

CONNECTING WASHINGTON STATE UNIVERSITY, THE STATE, AND THE WORLD • FALL 2003

Washington State

m a g a z i n e



COVER
STORY

A Place at the Table—*Washington Farmers Seek Their Fair Share*
Tuscan Tastes • Street Vet • Classical Turkey • Happy Cows, Contented Ranchers

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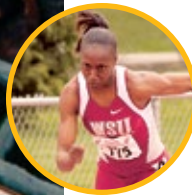
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54 books, etc.

60 a thousand words



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LETTERS



ROBERT HUBNER

"Roto" Dining Hall

Ah, the "Roto," as we used to call the Rotunda [more correctly, the Stanton J. Hall Rotunda, as they had to find something to name after him that wasn't a "hall"]. I used to walk by it every day for two years on my way to campus.

But wait! "It is the only dining hall on the south side of campus, where 60 percent of the students in residence halls live?"

While it has been 26 years since I lived in 1135 Orton Hall, giving me two years of sunsets looking over Rogers Hall and the Stephenson complex, I can't imagine that both the Rogers-Orton Dining Hall and the Stephenson Hall are both gone. I worked far too many breakfast shifts in R-O under the watchful eyes of Mrs. Million and the redoubtable Miss Kaiser. Say it ain't so, Bronco Billy!

Ben Andrew Hein '80
Hollywood, California

Rogers-Orton Dining Hall was converted into the WSU Children's Center in the spring of 1986. The dining hall in the Stephenson Residence Complex has been the central production kitchen/bakery for all the campus dining halls since the spring of 1989.

PANORAMAS

Remembering Professor Drake



Thank you for writing an article on Dr. Charles Drake [Spring 2003 issue, "In Memoriam"]. I was fortunate to have him as a professor and friend. I was in his last Bacteriology 101 class. Everything you said about him was so true. A lot of students relied on his bonus questions at the end of his exams.

I got to know him more as a friend. We both loved to fly. There were a few times that we went flying together. He was a very good pilot.

I enjoyed having dinner with him and Audrey at their home. The joy of each visit was: "Mamma, bring us some wine."

You allowed me to visit back in time with an old friend through your article.

*Ray Osman '84
Vancouver*

Thanks for the memories



WSU SPORTS INFORMATION

A heartfelt word of thanks to all my former baseball players, faithful fans, and teammates for making a memorable occasion of May 24 and the retirement of No. 14. [See story, page 50.]

The Washington State University Athletic Department, especially master of ceremonies Brady Crook, and Di Biddle, made the evening gala lots of fun for everyone.

The stories, though for the most part grossly exaggerated, were the highlight of the evening. The comments of President [V. Lane] Rawlins and Athletic Director [Jim] Sterk added class to the function.

My family and I thank you all.

*Bobo Brayton '50, '59
WSU Baseball Coach, 1962-94
Pullman*

ROBERT HUBNER



Robert Horner (far right, '75 M.S. Psych.) challenged undergraduate researchers to pursue their science with integrity.

Learning through collaborative research

"I didn't always get the results I was looking for, but was able to discover something new . . ."

—Elizabeth Matthaei

IN THE WORLD OF RESEARCH things aren't always what they seem, or are supposed to be. Psychology students at Washington State University learned that last spring while working together, interpreting data, and writing up results. At an undergraduate research symposium in April, a dozen student presenters used large poster boards to explain their semester-long projects. Seven of the 12 received small research grants.

The purpose of the one-day symposium was to "encourage hands-on, face-to-face learning through collaborative research between psychology majors and faculty mentors," says coordinator Samantha Swindell, who oversees undergraduate instruction in psychology at WSU.

The projects were varied. Some used animals in fundamental research. In others, human subjects provided insight into a variety of psychological questions. How people, for example, use different kinds of information to estimate the probability of certain life events, like an automobile accident. How students can decrease test anxiety through various types of services at WSU. How impulsivity affects reasoning and decision making.

"I didn't always get the results I was looking for, but was able to discover something new . . . something I didn't know before," says Elizabeth Matthaei. "You aren't out to prove you are right, but to gain more knowledge."

The junior from Auburn used lab rats in her study to determine the difference in how females and males tolerate chronic pain caused by inflammation.

"This is an incredible opportunity for students to do their own research and understand how science moves forward," says psychology professor Frances McSweeney.

"For some students it's a way to discover for themselves, 'Is this what I want to do the rest of my life?'"

Senior Jeremiah Brown examined how pre-exposure to a reinforcer (food) affects the ability of subjects (pigeons, in this case) to maintain a voluntary behavior. His experience at WSU taught him a great deal about experimental design and the scientific method, he says. "Analyzing things is a key component—letting the data talk to you, trying to figure what it is saying, rather than trying to fit your theory to the data. I've learned how to be a scientist."

Symposium speaker and WSU alumnus Robert H. Horner ('75 M.S. Psych.) stressed the value of good research and how it has helped him during a 25-year career in teaching and consulting. He is professor of special education and director of educational and community support at the University of Oregon.

Research in such areas as principles of behavior, intervention strategies, assessments, reinforcers, and discriminating between appropriate and inappropriate behavior can provide teachers, counselors, and psychologists with important tools for working with school children.

Typically 15 percent of school children today are at risk, and 5 percent demonstrate problem behavior, Horner said.

However, "if you think you are going to change one kid at a time and provide a lasting solution, think again," he warned. "There are more of them than there are of us."

Instead, he recommended a behavioral analysis for a whole school as a way to provide a safer environment where students can build social competence and achieve academically.

He cited the case of a middle school which reduced the number of office referrals by 890 over a year's time. That saved 9,625 minutes—the equivalent of 160 hours, or 20 eight-hour work-days—devoted to dealing with inappropriate student behavior.

He encouraged WSU graduates going into education to build intervention strategies that are sustained across time—for at least four to six years.

On his return to Pullman, Horner saluted his mentor and award-winning psychology professor, Thomas Brigham.

"We learned to do science and do it well. We learned integrity from him," he said of Brigham, who still teaches. "I expect you to use well what you learn here." ■

—Pat Caraher

Photography by Robert Hubner

Wings



to Fly

by Nella Letizia



*"I always loved to dance,
even before I learned
ballet. I love to move,
I'm very kinetic.
Dance is freedom for me."*

MIA SONG SWARTWOOD hovered over the Gladish Auditorium stage on pointe, adorned in vibrant plumage of gold, teal, and purple, arms stretched skyward, joyous in flight. Cast in the lead role of *The Sparrow Queen*, the May 10 inaugural production of Pullman's Graham Academy of Contemporary Ballet, Swartwood embodied the free spirit that ultimately unites two estranged sisters in the ballet based on a Japanese fairy tale.

Swartwood's own life is something of a fairy tale that began in South Korea. Left at a local Catholic Children's Services Center in Incheon the day she was born, Swartwood was adopted a year later by Jim and Danné Swartwood of Bremerton. Danné, who danced and taught on and off for 30 years, was the first to teach Swartwood ballet at age four—and instilled in her a lifelong passion for dance.

"I always loved to dance, even before I learned ballet," Swartwood says. "I love to move, I'm very kinetic. Dance is freedom for me."

By age 14, Swartwood was performing in classical ballets. She has been featured in *Swan Lake*, *Sleeping Beauty*, *Don Quixote*, and *Coppelia*, and danced the lead in

Giselle. Home-schooled in junior high and high school, she graduated with a 4.00 GPA in 2001 from Central Kitsap High School in Silverdale and transferred to Washington State University after attending Olympic Community College in Bremerton for one year.

The 21-year-old chose to attend WSU because of music faculty member Susan Chan. Swartwood, who met Chan when she was 14, is double-majoring in piano and communication and minoring in dance.

"Dr. Chan makes such beautiful music," she says. "She knows so much about piano and music literature. She can pinpoint and tell you exactly what she wants from the student."

Like the Sparrow Queen she portrayed, Swartwood is vivacious and giving. For a friend who was feeling down, she wrote a story, which included lyrics from "Puff the Magic Dragon," *Mary Poppins*, and "I Can See Clearly Now."

"It made him smile, which is my whole aim," she says. "My mom told me a quote, 'Blessed are we who can laugh at ourselves, for we shall never cease to be amused.' I never stop laughing at myself. Laughing is contagious. If you get others to laugh, you have the whole world."

Swartwood has the whole world, too, because of the opportunities she received from being adopted. Gratefulness is the key to everything, she says.

"I absolutely adore my family. I couldn't have done what I do had I not been adopted.

"I'm incredibly grateful," she says. "If I were to find my biological mother, I would only thank her for thinking of me first and giving me up instead of keeping me [in South Korea], where to be an orphan is to stay an orphan. I'm passionate about being adopted." ■

The First Amendment

THE FIRST CASUALTY

DURING ONE of the nation's many wars, I wrote of a patrol that came under fire and killed an enemy soldier. Before continuing, the GIs cut off the dead man's genitals and forced them into his mouth, leaving also a playing card—Ace of Spades—on his body. The soldiers said that such were enemy superstitions, that they would not cross over a dead man so festooned, thus it was required to keep the other side effectively tethered if the patrol was to complete its mission.

It was a poor excuse for abomination. The superstitions were merely warrior chatter, and the mutilation was a courts martial offense. But when I sent the dispatch to my syndicate as an exam-

ple of the derangement of combat, the article was destroyed. The culprit editor explained that the company did not want to get into the business of second guessing our men in battle.

Every war correspondent has had the education. The First Amendment is the first casualty in combat. Good men and women are paid by their organizations to get up front, get a good look, but take care with the dirty details. If the military on location does not censure one's copy by limiting access, the desk may, back in the home office, by swooning to patriotism. The result is that war reports in the world's most warring country are filtered through parental guidance.

The United States media does



Vietnam was the last conflict in which reporters could speak and write with prudent freedom.

not display photographs of dead Americans on the field. The unspoken rule is never to write of an American in a cowardly act. Correspondents do not normally note gross unit failures, bumbling leadership, or serious whining in the ranks. The statistics and management of warfare are provided by the government, hence they can be safely—if questionably—used; but if a GI machine-guns a 10-year-old boy, as happened during the war in Iraq, the reporter is obliged to include an interpretive spin, collateral damage, that sort of thing.

