven minutes for paramedics to arrive. The new defibrillator can get to a patient almost instantly. According to a Seattle study, portable defibrillators save 2,000 to 4,000 lives in the U.S. annually.

Now married, Cole joined the WSU faculty in 1997.

Having left a cutting-edge engineering position, he realized that the curricula at WSU were not taking advantage of the latest digital design tools and methods. In his entry-level digital design classes, for example, the circuit boards his students were using enabled them to design and build only the simplest circuits. His advanced students were limited to designing circuits on paper, and thus the opportunity to actually try them out.

So Cole designed a circuit board that students could use for a variety of projects, from simple circuits to complex microprocessors.

Next, he designed an advanced version and built 400, 300 of which he sent to colleagues at other universities. They were well received, and students started designing.

Soon he was getting calls from universities nationwide.

In 2000 Cole and a former student, Gene Apperson, founded Digilent, Inc. to manufacture and market the boards to schools and colleges nationwide. Since then, the pair has designed more than 50 products, which are used in more than 80 universities worldwide.

The company now has seven full-time employees, including Apperson and Cole, who don’t receive a salary—and a new director, enabling Cole to focus on his teaching.


Thomas, who was born to him and his wife, Jamie (4) and William (2).

—Tom Hilding

CLASS NOTES

1950s

Lino D. “Don” Caron (’50 For.) served three years in the U.S. Army and four years in the U.S. Forest Service in several capacities, including district ranger. He served ten years at the John Muir Society state coordinator in Washington, D.C., and later in Idaho, Montana, and Wyoming. He retired in 1966 and lives near Boulder, Montana. 

Bernice (Bunny) Levine (’51 Psych., Cliffside Park, New Jersey, has pursued her lifelong passion for acting in New York and Los Angeles since retiring as a librarian. Her recent appearances include spots on Everybody Loves Raymond and The Colbert Show.

T. Peter Radenacher (’51 An. Sci.) works for the American Cancer Society in Memphis, Ohio, and consults with volunteers throughout the state, organizing fund-raising golf tournaments. 

Robert Feen (’52 Arts Ed.) wrote the lead article of the final issue of Outdoorsman, and worked for the National Outdoor Leadership Foundation. 

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Thomas, who was born to him and his wife, Jamie (4) and William (2).
“It’s a very hard career to mesh with a family,” says Sheriff Rahr. “I am lucky to have had the family I have. I know when to step away. That’s all they wanted. It’s just not worth creating heartache at home. It was easy to do that up.

Balance career and family. It’s a very hard career to mesh with a family. I am lucky to have had the opportunity to speak to groups of women and tell them, “Don’t think you can have it all.” When my kids were first born, I went through a time of being very angry with what I called the feminist movement. When I was in college I heard what I thought and what I believed was, you can have it all, and by God, if you want it, you have to be anything, you have to have a career as well as a family. And as soon as my first son was born, I remember thinking, “Oh forget it, I changed my mind. I don’t want a career. I want to stay home with my baby.” It took me several years to come to terms with the career decision I had made. What I discovered was I had to make concessions on both sides. I had to go into career assignments that were less demanding when my kids were younger. When I am not at home, my kids come first. I am very focused on my family. I think that’s how I came to some peace with my job. In the kids’ view of me, I’m home, I’m 100-percent mom.

Hang on to your faith. I think it’s very important to come to terms with the career. My kids’ view of me is, ‘Mom. When I think of baseball season starting, I certainly haven’t sat back and waited for things to be dropped in my lap.’

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Gordon Morgan

Joseph (Jr. Ind. Tech.) and Carol Ackermann (‘62 Ed.) recently retired. They spend their summers in Yakima and their winters in Arizona.

Lyle Emeln Russell (‘63 Math.), Tacoma, retired May 2004 from City of Tacoma Finance Department, where he was an applications system and computer programmer. He is active in many nonprofit organizations and is secretary for National Alliance for the Mentally Ill of Pierce County.