Many correspondents call it pandering.

The military and genuflecting media outlets prefer to think of it as: whose side are we on?

Whatever the characterization, the camouflage of communications is getting worse. The military is now “embedding,” which is to say “entombing,” correspondents with specific units, the better to keep an eye on their production. And editors and producers are squeezed not only by inherent home-front chauvinism, but also by marketing considerations; recent U.S. wars have been struggles of revenge, and woe be to a commercial enterprise not in tune with the national passion.

The present pressures are such that, in retrospect, the days of the Ace of Spades atrocity seem relatively unfettered. Vietnam was the last conflict where reporters might speak and write with prudent freedom. The mutilation described above happened early in the mess, when Americans were still sending cookies to the troops. When the novelty dimmed, and casualties multiplied, news people were permitted—encouraged—to explain in full what the hell was going on.

Rapes, torture, My Lai, and throwing prisoners from helicopters. As Vietnam degenerated, correspondents issued perhaps the most realistic accounts of the military killing process since the trenches of the Western Front. I recall walking through a U.S. mortuary at the Saigon airport, in tow of an officer who lifted the sheets on bodies without arms, arms without bodies, and wiped away the roaches that had drowned in drippings of blood on the gurneys.

The graphics were such that refinement was almost assured. The military thereafter took steps to

limit the prospects of mom and dad suffering news clips of teenage cadavers. And news organizations also reordered their procedures, if only in protection; when the war reports are grim, or, worse, ugly, customers turn away—people would rather read about heroes than brutes, they would rather tune in firepower spectaculars than ocular tours of corpses as cordwood.

And here we are. Like sportswriters traveling with the Yankees, today’s war correspondents are bundled with the troops in mutual trust. The military understands the need for rich exposure, the reporters know the bounds of the bargain, anything affecting morale. When our forces roll, as they do endlessly, there is naught but upbeat appraisals at the scene: GIs sharing their rations with the innocents, and American flags waving at the bottom of television recordings.

So what is the rub of all this? Apart from the dishonesty of selective reporting, the sanitizing of warfare contributes to the array of forces that perpetuate warfare, one of which is public delusion. American wars are displayed as smart bombs and snappy colonels speaking of benevolent liberation. They are in fact men, women, and children dying like beasts, shrieking in horror. Were the latter the message, and not the former, peace might prosper more than it does.

In Iraq, a petite female soldier was taken prisoner, and then rescued. It was the stuff of a Hollywood script, and another example of the gallant triumphs of conflict. But what of the POWs who

were killed, and then buried in the survivor’s happy news shadow? How were they murdered? What did they go through? Why could we not save them? Until we know all sides of activity in our name, we are blind to some of it, and unable to choose useful conclusions.

In journalism we are directed to get the story, the whole story, and nothing but the story. The assignment should not come with a disclaimer in case of nationalism. America on average has been in combat once ever three years since Vietnam; few of us yet have been told the truth in its entirety of the incessant enterprise. If media men and women have what it takes to find the real face of war, the rest of us should be permitted to have what it takes to look on it as well. ■

*Tom Tiede ('59 General Studies) has been a syndicated national, foreign, and war correspondent. He was co-winner of the Ernie Pyle Award (1965) for war reporting from Vietnam and is author of three books, including the novel *Coward*, written in Vietnam, and *Self-Help Nation*, published in 2001.*



Left and above,
Tom Tiede in Vietnam.
FROM THE TOM TIEDE COLLECTION IN SPECIAL
COLLECTIONS AT BOSTON UNIVERSITY.

WSU MOM OF THE YEAR SUPPORTS FAMILY, COMMUNITY

Chris Rettkowski learned firsthand the positive impact his mother has on other people's lives, including his own. When his father died of a brain tumor four-and-a-half years ago, Chris and his sister, Lynne, were left looking for answers.

Their mother, Becky Rettkowski, became "the glue that held the family together," he said in a letter nominating her for the 2003 Washington State University Mom of the Year award.

She and four other finalists for WSU Mom were recognized April 12 during the Mom's Weekend Brunch on campus.

Nothing could replace the love his mother has provided, Chris said. Her constant support allowed him to focus on attaining his dreams.

She supported his decision to enroll at WSU and pursue a degree in sport management, even though she knew it meant he would probably not return to the family farm at Wilbur. Having graduated in May 2003, he plans to pursue a master's degree at Florida State University and a career in sport administration.

"Mom is a caring, loving, and devoted person, . . . like most mothers. What makes her different is her desire to care for others, even those she has never met," he wrote in his letter.

Becky Rettkowski earned a degree in home economics from Whitworth College, but adopted WSU when Lynne ('97 Ornamental Horticulture) enrolled.

As a farm mom, her care extends far beyond her own family and children. She has been a Cub Scout leader, served on the Eagle Scout board of review, and chaired fundraising activities for Scouts and for the maintenance and operation of the local swimming pool. She has mentored students in the elementary school who are struggling in math and English. And she donates time at the church daycare center, serves on the endowment committee, and co-chairs the "Christmas on the Hill" charity event that benefits children.

Earlier this year, she took her children to the Rose Bowl.

"My mother really tries to never miss out on anything at or connected to WSU, despite her busy schedule at home," Chris said. "Mom's Weekend might be her favorite time of the year. Sometimes I think she likes being here [WSU] more than I do."

ROBERT HUBNER



Becky
Rettkowski
and son
Chris.

THE BENEFITS OF *mustard*

REMEMBER YOUR FIRST encounter with classic Chinese mustard? Your seared sinuses? Your cheeks washed with involuntary tears?

What you tasted was the indelicate reaction of the mustard plant's chemical compounds, probably enhanced by the wetness of your mouth.

That same volatile reaction is being applied by Columbia Basin farmers to control pests and weeds, improve the productivity of their soils, reduce the use of chemicals, and improve air quality for downwind communities.

Mustard is becoming the crop of choice as a green manure grown in the rotations of many potato producers. Research is showing that in addition to improving the physical and chemical characteristics of the soil by adding organic matter, mustard and other

plants can actually provide the same kinds of protection against disease and pests as applied chemicals do.

From his Grant County office in Ephrata, Andy McGuire coordinates much of the study and evaluation of green manure applications. McGuire is the Lauzier Agriculture Systems Educator, the single endowed extension agent position within Washington State University's Cooperative Extension system.

While McGuire points out that the complexity of the soil environment makes it difficult to measure the specific biological processes involved, he says the effects of green manure on soil-borne pests are the result of

several interacting mechanisms.

Biofumigation is one of those mechanisms attracting considerable attention, because it works in quite the same way as commercial fumigants applied before potato planting. Mustard contains glucosinolates, biologically active chemicals that give it its biting taste. When turned under, the glucosinolates break down into isothiocyanates (ITCs), which are known to kill or suppress soil-borne diseases, nematodes, and weed seeds. In many circumstances mustard ITCs can replace the methyl ITC that is the active chemical produced when commercial metam sodium is applied.

Scientists are also examining other important biological mechanisms, identified as competitive exclusion and induced resistance. They believe that the disease verticillium wilt may be suppressed when the organic material of mustard helps beneficial organisms out-compete the verticillium organism that infects the roots of potato plants. Similar in concept, they believe, is disease suppression that occurs when beneficial organisms secrete chemicals that induce



the resistance of plants to insect-borne diseases.

When McGuire left Nebraska to join the staff of WSU's Center for Sustaining Agriculture and Natural Resources in 1999, Columbia Basin farmers were growing about 1,800 acres of mustard as a green manure. One of the earliest and most enthusiastic advocates for the practice was Dale Gies, a WSU alum who operates the family farm near Moses Lake.

With McGuire providing farmers with a wealth of information about the benefits of mustard, and Gies the mustard seeds, the acreage numbers have grown to over 20,000. "These approaches have been accepted more rapidly than we expected, but there's still plenty of opportunity for growth," McGuire says. Potatoes currently are grown on more than 170,000 acres.

McGuire and farmers also are exploring the benefits of other green manure crops and farming methods with plant scientists from Italy, Australia, and Germany, where the government pays farmers for incorporating green manure into their cropping systems.

The broader benefits of green manures are returned to the public at large, says McGuire. The organic material significantly reduces soil's susceptibility to water and wind erosion. Air pollution studies of areas east of the Columbia Basin, including Spokane, have linked small, wind-blown particles to respiratory illnesses.

In April, WSU researchers from Pullman used a portable wind machine to measure erosion in a field treated with green manures. "They ran the velocity up to 100 miles an hour and couldn't get the dirt to blow," says McGuire. ■

—*Al Ruddy*



DESIGNING FOR DEMENTIA

A COMMON CLOTHESLINE can make a difference in preserving the dignity and self-identity of Alzheimer's patients, says Keith Diaz Moore, Washington State University professor of architecture and landscape architecture.

At Sedgewood Commons in Falmouth, Maine, a backyard clothesline engages residents of the 96-bed care facility in daily household tasks. It also represents how designers now are considering cultural aspects in building new and remodeled assisted-living facilities, explains Diaz Moore. "An outdoor yard, including a clothesline, historically has been an important part of New England family culture. Here it helps promote resident autonomy, and the ritual of maintaining the landscape encourages awareness and orientation."

Diaz Moore directs teaching and research at WSU Spokane's Interdisciplinary Design Institute (IDI) in design issues related to dementia. The IDI is one of only a handful of architectural schools in the country with a concentration in the area.

Diaz Moore says while physical, social, and organizational environments do not determine an individual's quality of life, together they certainly have a substantial impact upon people,

particularly upon those with reduced competence. Culture provides untapped resources for creating activities and environments that address age-related cognitive issues.

Tribal longhouses, Jewish and Catholic religious traditions, and customs of the Pennsylvania Dutch have all been incorporated in assisted living facilities built recently in this country, representing attempts to improve the quality of life of Alzheimer's victims.

Unfortunately, says Diaz Moore, only a small percentage of our four million Alzheimer's sufferers live in these innovative facilities. "The vast majority of institutionalized dementia victims are still housed in traditional nursing home environments."

In a way they are captives of well-intended social policies. Although the Hill-Burton Act, which provided federal funding for hospital construction, was extended in 1954 to include nursing homes, the standards for construction, facility design, and staffing patterns it originally set forth remained unchanged. As a result, nursing homes resemble hospitals, with narrow rooms arranged along a corridor near a nursing station. Like hospitals, they are designed for a few days

Above: *Washline* by Karla Matzke, pastel, 36 x 28 inches (www.historyoftheworldfineart.com).

of acute treatment, not for the years to which many elderly are sentenced, says Diaz Moore.

But by the mid-80s, the view of dementia as a national tragedy began to take center stage, along with discussions of how environments might be changed to improve the quality of life for those afflicted.

Change has been slow because of limited financial resources and limited design research, says Diaz Moore. However, he hopes that a project he's directing will accelerate the application of successful innovation in design. For the past three years, he has headed a study involving six facilities across the country, including one in Spokane, to assess the effects of design elements on residents, staff, and operations. Funding by the Extendicare Foundation, operator of long-term care facilities, will support the maintenance and updating of a Web site to include the research assessment and information available to designers and researchers in the field.

In the long term, Diaz Moore is optimistic about improving the prospects for elders committed to extended care. It is estimated that by the middle of the century 14 million Americans will be ravaged by Alzheimer's disease. Other dementias will raise the total. When their friends start becoming dementia victims, baby boomers will have the political clout to really change public policy, he says. "Until then we must invest designers with the best information and tools possible to replace the Old Folks Home." ■

—Al Ruddy

Maybe It's Not Just in Your Head

IMAGINE TRYING to lead your life while avoiding diesel exhaust, perfume, cleaning fluids, the myriad chemicals that give off gas from new cars, carpets, or treated woods and fabrics—and a whole lot of other things.

That's exactly the case for the 10 million or so Americans who suffer from severe multiple chemical sensitivity (MCS). For them, sitting at a stoplight next to a bus or walking into a department store might be all it takes to bring on immediate and severe headaches, joint pain, muscle fatigue, dizziness, and brain fog.

And then, when they go to a physician for help, the doctor might just tell them it's all in their head.

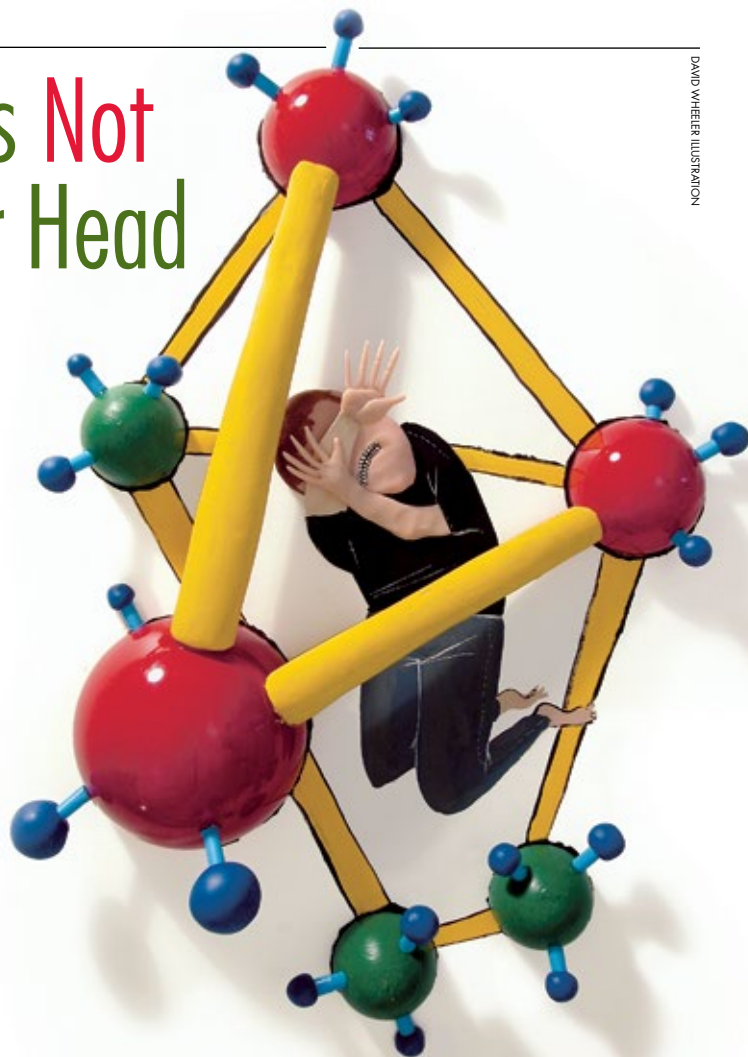
Martin Pall, professor of biochemistry and basic medical sciences at Washington State University, says that one reason many believe MCS is "all in the head" is that there has been no plausible mechanism proposed that explains how MCS happens and how people with MCS can be so exquisitely sensitive to such a wide variety of chemicals. Because there has not been a plausible explanation, there's also little money available to study the disease—though that didn't stop Pall from taking the time to research and develop a theory that may well provide the missing mechanism.

Pall's theory is a fusion of two previously proposed theories, neither of which can completely explain the disease. The first, proposed by Iris Bell of the University of Arizona, suggests that MCS is due to nerve sensitization via mechanisms similar to those involved in

learning and memory. The second, developed by Pall, suggests that abnormally high levels of two chemicals, nitric oxide and peroxynitrite, are responsible for the disease.

Learning and memory involve the reinforcement of specific pathways in the central nervous system. The pathways are established between nerve cells when a chemical neurotransmitter is released by one and travels to another. The second nerve cell responds, because it has a protein receptor on its surface that specifically recognizes the neurotransmitter. The pathway between the two cells becomes reinforced when the junction between them becomes hypersensitive. That might happen because more neurotransmitter is released or because the receptor becomes more sensitive to it.

In MCS, it appears that pathways over a large region of the brain become activated and reinforced. Pall's theory explains how that might take place. He believes that high levels of nitric oxide and peroxynitrite are produced during the chemical exposure that is usually the initiating event in MCS. These compounds are known to stimulate nerve cells to release excess neurotransmitter and to make the receptors on many receiving cells hypersensitive. In addition, peroxynitrite may provide the means by which the chemicals gain access to the brain, for it is known to compromise the blood-brain barrier that normally protects the brain from drugs, chemicals, and other potentially harmful substances.



DAVID WHEELER ILLUSTRATION

The idea to put Bell's and his own theories together came to Pall as he was trying to determine how his initial theory might explain the many puzzling features of MCS. During that research, he found many observations that implicated a particular type of neurotransmitter receptor, one that previously had been shown to be involved in nerve sensitization. When that receptor is stimulated, it is known that more nitric and peroxynitrate are produced in the brain.

Pall's theory is receiving increasing attention from the scientific community. It has been published in the *Journal of the Federation of American Societies of Experimental Biology* and was extensively discussed at a recent meeting of the committee that advises the U.S. government on Gulf War syndrome. In addition, he has accepted invitations to speak at major meetings in London and Washington, D.C. Perhaps this attention will produce the critical mass of research and money needed if progress is to be made in determining the mechanism of the disorder, whether that mechanism is his or another as yet to be proposed.

"These things never go as fast as you want," he says.

Pall believes that the mechanism he proposes for MCS also may explain several other "mystery" diseases: chronic fatigue syndrome, Gulf War syndrome, post traumatic stress syndrome and fibromyalgia. As with MCS, none have plausible mechanisms that explain the whole pattern of reported properties. It's of interest that, for Gulf War Syndrome, published data suggest a correlation of the neurological symptoms with a gene that has a role in metabolism of a pesticide-like compound to which many Gulf War vets were exposed. ■

—Mary Aegerter



TASTING WASHINGTON

THE SETTING is elegant, the food divine, the wine fine and endless and magnificently diverse. On a Sunday evening in June, the Grand Pennington Ballroom at Spokane's Davenport Hotel is filled with representatives of more than 60 Washington wineries and 20 area restaurants, caterers, and markets—and hundreds of Washington wine devotees.

Taste Washington has paired samplings of Washington food and wine, much to the gathering's enjoyment. In the process, the celebrants are supporting Washington State University's fledgling Viticulture and Enology Program and the School of Hospitality Business Management, as well as the Davenport District Arts Board.

A celebratory note also resonates among the participants who have learned that, due to successful lobbying by the Washington Wine Commission, the Washington legislature has earmarked nearly \$1 million to support the viticulture and enology program. The funding will support two Cooperative Extension positions, one in enology and one in viticulture. It will also provide one-time money for two-and-a-half faculty positions and for renovating a laboratory at WSU Tri-Cities for enological purposes.

Washington ranks second nationally only to California in wine production. Both acreage and reputation have experienced a meteoric rise since WSU's Walt Clore (see p. 53) and others convinced Washington farmers that they could indeed grow European *vinifera* grapes. Washington wine production reached 17 million gallons in 2002, with 240 wineries currently in operation throughout the state.

And in the Grand Pennington Ballroom, a chef from Walla Walla's Whitehouse-Crawford serves me a little pancake topped with Walla Walla Sweets, green peas, and salmon. He is flanked by representatives of Tamarack Cellars, Patit Creek Cellars, and Seven Hills Winery, all of whose merlots are perfect with this treat. From the balcony overlooking the ballroom, Gordon Brothers Winery's Jeff Gordon is extolling the merits of another auction offering, this one donated by Arbor Crest Wine Cellars, and the bidding begins.

This is one of those fortunate places where everyone is smiling—at the gustatory pleasures that fill the ballroom, at the conviviality, and at this very bright spot in Washington's agricultural economy. ■

—Tim Steury

SEASONS|SPORTS



SHELLY HANKS

DICK BENNETT'S MANTRA "Play hard, smart, and together"

IN MORE THAN THREE DECADES of coaching, Dick Bennett has developed a simple philosophy about basketball. It's a *team* game.

"Once players understand and embrace that concept, basketball becomes simple—at both ends of the floor," he says. "Viewed strictly as an individual showcase, it becomes more difficult. There is room for individual play to shine within the team framework, but in Bennett's scheme of things 'we' takes precedence over 'me.'"

Listening to Washington State University's new basketball boss talk about the game, one learns about the sport and the man. He's

as much a student of the game as he is a teacher/coach. He describes the gym as "one of the truly great classrooms." Each game is "a blue-book exam."