After a 27-year career with the federal government, Samuel L. Edelman (’46 Econ., Stat., Econ.) retired, Washington, D.C., retired August 2005 as director of public affairs, Office of Thrift Supervision, an agency of the Treasury Department.

Gordon Morgan (‘54 Phl. Soc.) has been appointed University Professor at

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Katherine McHugh was the only pharmacist in a pharmacy in Portland. She has her own patients and writes prescription recommendations for their doctors to sign. After a few years of working there, she started a business with two other pharmacists who preferred to work together. She now has about 15,000 members and has been honored 10 times by revenue.

Before starting her own pharmacy, she worked as a pharmacist at the University of Arizona, where she had just graduated. She became a member of the National Institute of Standards and Technology (NIST) for his outstanding achievement in building and strengthening ties between NIST and industry. He established a committee to address critical research needs in the coatings and sealants industry. He was also co-chair of the 2004 and the 2005 American Coatings Foundation Award and the 2004 John A. Gordon Best Paper Award.

In addition to working for women's hormone replacement therapies, they have left pharmacists who resisted the idea and have found others who agreed to go along with it.

Unlike synthetic hormones, the chemical structure of the hormones Johnston dispenses is identical to that of those made in the human body, she says. These bio-identical hormones are derived from soybeans, garlic, or tongue through a chemi- cal process to become pharmaceutical-grade hormones, she says.

In addition to treating women for perimenopause symptoms, Johnston treats men for declining testosterone levels and women for menopause. She says, “With saliva, you are primarily looking at the levels of free hormone, which is the hormone that has the most effect.”

The saliva test measures estrogen, progesterone, testosterone, DHEA, and cortisol hormones. The results are compared with the normal ranges and the patient’s symptoms. Because nutrition and exercise play a “huge” role in the effect of the hormones, Johnston talks with the patient about those factors before she writes out her recommendations and mails them to the patient’s phy- sician to sign. “Now, since one of the physicians sign the recommendations and mail them back,” she says.

A few physicians in the Portland area are working with her now, writing prescriptions for busi- nesses. Johnston is hoping more will start, because she can’t take on many more patients—she has about 70. But she can fill a lot more prescriptions.

—Lorraine Nelson

Falling pharmacist uses chemistry to identify natural human hormones

Forget about over-the-counter pills and creams to reduce hot flashes, insomnia, and other symptoms of perimenopause. Don’t bother with mass-produced synthetic hor- mones, either. Instead, why not use chemistry—bio-identical hormone replacement—to duplicate natural human hormones, and then concoct the right dosage for each individual woman? Johnston calls this individualized procedure “compound- ing.”

Alison Johnston (’84 Pharm.) started doing just that in January 2003 in Portland, Oregon. She reports it to be working.

Johnston is the only pharmacist in a com- pound-only pharmacy, Marquis Compounding Pharmacy in Portland. She has her own patients and writes prescription recommenda- tions for their doctors to sign. A few of her patients believe so strongly in this hormone replacement therapy that they have left physicians who resisted the idea and have found others who agreed to go along with it.

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Tracking the Cougars

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Instead, why not use chemistry—or bio-identical hormone replacement—therapy that they had left in the pharmacy for medical use, because she can’t take on many more patients—especially those who come in急需 their medicine and seem to be working.

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Johnston is the only pharmacist in a compounding-only pharmacy in what is called this individualized procedure "compounding." It has been especially useful for women who have a variance in their hormone levels.

She relies on a saliva test instead of a blood test to determine hormone levels in the body. Saliva testing does not require a patient’s order and is easy to do at home. It takes a skill to accurately determine hormone levels in blood, Johnston says.

"You are looking at the total hormone levels, which include both free hormones and hormones that are tightly bound to other proteins," she says. "With saliva, you are primarily looking at the levels of free hormone, which is the hormone that has an effect."

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Tracking the Cougars

THE DOCTOR'S OFFICE

“Healthcare is so complicated. People have a difficult time understanding the constant changes, procedures, and pricing,” he says. Traditionally, hospitals were low volume, high margin businesses, he explains. “We could charge a lot, and so we didn’t have to do many procedures. All that has changed. We are definitely low margin and dependent on our local market share; volume is essential to doing a lot of things.”

McLean’s hospital ties date to 1975, when he was director of public relations at St. Mary’s Medical Center. Evansville, Indiana. Since 2001, he’s the one who answers the phone in the president’s office at Mount Carmel Hospital in Covilve.

“Healthcare is so complicated. People have a difficult time understanding the constant changes in policies, procedures, and pricing,” he says. Traditionally, hospitals were low volume, high margin businesses, he explains. “We could charge a lot, and so we didn’t have to do many procedures. All that has changed. We are definitely low margin and dependent on our local market share; volume is essential to sustaining services such as obstetrics.”

McLean was the fourth administrator hired in as many years at North Valley Hospital in Tonasket in 1994. Intent on reducing the debt and increasing cash flow, he initiated a credit check for entering patients. They revised the policy. The hospital board stood behind him. Many thought the hospital would fail. It didn’t. Under his three-year watch it was “re-engineered,” acquired a new 70-bed nursing home, and broke into black ink.

At Whitman Hospital and Medical Center in Colfax, McLean found “a fragile situation” in 1987. Lost the previous year totalled $233,000. The Palouse area’s 70,000 residents didn’t seem enough to support 132 hospital beds in Colfax, Pullman, and Moscow, Idaho. Whitman appeared to be in the greatest jeopardy of folding.

McLean eliminated a number of positions from 1994 to 1998, and streamlined a successful drive to create a public hospital district that encompassed outbound communities. By year’s end the hospital showed its first positive balance in six years—nearly $50,000. In 1994 and 1995 Whitman was among the top 100 hospitals in the country by a national HCIA-Mercur ranking.

McLean assumed his duties at Mount Carmel Hospital, Colville, in August 2001. For the third time, he was in a red-ink situation.

He set about a “global turnaround” through staffing changes, system support, and having Mount Carmel named a critical access hospital—a designation by Congress for rural hospitals that provides a boost in payments to help keep vital community services open.

Mount Carmel is not only making a profit now, but has a $20 million renovation and replacement of the 1952 facility.

—Pat Caraher ’62

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Listening to people and finding solutions has been his forte during a 10-year career in hospital administration. Over the past two decades, he’s become new life into healthcare facilities in rural eastern Washington.