Years in the coaching profession have taught him that basketball is a "neck-up" endeavor as much as an athletic pursuit. One without the other makes for an incomplete performance. "When you have someone strong in both areas, you have a very special player," he says. "And when you have a nucleus of players like that, you are going to have a very special team."

That's what he wants to create as WSU's 15th basketball coach.

"I want to put a team on the floor that always plays to win, as opposed to just looking good."

—Dick Bennett

Having earned a reputation for resurrecting languishing basketball programs, he knows it will take time to restore respectability to a program that has been dormant for a decade. He doesn't say how much time. First there's an attitude to change, confidence to build. The players will have to buy into his coaching philosophy, and consistently play "hard, smart, and together."

Easy to say, but the challenge is to get them to do it. College players are at a stage where a coach can help them develop good work habits, but Bennett says it is harder than at the high school level. "You have to accept college players where they are, and work with them on that part of the game that can still be shaped." His goal is to put them into an environment where they can succeed, and help make their teammates better.

"I want to put a team on the floor that always plays to win, as opposed to just looking good." His career collegiate record—453-258, including a 280-178 mark at the Division I level—reflects that. He guided the University of Wisconsin, Madison to three NCAA tournament appearances. His 2000 team reached the Final Four, losing to eventual champion Michigan State in the semifinals. That year, the media described the Wisconsin Badgers as "an ugly" team—more hard-nosed than finesse.

"Sometimes it wasn't pretty," he admits.

A couple of games into the 2000-2001 season, Bennett abruptly chose to step aside from coaching. He cited burnout. After three years,

he came back to the game, because he missed the players and competition. His passion for coaching "has never been higher," he says.

After interviewing Bennett for the WSU coaching position, athletic director Jim Sterk sensed that burning desire in the veteran coach, and signed him to a five-year pact.

On the competitive side, Bennett acknowledges he's "relatively intense and focused." Away from the game, he's "laid back and private." His faith is the most important dimension of his life. He and his wife, Anne, were high school sweethearts in Wisconsin. They have three grown children. Kathi, the eldest, is head women's basketball coach at Indiana; Amy is a speech therapist in Green Bay; and son Tony, a former NBA player with the Charlotte Hornets, is now a WSU assistant.

One of the half-dozen books sandwiched between bookends on Bennett's cherry wood desk in his office at Bohler Gym is *A Season with Coach Dick Bennett*. It highlights the 1996-97 campaign at the University of Wisconsin, Madison. With both hands he picks up a basketball from the corner of his desk and holds it thoughtfully. It's a keepsake from the Badgers' Final Four appearance, his last game.

Today he is demanding, but flexible and easy going, as long as the kids are competing. When the team yields or quits, he becomes upset. In his program confidence is earned. As players, he says it is who they are in practice, and what they learn from previous games, that will determine their success.

SPORTS|SEASONS

In laying the groundwork for a new era of WSU basketball, he tells his players to be grateful for what they've been given—"a wonderful opportunity to gain a quality education and compete at the best amateur level of basketball possible in one of the best conferences [Pac-10]."

He wants his players to take the

classroom seriously and be the best they can be. "I often ask them, 'If you couldn't play basketball anymore, in what direction would you like your life to go? What excites you?' It may be a class or a course of study that takes them in that direction."

As for team rules, he says he simply wants his players to "con-

duct themselves humbly and appropriately as representatives of the basketball program and University, and as decent human beings. And the hardest part—in all circumstances." ■

—Pat Caraher

Richardson era ends with her best

"Someone like her only comes along once a career."

—Rick Sloan

ELLANNEE RICHARDSON had just run the race of her life: a blistering 800-meter time of 2 minutes, 12.04 seconds, a personal record, in the final event of the heptathlon at June's NCAA Track and Field Championships in Sacramento.

It should have been enough for Richardson, a redshirt senior at Washington State University, to win her first NCAA title.

But in the world of track and field, you can never fully control what anyone else does. And as Richardson caught her breath, just 13 seconds after she crossed the line, her dream ended.

Needing a 27-second victory over leader Hyleas Fountain of Georgia, Richardson fell 14 oh-so-close seconds short.

A disappointment? Of course.

But a failure? Not if you know Ellannee Richardson.

"I guess I can't be that disappointed," she says. "It was a personal best score, and at the same time I did come in with a goal of winning a national championship. But Fountain performed great, and I did finish second nationally."

Richardson still set a personal record with 5,839 points in the seven events. She placed second in the country for the second consecutive year. She helped the Cougar women's track and field team to its best finish—12th place—in 17 years.

Most remarkable of all, the 5-foot-7 All-American was in position to be crowned the nation's best female athlete.

"The pain was always there," she says. "I knew that if I was going to compete, I couldn't use it as an excuse."

The pain started before her sophomore year. Recurring hip and back pains were so severe it affected her training. Some days she couldn't practice certain events, other days she couldn't practice at all. As a result, Richardson redshirted.

But you never heard a peep from her. There was never any self-pity. She just kept going about her work.

Doctors and trainers originally thought it was fibromyalgia, a syndrome that causes fatigue and pain in muscles, ligaments, and tendons. That diagnosis would have

ended her career, but proved to be incorrect, though no one has been able to give her an alternative diagnosis.

Even for a competitor as fierce as Richardson, the situation was tough, but she had a wide support group on campus that helped her cope.

"The coaching staff and my teammates, as well as my boyfriend and best friend, were really instrumental in helping me get through it all," she says. "I've been really fortunate."

When she returned to competition, Richardson would win three consecutive Pac-10 heptathlon titles, place second nationally twice, and is in the top five all-time in nine different events at WSU.

"When we started recruiting this past year my assistant, Mark MacDonald, told me it was an end of an era," Sloan says. "We started looking at how many people it would take to replace what she did. Someone like her only comes along once a career."

Richardson has also stayed focused off the track, earning bachelor's degrees in sociology and criminal justice. Named a second-team Academic All-American this year, she returns this fall to com-

plete her master's degree in criminal justice.

As for her post-WSU plans, track may still be an option, but ultimately Richardson would like to work in social services, preferably child services.

"I've always liked working with kids," says Richardson, who came to WSU from Gladstone, Oregon. "I feel bad when I see kids in bad situations. I really just want to make a difference."

If her time in Pullman is any indication, she already has. ■

—Jon Naito

Just before going to press, WSM received word that Richardson had been named assistant track and field coach at WSU. She began work August 1.

Ellannee Richardson heads for home.

EVENT	TIME/DISTANCE	POINTS
100m high hurdles	13.92	990
high jump	5-foot-8½	903
shot put	34 feet	553
200m	23.95	986
long jump	19-foot-2 3/4	807
javelin	130-feet-10	665
800m	2:12.04	935
		TOTAL 5,839

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WHILE MANY PEOPLE searched at airports merely have their personal items strewn on a table, some get more thorough treatment—a cotton swab wiped across their belongings and placed in a machine that identifies suspicious chemicals like explosives.

Many of these machines use a technology known as “ion mobility spectrometry” (IMS), an analytical technique not widely used when it was first developed in the early 80s, according to Herb Hill, professor of chemistry at Washington State University since 1976.

But things have changed since September 11. Last year, the Transportation and Security Administration contracted Boeing to install 4,800 to 6,000 explosives trace detection machines, which use ion mobility technology, in airports across America.

Hill, an expert in detecting trace amounts of chemically and biologically important compounds, describes IMS as a way to separate and identify molecules of different structures. This is important, because two compounds made up of the same atoms can act very differently depending on the structure—one may be harmless, while the other is a great security risk.

IMS works by electrically charging the questionable sample and sending those charged particles, called ions, through a gas-filled tube. Different chemicals travel through the tube at different speeds, depending on their size and



ROBERT HUBNER

shape, so materials can be identified by their signature speed.

Hill has improved the technology to reduce the number of false positives, in which harmless substances appear as a potential risk. “False positives are expensive, because they lead to shutting down airports and interrogations,” says Hill. Wes Erron Steiner, a graduate student in Hill’s lab, combined IMS with mass spectrometry (MS), a process that separates compounds based on molecular mass, in one machine. This “two-dimensional” system is more precise than using IMS alone, says Hill.

Besides being accurate, the system is also versatile. Ion mobility technology is most often used for detecting explosives, drugs, and chemical warfare agents, according to the Idaho National Engineering and Environmental Laboratory, an organization Hill collaborates with. But the potential applications are much broader. Pesticides, pollutants, and even large molecules like proteins can be detected. Next year, Hill’s group will take its system to an Army facility where it will test

actual nerve agents, instead of the simulations it currently works with.

“By choosing the right ionization and separation conditions,” says Hill, “you can detect a lot of different compounds.”

Finding trace amounts of hazardous materials is even tougher when they’re hidden in complex matrices like river water. With minimal filtering, Hill’s IMS-MS system can detect up to 10 different compounds in one sample of air or water. The system as a whole can detect about 60,000 different chemicals. “We’re still the only people who can do liquids well,” Hill says.

Despite the value of IMS-MS technology, adapting new developments in the lab to use in rugged, field-portable instruments around the world is a slow, expensive process, according to a 2002 International Union of Pure and Applied Chemistry (IUPAC) report.

“Everybody wants it cheap and portable, while keeping the integrity of the system high,” Hill says, jokingly adding that what people really want is a “tricorder,” a hand-

held, futuristic—and entirely fictional—machine from *Star Trek* that gives the complete chemical make-up of any object it zaps.

Hill was surprised to learn at an IUPAC workshop that current weapons inspectors do not use analytical techniques to find chemical weapons, because the machines are not available at the investigation sites. He imagines that an airplane with a lab equipped for chemical analysis should be flown around the world to give

inspectors an analytical tool, but acknowledges that it’s an unlikely prospect any time soon.

Within a year, Hill plans to make a desktop-sized system, but envisions a more portable briefcase type in the future. One of his students, Maggie Tam, is taking “portable” to a new level by working on an IMS approach that would fit on a chip.

Since September 11, research activity surrounding detection of explosives and chemical weapons has increased, but Hill’s interest in the subject originated long before. The “challenge of seeing things at very low levels” has always motivated his work. In the future, he plans to investigate the use of IMS to detect carbohydrates in mammals, including some that could indicate the presence of cancer.