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Andrew Howell (“95, Ag Econ.) relocate
central Washington, D.C., where she will
work with Congressional members and
their staffs, agencies, and associ-
ations as federal agriculture liaison for
Volkswagen Group.
Sara Young (“95, SoL Sci.) was hired by
David Evans and Associates as an envi-
ronmental planner in Bellingham.
Ers Anderson (“96, D.V.M.) brought
Ballston Spa Veterinary Clinic in New
York State with his wife and business
partner, Dr. Dianita M. Salamun.
Art Bernstein (“97, SoL Sci.) directed, shot,
and edited just flush, an independent
film that played at Garland Theater, Los
Angeles, California, in December.
Shelly Goss (“98, Bus. Admin., Poli-
Sci.) is a executive director for the East
Great Falls Red Cross chapter, North
Dakota.
Michael Rule (“98, M.A. Bus. Admin. &
Leadership Stud.) is CEO of Phantom Lake
YMA, Makawonic, Wisconsin, where
he lives with his family.
Franklin Taylor (“98, Mech. Eng.), ’01
M.S. Mech. Eng.) is a mechanical
design engineer for Itronix in Spokane.
recently married Kelly Ross and resides
at the University of Washington.
Amy Moore (“99, Jr. Info. Sci.) is an
assistant manager at the Spokane office of
RDO Seidman.
Loris Worthy (“99, Hum. Nat.) is a
clinical dietician at St. Joseph Hospital
in Bellingham. She recently married
Craig Hougen.
2000s
Laura Eve Ellsworth (“99, Hum. Dev.)
works to promote organ tissue dona-
tion awareness as a program coordina-
tor for the Oregon Donor Program. She
lives in Vancouver with her husband.
Ryan Goodell (“99 Bus. Admin.) is an
associate attorney for Happen Every
Anderson & Paul, Spokane.
Cody Janson (“00 Civil Eng.) and Amy
Rudyg (“00, Bus. Adm.) were married
April 24, 2004. They met as next-door
neighbors while at WCU and currently
reside in Auburn.
Holy M. Nakamoto (“00 Comm. and
Timothy S. Yap (“12, Arch.) were married
October 17, 2004. They met through the
Asian American Pacific Islander Student
organizations. They reside in California.
John Roberts (“00, Bus. Adm.) was hired
at North Cascades National Bank as man-
ger of the bank’s Omak office.
Jennifer Smith (“00 Food Sci.) won first
place in Daino’s 2004 Knowledge
Award, new product contest for creat-
ing a new product. She resides in
Woodinville.
John Cairas (“01 Chem.) is regulatory
affairs specialist at Hollister Stier in
Spokane.
Jonathan Harris (“02 Fine Arts) is a
creative coordinator for Creative in
Jane Pacific (“02 Comm.) recently
graduated from the Austin Poli.
Academy.
Amy Christine Emrich (“02 Hotel
Manage.) is an assistant general manager
at the Embassy Suites in La Quinta,
California.
Chris Harrison (“03 Bus. Admin.) is a
staff accountant at Magnavox, Michi-
agon & Co.,鑫泽, Allaire, Maine.
Kim Cramer (“04, M. Merch., &
Sport.) is a manager trainee at JCPenney
in Vancouver.
Daniel P. Michael (“04 Comp. Sc.)
launched his consulting firm
through the Asian American Pacific
Islander Student organizations. He resides
in California.
Jack McPherson (“03 Bus. Admin.)
8, Wilbur.
1940s
Rune Ferdinand Goranson (”40, Ag.
Ecn.) is executive director for the East
Cascades Natural Resources District in
Bend.
Robert Burch (“43 D.V.M.) , 85,
Velma Minnick Canaan (“43, ’47 Ed.),
Velma Minnick Canaan (“43, ’47 Ed.),
Velma Minnick Canaan (“43, ’47 Ed.),
Velma Minnick Canaan (“43, ’47 Ed.),

IN MEMORIAM
1920s
Mabel Gladys Stone Webber (“21,
B.A.) , 110, December 8, 2004,
Spokane.
1930s
Velma M. McPherson (“30 Home
Luther E. Cliff (“30 Civ. Eng.),
95, August 22, 2004.
A. Sydney Shugland (“33 Serv. Eng.),
95, January 15, 2005, Walla Walla.
Clifford Eric Frost (“33 Chem.),
98, October 25, 2004, Vancouver.
Leonard W. Macey (“33, B.S. Arch.) ,
95, October 13, 1989, Seattle.
Harry Daniel Gleason (“33 Dairy
Prod., ’32, December 28, 2004,
Olympia.
Hunter A. Mock (“36, Mech. Eng.),
Glenn Alliger (“37 Chem.), 90, October
Thomas Cameron (“37 Mech. Eng.),
88, November 22, 2004, Pullman.
Edna Jane Thomas (“38 Mas.) , 88,
Kathleen “Kathy” Willett (“38 SoL Sci.)
, 87, January 7, 2005, Seattle.
Betty C. Renton (“38 Ag. Econ.),
87, February 17, 2004, Redmond.
Elthor F. Bodhaine (“39 Home Eco.) ,
86, October 1, 2004, Oro Valley, Arco-
na.
Esther Melissa Pickett Dillon (“39
Chem.), 87, December 10, 2004,
Bellingham.
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vation and replacement of the 1952 facility.
A former “Youth for Nixon” tries to win a place in Christine Gregoire’s majority

By contrast, Bennett says, Gregoire “upped the ante” around the controversial issue “as hard and fast as she could.” (A Gregory spokesman referred questions to the state Libertarian Party candidate. Yet in a 2002 run for state senator in Oregon, her father backed Republicans, and she had decried as “Youth for Nixon.” After moving to Colorado, she discovered the emerging Libertarian Party, which spoke to a belief in personal responsibility and limited government.

“What it comes down to is, Libertarians think that individuals are capable of living their own lives, and Democrats and Republicans don’t trust individuals,” she says.

In Colorado during the early 1980s, Bennett was the Libertarian Party’s state chair, organized a national convention, and twice ran for state representative, collecting up to 4.5 percent of the vote.

After moving to Seattle, Bennett again was a party leader before turning her focus to her full-time business, where she indulged her interest in anthropology while teaching pre-Colombian sites in the U.S. and Canada.

She sold her franchise agency in 2000 and made a run for lieutenant governor on the platform that she would abolish the office. Her campaign resonated, and she collected 8 percent of the vote, a big showing for a third-party candidate. Yet in a 2002 run for state representative and in last year’s gubernatorial race, Bennett said the media and debate organizers largely ignored her.

“If nothing else, that’s what this [election] shows, that voting third-party can make a huge difference,” says Jan Prince, Bennett’s friend who has run Libertarian campaigns in Colorado. “She is so clear about the issues and morality behind it, and she is so passionate about it. I’ve never seen anybody as good as she is.”
By contrast, Bennett says,Gregoire “up- daded” around the controversial issue “as hard and fast as she could.” (AGregoire spokesperson referred questions to the state Democratic Party, but the chairman didn’t return calls for comment.)

Although Ross opposed gay marriage rights in Washington, a campaign spokesman- woman agreed with Bennett that the issue likely cost Gregoire. “ChristineGregoire, to the dismay of many in her base, refused to take a position on that,” Mary Lane says. “Bennett probably took quite a chunk out of what might have been Gregoire votes.”

A representative of the Seattle Metropol- itan Elections Committee for Gay, Lesbians, Bisexuals, and Transgendered Persons, which rated Gregoire ahead of Bennett, says there simply isn’t enough data to prove which major-party candidate Bennett hurt.

Regardless of what caused the tight race, Republicans took the dispute to court seeking a recount. They offered evidence that more votes than the 129-vote margin were tainted— including ballots illegally cast in the names of felons and dead people. The outcome of the legal turmoil was unknown as this issue of Washington State Magazine went to press.

Meanwhile, Gregoire appointed an elec- tion reform task force, which developed a 15-point plan to improve the process and increase voter confidence. The task force includes as co-chairs Secretary of State Sam Reed (‘03 Soc. Sc.), ‘08 M.A. Poli. Sc.), WSU president emeritus Sam Smith, and former state legislator Larry Sheahan (‘82 Poli. Sc.).

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Jack T. Kimbro, 81, January 24, 2005, Seneca, California. Taught mechanical engineering at WSU for 52 years, and retired in 1966.

Sloppy “W” Kircher, 93, Salem, Oregon. WSU head coach for four years.


Leila Sturgis Old (‘51 Ed.), 78, December 26, 2004, Albion. In 1948, she began teaching various home econom- ies classes at WSU, including dressmaking, dress pattern making, and weaving.

Deborah Plambeck, Jr., 70, October 15, 2004, Spokane. Worked as assistant steam engineer at WSU for 18 years.

Harold “Hal” Romberg, Jr., 75, October 5, 2005, Spokane. Worked as former WSU Regent.