“Most people focus on a system and use different tools to study it. We’ve chosen the tool as our focus,” says Hill. “Without new measurements, you can’t make new discoveries.” ■

—Alison Emblidge

IS GROWTH ANTI-DEMOCRATIC?

"GROWTH IS A COSTLY and dangerous process," says John H. Bodley, professor of anthropology at Washington State University. For the past several years, Bodley has been researching the role of scale, or size of communities, as it relates to socioeconomic growth and prosperity. His hypothesis is that growth is an elite-directed process. In other words, although the majority of people bear the costs associated with growth, only a few receive the primary benefits.

In all cases that Bodley has studied—from the global community to small towns—his hypothesis holds true. The bottom line is that as scale increases, fewer people reap the rewards of growth.

There are different kinds of growth, says Bodley. "Sometimes growth involves segmentation—a society grows to a certain size, it reaches a threshold, and then splits into two or more similar societies. This kind of growth fills up a space with more societies of the same size," he says.

"The other kind of growth involves a single society getting larger. It is growth by aggregation, or accumulation," Bodley says. "This is growth that changes scale and requires cultural transformation such as bureaucratization and specialization, and it concentrates power." Bodley studies this second type of growth.

Bodley says you can apply the theory that growth is an elite-directed process to any socioeconomic category, such as American taxpayers by size of income or

American corporations by size of revenue. These are two measurements you can find in Bodley's latest book, *The Power of Scale, A Global History Approach* (M.E. Sharpe, 2003). The book reveals that as the number of taxpayers or businesses increases, wealth becomes concentrated in fewer and fewer hands.

This is the case on both a global and community scale, says Bodley. A few years ago he tested his power-elite hypothesis in the Palouse region of eastern Washington and published his findings in an article titled, "Socioeconomic Growth, Culture Scale and Household Well-Being" (*Current Anthropology*, December 1999).

Bodley ranked property owners in 27 municipalities in the Palouse by the value of their property. His data show that as the size of communities increased, or as villages became towns and cities, a few families became very prosperous, while

the number of poor and maintenance-level households increased. In other words, the gap between the haves and have-nots grew bigger.

A small number of prosperous families typically own property and become the power elite. In their power positions, they become involved in city and county government and are able to encourage further growth through annexation and zoning changes. Thus, these elite individuals increasingly

concentrate their power, and the growth process becomes self-perpetuating.

Bodley has concluded that the perception that growth benefits everyone is inaccurate. "Growth is not likely to benefit the majority of the population."

Bodley's research also suggests that the concentration of wealth due to increases in scale diminishes the democratic process and is costly to the non-elite. Often the non-elite end up subsidizing the cost of



DAVID WHEELER ILLUSTRATION

programs created by the power-elite by bearing increases in the cost of such things as transportation, storage, packaging, and advertising. Bodley goes on to say that urban growth, national markets, and large accumulations of private wealth, whether held by individuals or corporations, must be supported by taxpayer-funded subsidies to pay for the necessary infrastructure including police, courts, public education, and the military.

In his study of the Palouse, he found that non-property-owners in towns of 2,500 people or less participate in the governance of their communities. This is less likely to be the case in larger cities, where government positions are often held by elite property owners.

Based on this finding, Bodley concludes that "to the extent that growth concentrates power, it is anti-democratic." ■

—Megan Guido

A Search through Space and Time

IN 1916, ALBERT EINSTEIN predicted the existence of gravitational waves in his general theory of relativity. However, due to technological limitations, the existence of gravitational waves has been inferred only through indirect observations. Scientists hope to change that with the LIGO facility at Hanford, Washington.

LIGO (Laser Interferometer Gravitational Wave Observatory) began as a joint project of the California Institute of Technology and the Massachusetts Institute of Technology, and is largely funded by a grant of nearly \$400 million from the National Science Foundation. In March 2002, Washington State University was approved for membership in the LIGO Sci-

entific Collaboration. WSU assistant professor of physics Sukanta Bose works on locating cosmological sources for gravitational waves, and is formulating strategies for detecting them. Assistant professor of physics Guy Worthey will use LIGO data for his research on the evolution and the population of stars. In all, nearly 400 scientists are involved with LIGO worldwide.

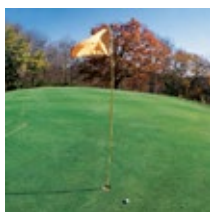
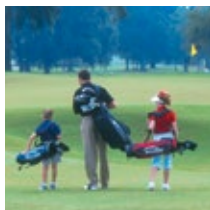
In his general theory of relativity, Einstein theorized that moving objects warp and curve "space-time." According to Worthey, the theory predicts that cataclysmic events like the explosion of neutron stars or the birth of black holes generate gravitational waves which radiate outward in every direction.

Moving at the speed of light, the waves progress by expanding and

contracting distances on an extremely small scale. Unlike radio, X-ray, and other electromagnetic waves, passing through matter does not weaken gravitational waves. Their strength diminishes only with distance, and most have traveled millions of light years before reaching Earth. Bose says even a strong wave would alter a segment of space the length of the Earth's diameter by a factor of only 10^{-17} , which is a change as small as a hydrogen atom's diameter. But it is this expanding and contracting of distance that LIGO scientists are trying to detect.

Since the fractional change in distance caused by a gravitational wave is more detectable over increasing distances, a laser interferometer's sensitivity depends

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When a gravitational wave passes through the LIGO facility at Hanford, it will cause the 2.5 mile distances between the mirrors and beam splitter to, very slightly, alternately lengthen and shorten.



largely on its size; the interferometer at Hanford is one of the world's largest. LIGO consists of two pipes, each four feet in diameter and each 2.5 miles long. The pipes connect at a 90-degree angle at the observatory's control center, which houses a precision laser. Upon striking a beam splitter, equal portions of the laser beam are directed into the two pipes. At the end of the each pipe, the laser beams strike a mirror and bounce back toward the beam splitter. In this way, says Worthey, the beams can bounce back and forth between the mirrors and beam splitter a hundred or more times per millisecond. When a gravitational wave passes through LIGO, it will cause the distances between the mirrors and beam splitter to alternately lengthen and shorten. The differences in the two lengths will become noticeable when the two separate laser beams are combined, producing an oscillating pattern of light. Photodiodes, which turn light into electric current, will then convert the pattern of light into an electric wave. In this fashion, LIGO scientists hope to detect and study gravitational waves that would change the distance between the

Earth and the sun by only a millionth of a meter, says Bose.

But LIGO will do much more than confirm another prediction of Einstein's general theory of relativity. Gravitational waves will enable us to look at the universe in an entirely new way. To date, the universe has been explored only through the use of optical, radio, infrared, and X-ray telescopes, each of which has revealed something new. Because gravitational waves are drastically different from electromagnetic waves, Bose says, they will enable us to understand the universe from yet another perspective—to gather new information, for example, about neutron stars, black holes, and supernovas that could lead to the discovery of hitherto unknown aspects of the universe.

The most exciting potential of gravitational waves lies in what they can reveal about the creation of the universe. Unlike electromagnetic waves, which were unable to escape the compact early universe until some 300,000 years after the Big Bang, gravitational waves will enable scientists to study the universe milliseconds after its cre-

ation, according to Worthey. Says Bose, "Using gravitational waves, we would be able to pin down the age of the universe much more accurately and study how the universe evolved over time."

Because LIGO needs to be incredibly sensitive to detect gravitational waves, scientists have to eliminate or isolate a wide variety of background noise. Seismic vibrations are one of the main disturbances. Through ground vibration, LIGO can detect rush-hour traffic in Richland 14 miles away, and can every few seconds sense waves hitting the Washington coast hundreds of miles to the west. LIGO can also sense the pull of the sun and moon and detect aircraft flying over the facility.

LIGO scientists continue to develop ways in which to isolate gravitational waves from background noise. But the most important instrument for filtering out background noise may be a nearly identical facility located 1,900 miles away near Livingston, Louisiana. By operating the two instruments simultaneously, scientists can filter out background noises that are not detected at both locations. The distance between the two facilities will

also enable scientists to triangulate the position of the source of a gravitational wave by comparing its time of arrival at each facility. Facilities in Germany and Japan will also help in the triangulation process.

LIGO's first scientific run took place in September 2002 and lasted 17 days. Even though no gravitational waves were detected, Bose says, the run was seen as a success, because it enabled scientists to make improvements in the instruments. Many of those improvements were tested in LIGO's second scientific run, which started in February and continued for eight weeks in collaboration with facilities across the world. With each run, LIGO scientists will continue to improve the instrument until it is able to detect the expanding and contracting of distances caused by gravitational waves.

Eighty-seven years ago Einstein predicted the existence of gravitational waves, but he said they would be too small to measure. Today LIGO scientists will have to prove him wrong in order to prove him right. ■

—Jeff Wolfe '03

CLASSICAL TURKEY

Story and photography by Paul Brians

Much of what we think of as ancient Greece lay in fact within what are now the borders of Turkey.

FOR ANYONE INTERESTED in world civilizations, there is no richer land to explore than Turkey. Here some of the earliest Neolithic agricultural villages were built, and here the bronze-age Hittites defeated Ramses II's Egyptian troops and impressed themselves on the memory of the Hebrews enough to make their way into the Bible. What was known to the Romans as "Asia Minor" looms large in the Christian scriptures as well; many of the early churches founded by Paul were located here, as well as the seven great churches identified in the book of Revelation. This was the heartland of early Christianity. The Nicene Creed was composed at Nicaea—modern Iznik—and many of the most influential early saints and theologians came from here.