Sarita E. Miller, 74, October 21, 2004, Pullman. Taught psychology at WSU for 25 years and retired in 1991. She became a leader of the general biology program in 1981 and received the WSU Faculty Excellence Award for teaching in 1985.

Last October, when Dr. Irwin “Ernie” Rose learned he had won the 2004 Nobel Prize in chemistry, he remembered the influence of the late Herbert Eastlick on his life. “Dr. Eastlick was an inspiring teacher,” said Rose. “He really influenced me in terms of getting into the spirit of research.” Now an enzymologist and emeritus researcher at the University of California-Irvine, Rose attended Washington State College in the 1940s when Herb was professor of zoology and the premedicine advisor.

Many of Eastlick’s former students have expressed similar appreciation for the mentoring he and his late wife, Peg, gave in abundance. More than a few credit Herb for getting them admitted to medical, dental, or veterinary schools. Peg, too, kept in touch with her former veterinary pathology students. Eastlick alumni serve as teachers, health professionals, researchers, and academicians around the world. As Herb observed in 1979 during the dedication of Eastlick Hall at Washington State University, the Eastlicks’ own achievements “have been magnified tremendously by their students’ superlative accomplishments.”

Eastlick demanded excellence. He called himself a “taskmaster and an autocrat in the classroom.” But his concern was for his students, and he had a knack for stimulating them to the utmost. “I work them diligently in the classroom,” he said, “not for passing tests, but to prepare them for life.”

The Eastlicks and many of their students became lifelong friends. Long after they retired, Herb and Peg received hundreds of cards and letters each Christmas. As Herb once noted, “My life is tied up in these young people. I know some of these students better than their parents do.”

The Eastlicks further demonstrated their devotion to WSU by pledging their $4.5 million estate to benefit future students and faculty. After their deaths—Herb’s in 2002 and Peg’s in October 2004—their estate was apportioned to the Herbert L. Eastlick Scholarship, the Herbert L. and Margaret G. Eastlick Scholarship, and the Herbert L. Eastlick Distinguished Professorship, as they had directed. Including the estate, their lifetime gift total is more than $6.6 million—the fourth largest individual lifetime contribution in WSU’s history.

Through inspired teaching, supportive mentoring, and visionary gifts for future students and faculty, the legacy of Herb and Peg Eastlick will remain a vital force at Washington State University for generations to come.
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Evelyn Fox Keller, a well-known social critic and professor of philosophy of science at MIT, has been reporting how we are in for another new discoveries? How does society make function to maintain and, ultimately, decisions. Recently, genes have been reported to through chapters on topics that range from ethical and cultural decisions. Ultimately, the knowledge of our mistakes and seeks humble rather than shame us. as a science to the mix of factors—including emotion, values, religion, experience, and common sense—upon which they base moral and ethical decisions.

The book opens with a definition of DNA, how it was discovered, and why it is so important to our understanding of ourselves. It goes on to discuss the modes of transmission of genetic information through various species. The book concludes with a discussion of the future of genetic research. It is a comprehensive and well-written book that will be of interest to anyone interested in the field of genetics.
Evelyn Fox Keller, a well-known social critic and professor of philosophy of science at MIT, termed the 20th century the “Century of the Gene.” Five years into the 21st century, it can be easily argued that we are in for another century full of genetic wonder, hope, frustration, and fear.

It is impossible to read a newspaper or watch the news without hearing about the discovery of a gene that will affect all of our lives. Researchers have been responsible for problems ranging from computer shopping, obesity, and alcoholism to breast and prostate cancer. How do non-scientists wade through the hype of these new discoveries? How does society make sense of what is being put into our food and into the umbrella term “genetic modification?”

How do we decide if it is ethical, or smart, for scientists to clone humans or to manipulate crop plants?