In the 4th century, Constantine founded Constantinople (modern Istanbul)—named after himself—and made it both the eastern capital of the Roman Empire and official center of Christendom. It continued to cling to that title after the empire in the West fragmented in the wake of the fall of Rome, producing the brilliant culture of the Byzantines. It was a Byzantine cry for help to Rome that prompted the Crusades. When the Turks conquered the last remnant of Byzantium in 1453, they rebuilt Constantinople as the spectacular

capital of the mighty Ottoman Empire, which produced extraordinarily beautiful and influential architecture, the classic Sufi mystical poetry of Mevlana Jalaluddin Rumi, and music that influenced composers like Mozart and Beethoven. Jews expelled from Spain by Ferdinand and Isabella in the late 15th century built a rich culture here as well. In the 20th century, Mustafa Kemal Atatürk built the first secular state in the Muslim world, setting precedents that powerfully influence the region to this day. My wife, Paula Elliot, and I had been heavily involved with Washington State University's World Civilizations program since its inception, and had enjoyed previous trips to both Italy and Greece, so we found it highly attractive to begin our joint sabbatical year in the fall of 2002 by touring Turkey, with special attention to its many



Ruins at Pergamum. When Egyptians cut off their supply of papyrus, scholars at Pergamum responded by developing a technique of writing on cured animal skins. The Latin word *pergamenum* ("parchment") is derived from the name of this ancient city.

classical sites. One of my goals was to add to the University's collection of copyright-free images for studying the ancient world.

To Homer's Greeks, the coast of what we now call "Turkey" was where the Achaeans sailed to recapture Helen from Troy; but by the Classical era, Greeks had settled all around the Aegean Sea, including the Turkish coast. Sappho's Lesbos is visible from the Turkish mainland. Much of what we mean when we refer to ancient Greece lay in fact within what are now the borders of Turkey. This region was incorporated into the empire of Alexander the Great, and then into the Roman Empire. Those interested in the architecture of the Greeks and Romans can find many of the best-preserved sites in Turkey.

The most renowned site in the region is of course Troy, though some find it a disappointment because the ruins are so fragmentary. The excavations directed by the German Homer enthusiast Heinrich Schliemann in the 1870s at Hissarlik, near modern Çannakale, are now generally acknowledged to have uncovered the ruins of ancient Troy, though Schliemann misidentified the layer belonging to the era of Homer's Trojans. However, his excavations are also generally acknowledged to have severely damaged the site. In the absence of modern standards of archaeological documentation, crude trenches were carved through the site, and quantities of precious objects were carted off to Germany without their context being clearly established. It takes a vivid imagination, a well-trained guide, or a good guidebook to make much of the site today. I recommend the excellent illustrated volume sold at shops near the site, written by Professor Mustafa Askin, *Troy: with Legends, Facts, and New Developments*.

The view from the walls of ancient Troy, toward what was once the beach where Achilles landed.



But for anyone who loves Homer, it is still thrilling to stand on top of the fortress and gaze out over the “windy plains of Troy.” What is no longer visible is the beach that figures so prominently in the *Iliad*, for like most Greek coastal cities, Troy was left stranded inland when silting converted the Aegean coastal waters into plains. The grazing of sheep and goats over centuries may have been mainly responsible for destroying the roots of plants that originally retained the soil on the upland slopes. Goats caused the downfall of more ancient cities than Alexander ever did. Without access to the sea, these cities could no longer function, and were abandoned.

The most famous of the later cities that thrived along the coast was Ephesus—modern Efes—now thronged with tourists “following in the footsteps of Paul” and climbing up the vast theater where, according to the book of Acts, a riot led by silversmiths once prevented the Christian missionary from speaking. They derived their income from the sale of images of the fertility goddess Cybele—called by Romans “the Diana of the Ephesians”—to pilgrims visiting her magnificent temple nearby. Naturally they objected mightily to Christian denunciations of pagan idol-worship.

The site of the great Temple of Cybele, famed throughout the ancient world, is little more than a vacant lot today; but images of the goddess survive in the nearby museum at Selçuk, including a magnificent Roman version. The contemporary scholarly consensus is that the globes hanging from her neck are neither breasts nor eggs, but the severed testicles of bulls which were sacrificed to her. It has been suggested by some that when Jesus referred in Matthew 19:12 to “eunuchs who have made themselves eunuchs for the sake of the kingdom of heaven,” he may have been speaking of the more frenzied devotees of Cybele, who castrated themselves in her honor. Winged lions and bulls decorate the image, conveying not simple maternity, but fiercely potent fertility.

Ancient Pergamum—modern Bergama—did not share the fate of the coastal cities, because it was always located at a distance from the sea, and was famed for its library and the scholars who worked there. When the jealous Egyptians at Alexandria cut off their traditional supply of papyrus, the scholars responded by developing a technique of writing on cured animal skins. The Latin word *pergamentum*—“parchment”—is for that reason derived from the name of this ancient city.

The acropolis at Pergamum featured a vast hillside theater and several splendid temples, the most famous of which was dismantled by German archaeologists and is now displayed in Berlin. But the fragmentary ruins of the temple dedicated to the emperor Trajan there are still impressive. A visit to the Bergama museum to see the many rich carvings and architectural fragments from the site helps bring ancient Pergamum to life. Also worth visiting is the nearby site of the ancient Asclepion, where the dreams of pilgrims were



Fertility goddess Cybele

used to diagnose their ailments by the priests of the healing god, Aesculapius. It was here that the famous physician Galen lived and worked. His writings continued to be studied in the Muslim world and in Europe well past the Middle Ages.

Of the scores of other interesting but less-

er-known Greek and Roman sites in Turkey, Didyma is notable for being the site of one of the largest classical temples ever constructed. The accompanying photograph shows only the porch, its columns soaring 64 feet into the air. This temple housed the second most famous oracle in the ancient world after Delphi. Our guide told us an entertaining legend about the priests here. Supposedly when visitors made an inquiry, they were given one answer orally and the diametrically opposite one was recorded in the archives. If a disappointed patron returned to complain that the oracle had been mistaken about the future, the priest would assure the aggrieved party that the records clearly showed that the opposite prediction had been made.

Magnificent Greco-Roman theaters are scattered all over western Turkey, many in better repair than similar theaters in Greece and Italy. Visitors go to Pamukkale primarily to explore the blue pools and white cliffs that adorn every Turkish travel poster; but at the top of the cliffs are not only a number of fine small museum buildings, but the sprawling ruins of ancient Hieropolis. In ancient times, the income from visitors to the baths helped build an enormous theater, whose *scaena*, or backdrop, is unusually well preserved.

To see some of the other Classical sites of Turkey, you can explore my photographic tour on the WSU World Civilizations Web site at www.wsu.edu/~wldciv/tours/turkey/. Nearly 500 high-resolution photographs from the trip are also available for viewing and downloading on the Web site of WSU Libraries' Department of Manuscripts, Archives, and Special Collections at www.wsulib.wsu.edu/holland/masc/xworldciv.html.

WSU history professor Robert Staab, who helped plan our trip, is organizing a WSU-sponsored two-week tour of Turkey for late May 2004. For further information write Prof. Staab at rstaab@wsu.edu. ■

Paul Brians is a professor of English who teaches World Civilizations and interdisciplinary multicultural courses dealing with the humanities in a historical context at WSU. His latest book is Common Errors in English, published by William, James & Co. His wife, Paula Elliot, is the architecture and performing arts librarian at WSU.



One of the largest classical temples ever constructed, this temple at Didyma housed the second most famous oracle in the world.

Income from visitors to Hieropolis's baths helped build its theater.



A Place at the





Washington farmers fight for their fair share of the consumer dollar by putting taste, face—and place—back into food.

SOMETHING VERY INTERESTING is going on in the state of Washington and across the country. Maybe you've noticed the steady increase in the number of farmers markets. Or a new diversity in the produce section at the supermarkets. Not just new exotic fruits and vegetables transported by ship from some tropical corporate farm, tasting nothing like they do when consumed in their native countries. But new varieties produced locally, maybe by your neighbor, better tasting and fresher. Or maybe you've tasted a raspberry dessert wine—made from Skagit Valley raspberries—with the purest raspberry taste you can imagine. Or maybe you had a great loaf of artisanal bread made from Washington wheat. But wait, you say, isn't all of Washington's wheat exported for Asian cookies?

Yes, something's going on here.

In a sense wine led the way. The phenomenal success of the Washington wine industry has prompted people to admit that maybe our food could be better. Why eat California cauliflower when Washington cauliflower tastes better? Why succumb to produce with all the life and taste shipped out of it?

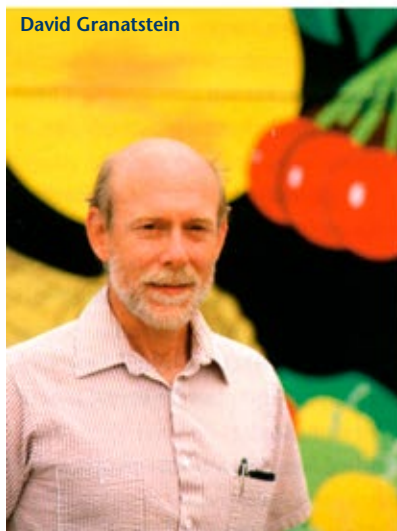
And just as Washington vintners refuse to produce a generic jug wine, other Washington farmers are realizing maybe the state's growing conditions and diverse infrastructure are simply too good to devote to indeterminate commodities that just get lost in a homogeneous global distribution system.

So what's going on? For one thing, says WSU sustainable agriculture specialist David Granatstein, farmers are trying to take back their fair share of the food dollar. In his office in Wenatchee,

Granatstein pulls up a chart created by University of Maine agricultural economist Stewart Smith. Smith analyzed the share of the consumer food dollar that went to the American farmer from 1910 to 1990. In 1910, the farmer got 40 percent. By 1990, that share had dropped to less than 10 percent. Today a decent chunk of that dollar is going to the input sector, the seed and fertilizer dealers, and other farm suppliers. But the lion's share is going to the marketers—the brokers, distributors, and supermarkets.

"Here's the driver," says Granatstein, pointing to the big blue area on the chart that represents the marketers' share of the food dollar. "You can invest all you want in increasing efficiency," he says, referring to the prevailing economic mindset of industrial agriculture, as well as the main thrust of the agricultural university of the last few decades. "It's a pittance. There's nothing there," he says of the pennies left the farmer under the conventional means of production. "It's chasing crumbs.

"Here's the action." His finger rests in the middle of the big blue realm of marketing.



David Granatstein

DON SEABROOK

STAYING IN THE GAME

SO NOW THAT we understand where the money is, what do we do? Americans spend \$145 billion a year on food. How much does the American farmer get? Well, figure less than 10 percent. A lot less, actually, for much of our food supply now comes from other countries. And getting any more of that dollar away from the marketers is not going to be easy. So why not market it themselves? Good point. That's exactly what some of the most diligent are doing. But doing so is not exactly straightforward.

Consider this: Washington is the third-largest raspberry growing region in the world. But when Jeanne Youngquist ('67 Home Econ.) of Mount Vernon goes into a local grocery during raspberry season, the raspberries she finds for sale are not from local farms, but from Canada.

Those Canadian raspberries—or New Zealand apples and lamb, Argentine beef, or Chinese strawberries—are both symbol and symptom of the global food system that confronts the American farmer.

No one is arguing that there's anything wrong with fresh pineapple year-round. Or being able to buy French cheese at the local grocery. Variety and availability make this a wonderful time for the gourmand. But there is an enormously complex assortment of problems associated with a system that can give you great French cheese on the one hand and, on the other, insipid produce shipped halfway around the world rather than across the county.

Despite the intricacies of the system, however, the upshot is simple. The food you eat is more likely to be grown thousands of miles away than by your neighbor. Chances are, you buy it for less than what you neighbor could grow it

The most innovative American farmers, the most dogged and cantankerous, think they've figured out some ways to survive, no matter what some ag economist from California says.

for. What suffers, however, is freshness, taste—and your community's economy.

In fact, the current state of American agriculture has led economist Steven Blank of the University of California to declare “the end of agriculture in the American portfolio” in his recent book of that title. Obviously, Blank's pronouncement has resulted in mixed reactions.

“It made me so damn mad when I heard him speak,” says Mike Youngquist ('66 Agriculture). “But he's right in a lot of ways.”

Blank argues that the extreme efficiency of industrial agricultural production, particularly as practiced by other countries, has led to a situation where Americans ought to be putting their financial efforts into more lucrative enterprises than growing food. Of course, Blank tends to disregard such unmeasurable things as taste and community stability.

Besides, most American farmers are a long way from rolling over and playing dead. The most innovative of them, the most dogged and cantankerous, think they've figured out some ways to survive, no matter what some ag economist from California says.

Blank follows a fairly conventional line of thought that the only way to

compete globally is to become more “efficient.” Although this trend has its roots in the mechanization of agriculture in the first third of the 20th century, it gained its battle cry with Nixon administration secretary of agriculture Earl Butz's admonition to “get big or get out.” Farmers took him seriously, content to fight the indignities of one of the lowest profit margins of any industry with economy of scale, massive debt, and federal subsidies.

And some of those who got truly big did truly well. Really big operations, nurtured with the political influence, subsidies, and so forth that accompany our free market, just got bigger and bigger, doing better and better. Meanwhile, the little guys—the ones without the buying power and economy of scale of the big guys—started dropping like flies.

So all of this kind of thinking, plus steady industrialization, specialization—and the “G” word, globalization—joined with a curious conviction that Americans deserve to spend a smaller portion of their income on food than anybody else, led Blank to his dismal conclusion.

“No—it's the other way,” says Washington State University rural sociologist Ray Jussaume. You don't compete through technological efficiency. Jussaume has long studied Japanese and American agricultural markets and currently is analyzing how food systems in Washington's Grant, Chelan, Skagit, and King counties are changing.

Jussaume concedes that most American farmers cannot compete directly. Labor and other costs are simply too high.

“So you have to compete indirectly—with quality and variety,” he says.

Quality and variety. What a great idea! World class. On your plate.

DOING IT BETTER

“IT'S RECLAIMING taste,” Granatstein says. “And place. Where'd that food come from?”

“And face. Who are the people behind it?”

“From the consumer side, it's reclaim-

ing things that were lost as we've gone mass market and industrial.”

So consumers reclaim lost virtues and farmers reclaim a chunk of the food dollar. What a deal!

But hold on. We're not there yet. Unfortunately, there is no shining path toward our ideal conclusion. However, across the state, a number of alumni farmers have discovered their individual paths, if not to prosperity, then at least toward survival.

Shukichi Inaba emigrated from Japan in 1907 to clear sagebrush and dig the first canals near Harrah. When he lost his land under the Alien Exclusion Act, he switched from the conventional hay and potatoes to vegetables, because that was the only way he could make any money sharecropping. Today, Inaba Produce Farms grows 20 different crops from April to October on 1,200 acres, with a crew of nearly 200 at peak season. Managed by Shukichi's grandson, Lon Inaba ('79 Ag. Eng.), the farm sells its produce throughout the western U.S. and some onions in Japan. Brother Wayne is the farm's accountant and salesman, and Norm ('81 Econ.) handles the payroll.

Nobody's getting rich at Inaba Produce Farms. But its very existence in a cut-throat market is testimony to Inaba's innovation and persistence. They hang on to some of the marketing dollar by doing their own wholesaling. Wayne is the farm's salesman. “We'd rather have 100 little guys to sell to than one big guy,” says Lon. “One big guy can control it—especially if you're trying to get a premium.”

That premium is another part of Inaba's strategy. “We have our name on that box, and that level of quality is always going to be a little bit better than somebody else's. We just try to do what the consumer wants.”

Inaba has tried more direct marketing. “We tried farmers markets,” he says. “But they didn't really fit our operation.”

So they went back to concentrating on moving the highest quality produce.

Jeanne Youngquist





They grow about 20 different crops, including asparagus, onions, sweet corn, peppers, and tomatoes. The key to their high quality is good farming techniques. Although they have about 200 acres in certified organic production, Inaba is reluctant to talk about it. Organic production really isn't all that different from the way they've always farmed, he insists.

We drive past a field in its first year of transition to organic. "Compost works for our program," says Inaba. "Cover-cropping works into our program. Crop rotation works into our program.

"We just try to do things that work," he says.

"We don't do anything fancy. We try not to do anything to get ourselves too much in debt. We don't change very much. We don't do something unless we think it's going to fit long-term."

Once the Inabas make a decision to move into a new crop, they know they're going to stick with it. Vegetables might be annuals, says Inaba, but they still require a lot of capital for start-up.

Another thing that has helped the Inabas is the Food Alliance, based in Portland. The Food Alliance came about as a cooperative development of WSU, Oregon State University, and the Kellogg Foundation in 1994. David Granatstein

was instrumental in forming the alliance, which uses market forces to effect change. Certification by the Food Alliance means that the farmer has met certain standards in working toward environmental and social responsibility. The certification process considers such varied factors as level of chemical use, tillage practices, and social responsibility, then rewards certified farmers with a label that indicates to consumers the alliance's approval. Food Alliance approval of Inaba Produce reflects not only the farm's sustainable agricultural practices, but also its treatment of workers.

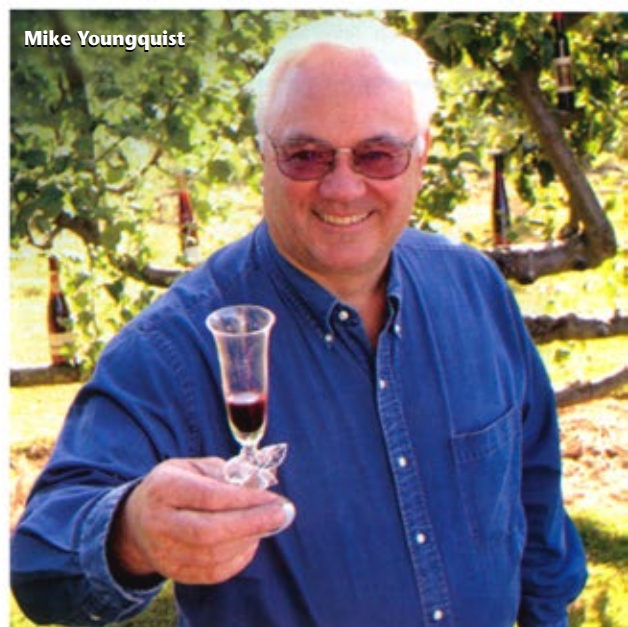
Across the Cascades, Mike and Jeanne Youngquist are celebrating the fruition of a Food Alliance certification connection. Food Alliance approval has allowed them a greater market share and brand loyalty for their Cascade Snow brand cauliflower and IQF Raspberries.

Mike and Jean's Berry Farm was selected in part for their social impact. The Youngquists developed a daycare and pre-school for farm workers' children, and have worked hard to improve farmworker housing.

Still, they have no illusions that labeling is going to solve American agriculture's problems. "Everybody wants the cheapest product," says Mike. Farmers

are also subject to the whims of the market and the actions of buyers. Because of a major consolidation shift in purchasing and the related confusion by one of the large grocery chains they supply, the Youngquists lost over \$200,000 in sales to that customer last year in cauliflower.

They currently are looking more to the potential for specialty niches. They supply raspberries to a couple of wineries, Bonny Doon in Santa Cruz, Califor-



Mike Youngquist



nia, and Pasek Cellars in Mount Vernon, for dessert wine. Last year, they shipped three semi-truck-loads of raspberries to Santa Cruz. Winemaker Randall Graham has requested that they expand production of a specific WSU-developed raspberry variety, Morrison, to five times the

Being a successful farmer means not only handling production, sales, accounting, and marketing, but also mechanical upkeep. Anne Schwartz, above and below, in a couple of her many roles.



present output in the next three years.

Anne Schwartz ('78 Animal Sciences) long ago set out on a much different path, squeezing her entire production onto 22 acres. Tucked into the forest up the Skagit River, her Blue Heron Farm produces organic raspberries, blueberries, and vegetables. About nine of those acres are in nursery crops, including hardy bamboo.

Organic production has provided a small portion of American farmers with a lucrative niche. But successful organic production requires a high level of agonomic skills and is very labor intensive.

After increasing 25 percent a year for 10 years, organic represents about 3 percent of American food sales, so it's not an economic blockbuster. Still, the growth and consumer acceptance are impressive, and organic production has provided Schwartz a reasonable livelihood.

However, organic's very popularity is increasingly putting organic producers, like other small farmers, on the defensive. Corporate producers are moving into the growing market. That's good for the environment, not so good for

a small farmer with production capacity maybe one millionth that of General Mills. Some growers are giving up their certification, focusing more on place or other attributes to market their goods.