In their book, *False Roads to Manhood*, Frank Chase, Jr. was on a bad road, and he knew it. Torn troubles led to theft, young adulthood led to illegal drugs and drinking. There was a divorce. He didn’t know where to turn. As a young soldier he finally found his way. He became a Christian. He turned his life around and began writing a book in 1995 to share his experiences.

**False Roads to Manhood**

By Frank Chase, Jr. ’85

As a society we are asked to make informed decisions on complex issues such as stem cell research and the labeling of our food based on its level of genetic modification. We have a lot of homework to do, and this book is a good start.

For more information, see www.bn.com or www.columbia.edu/cup/catalogdata/02113.02131920.1020-HTM.

—Stephen Jones

A professor in the Department of Crop and Soil Sciences at WSU, Stephen Jones teaches graduate courses in advanced classical genetics and the history of genetics.

### False Roads to Manhood

By Frank Chase, Jr. ’85

*Washington State Magazine, SUMMER 2005*
WASHINGTON'S OLDEST APPLE TREE: Mike Welding must walk under the railroad overpass to visit the oldest apple tree in the state during his noontime strolls along the Columbia River in Vancouver. He wishes the landscape still looked like it did when the tree was planted at Fort Vancouver in 1826. Now it occupies a tiny green parcel sandwiched between elevated railroad tracks, State Route 14, and I-5.

As the U.S. population ages, an increasing number of people suffer from age-related bone problems, such as arthritis. Being able to develop a bone imitation with similar physical, mechanical, and biological properties as real bones would be invaluable to the medical community.

A team of Washington State University researchers— including Amit Bandyopadhyay, Susmita Bose, and Howard Hosick—is looking to do just that, thanks to a $750,000 grant from the W.M. Keck Foundation to establish a laboratory for biomedical materials research.

Part of WSU's new Bioengineering Research Center, the Biomedical Materials Research Laboratory will allow the research team to develop new bone implants, structures, and bone-grafting materials. Currently, they are developing calcium-phosphate-based ceramic scaffolds to improve bonding between implants and human bone. Using nanoscale ceramic materials, they hope to build porous scaffolds, permitting bone cells to grow while the scaffold slowly dissolves into the body and is replaced with bone cells.

They also hope to better understand the process of bone regeneration and interaction with implant materials at the cellular level. Thanks to the team’s research, future implants could last much longer than the average 10-year life span of those currently in use.

WSU will also become the first academic institution in the United States to use laser engineered net shaping (LENS) technology to develop porous metal-ceramic implants for load-bearing applications. Unlike the implants now in use, which, due to their density, weaken surrounding bone and implant bonds, porous implants would allow bone cells and connective tissue to grow into the structure, yielding a stronger version of bone.

Eventually, the team hopes to develop a bone replica based on a patient’s CT (computed tomography) or MRI (magnetic resonance imaging) scans. “By bringing these world-class researchers from different disciplines together, a novel research program has been developed at WSU which allows engineering and science to help address significant societal needs,” said Jim Petersen, vice provost for research. “This grant ensures that WSU will remain a leader in the development of these important technologies.”

Founded in 1954 by the late W.M. Keck, founder of Superior Oil Co., the W.M. Keck Foundation supports pioneering efforts in medical research, science, and engineering, as well as undergraduate science and humanities education.
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Ruth Andrews ’42 is a loyal Cougar and is passionate about Washington State University civil engineering students.

Ruth created her WSU legacy to honor the commitment of her late husband George (’41 B.S. Civ. Engr.) to the College of Engineering and Architecture and the Washington State Department of Highways.

A portion of her estate will be added to the George H. Andrews Memorial Scholarship, which she established in 1988 to support WSU civil engineering students interested in transportation. Ruth’s memorial to George inspires and motivates the best and brightest at WSU, continuing the Cougar tradition of excellence.

For more information about creating your legacy, contact the Gift Planning Office at 800-448-2978, gift-planning@wsu.edu.