The middle is disappearing, says Schwartz, somewhat matter-of-factly. "Though it isn't going to go without a fight. The smart ones will figure something out. More will figure something out that is more direct, local, and diversified."

BREAKING OUT OF THE TRAP

For wheat farmers in eastern Washington, foreign competition, surplus production, and the resulting perpetually depressed prices take that already paltry share of the food dollar down to a miniscule two cents or less. Ideal growing conditions, high-producing varieties developed by WSU breeders, and federal commodity subsidies have helped wheat growers stay alive in a brutal Asian market. But it's a helluva way to make a living.

Karl Kupers ('71 Pharmacy) got tired of it. He's tried a lot of different things since he decided he didn't like working inside as a pharmacist and returned to

...“Where’d that food come from?”

Harrington in 1973 to help his dad farm the land he started sharecropping in 1946. For a while, they followed the conventional wheat/fallow rotation that nearly everyone in the dryland wheat region of Washington does. But finally, says Kupers, he got to the point where he had to break out of that trap.

First thing, he gradually shifted his 5,500 acres from a wheat/fallow rotation to direct seeding. Direct seeding means just that. You plant a crop without tilling. The resulting improvement of soil tilth over the years provides a healthier environment for more diverse crops. Kupers’s whole system is certified by the Food Alliance.

The capability of his healthy soil allows him to grow niche crops, sunflowers, safflower, edible soybeans, restoration plants. And now, he really thinks he’s on to something. One day he realized, “We’re not wheat producers, we’re flour producers.”

So rather than shipping his wheat off to Asia along with the other 130 million bushels from eastern Washington, he started milling his own flour and selling to Grand Central Bakery in Portland and, just recently, Bon Appetit Caterers.

None of this is easy. Look over Karl Kupers’s bookshelf in his office, and you find an extraordinarily eclectic mix: *Complexity*, *Weeds of the West*, *The Corporate Coach*. Kupers has to be an expert on everything from soil microbiology to marketing. In Rockport, the demands on Anne Schwartz are no less. She not only handles production, but sales, accounting, and mechanical upkeep. And she has been widely in demand throughout North America as a speaker. The Youngquists and Inaba face all these challenges and many others unique to their businesses. Produce and berry markets change daily.

And even if such creativity and innovation could be magically transferred to the marketing disadvantaged, some farmers are going to be left behind.

“The only way we’re going to survive is through value-added,” says Mike Youngquist, “and if our consumers demand it.”

“No, the only way we’re going to survive,” says Jeanne Youngquist, “is if we bring the processing and production industry that we’ve lost to other countries back. We must encourage production agriculture to be innovative and find a way to help the government and consumers to figure out why it’s so important to have a U.S.-based agricultural system.”

Unfortunately, the trend in the “other” Washington is toward more globalization. Corporate farms and their shareholders are happy wherever the conditions are most favorable.

Still, there’s hope.

“You fight imports by locking up contracts,” says WSU ag economist Tom Schotzco. “There are lots of opportunities out there.”

But those opportunities are different. You can’t farm like your dad did and expect to make it in the current economy. And farmers can’t do it all themselves. They need help in meeting those opportunities.

Washington State Agricultural College started helping state farmers match their abilities to opportunity in 1889. Since then, much has changed. But as a land-grant institution, WSU continues to support farmers as much as possible. Units such as Small Farms Program and the Center for Sustaining Agriculture, both with offices in Puyallup, provide support, market research, and advice. Research stations at Vancouver, Puyallup, Mount Vernon, Wenatchee, and Prosser continue to perform the production research and extension support they were formed to provide.

But there are limits.

Twenty thousand farmers in Washington raise the top five crops—tree fruit, wheat, dairy, beef, and potatoes—says outgoing College of Agriculture dean Jim Zuiches. The other 20,000 raise the other hundred or so crops. “We serve the big ones pretty well,” he says. “But it spreads us thin in everything else.”

There is also the reality of funding, or lack thereof.

Although Washington is second only to California in crop diversity and fifth in the nation in production, it ranked



44th (2000) in the nation in research dollars from the state, the Youngquists point out. California, by the way, is number one in both research funding and production.

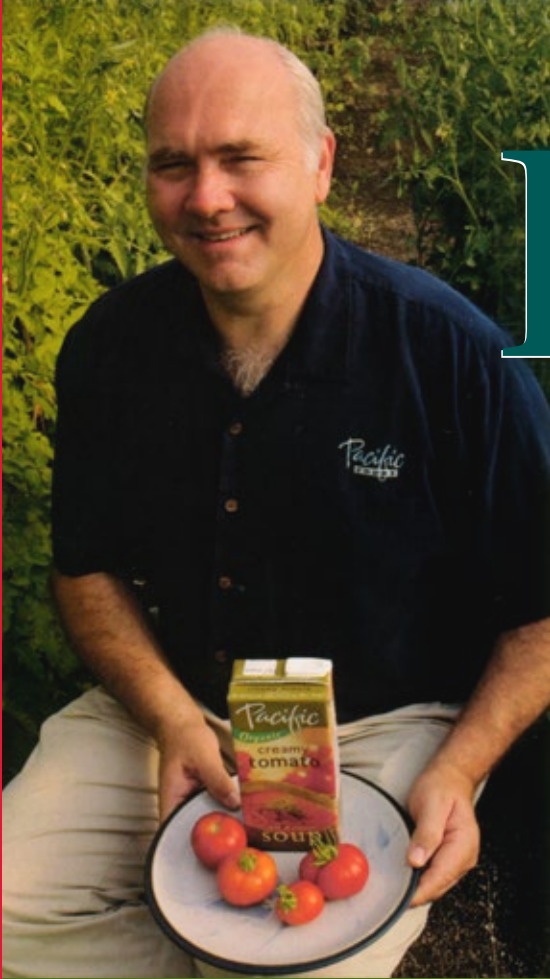
And there are distractions provided by the funding that does exist. “There’s pressure to do big grants and research,” says Jussaume. “But is that what farmers need?” Much of that research tends to serve corporate interests rather than address specific problems of Washington farmers.

Given the volatile mix of global competition and economic pressures, it’s a brave new world for Washington farmers. However you interpret it, the ultimate result could indeed mean the end of agriculture in America—or it could be a bright new, very different, agrarian era. Meanwhile, this is one of those rare things you can actually do something about. And it’s pleasurable. Next time you go shopping, buy Inaba asparagus, Cascade Snow cauliflower, bread made from Shepherd’s Grain flour or Washington grassfed beef (p. 29). Or stop by the Twisp Farmers Market and check out Anne Schwartz’s carrots. Eat well, and we all, farmer and consumer alike, will be a lot happier. ■

This is the first in a series of articles exploring Washington agriculture as part of the state’s economic, cultural, and social fabric and its place in the global market. General themes will include food and community; new varieties, new products, new markets; and wheat and apples—what do you do when everyone else is producing your commodity?

from Dirt to Dinner

by Eric Apalategui • photography by Laurence Chen



Chuck Eggert has parlayed a 32-year career in the food industry and partnerships with family and friends into a small empire of privately owned companies in Oregon.

PACIFIC FOODS. The Tualatin-based company makes 170 types of soups, broths, nondairy beverages, and other foods under its own labels. It also makes similar products under chain-store brand names. Two divisions, Biogroup of Oregon and Pacific Environmental Group, promote sustainability through organic farming, recycling, composting, and alternative energy.

NEW SEASONS MARKETS. Eggert and two former executives at Nature's Northwest, Stan Amy and Brian Rohter, founded the Portland-area markets in 2000 to fill a niche between natural and traditional grocery stores. They plan to open a fifth store in early 2004.

CHAMPOEG WINE CELLARS. Winery named for historic Champoeg and located near Biogroup of Oregon. Twenty-three acres of vineyards use sustainable farming practices to produce varietals such as pinot gris, pinot noir, Riesling, and chardonnay. Eggert's wife, Louanna (Lynch) Eggert ('71 Education), runs this business.

PACIFIC NUTRITIONAL FOODS. A partnership with Japanese giant Morinaga Milk Industries Co., this factory next to Pacific Foods makes organic tofu products under the Mori-Nu brand.

WITH A FEW KEYSTROKES, Chuck Eggert can tell you the exact hatch date of the chickens that flavor a batch of organic soup on the loading dock at Pacific Foods of Oregon.

He can tell you what those birds ate before they became broth. He knows where every organic vegetable, grain, and herb that goes into Pacific Foods's line of soups, broths, and nondairy drinks was grown.

Eggert, 54, started Pacific Foods in 1987, 16 years after graduating with one of Washington State University's first degrees in food science.

Today, after another 16 years, Eggert remains at the Pacific Foods helm as president and chief executive officer. On his business cards he is Charles W. Eggert and has titles such as "Director" or "Product Development." In casual conversation, however, Chuck Eggert is "the simple solution person" and, sometimes, "a meddler."

In some respects, the man who has been meddling in the food industry since he was 16, when he landed a job at a frozen vegetable plant in the Puget Sound area, now is among the pioneers in his field.

Like plenty of CEOs, his business is making and selling food. But what he really wants to make is a difference—"to show that it can be done."

Eggert continues to cook up new recipes, to be sure, but he also is turning his zeal toward a new conquest: becoming an "environmentally neutral" company through aggressive recycling



and renewable energy. After starting his career with traditional vegetable processors, Eggert figures he has built Pacific Foods into one of the country's

top five privately held makers of natural and organic foods. The company's 2001 sales were \$43 million, according to Dun & Bradstreet. Eggert won't discuss current sales figures, but says sales continue to outstrip the red-hot natural food industry, which swelled by 19 percent last year despite the faltering economy.

He credits Pacific Foods's success to vigilance for quality and commitment to sustainable agriculture from the dirt of his organic farm to the customer's dinner table.

"People are becoming more and more concerned with what they're eating—as well they should," he says. "I think we're just on the beginning edges of a huge nutritional transformation."

Making natural foods is a family affair. Father-in-law Edward Lynch is co-founder and partner at Pacific Foods, wife Louanna Eggert ('71 Education) is in charge of the family's winery, and 25-year-old son Charlie Eggert helps run its organic farm.

Pacific Foods's main plant could pass for a high-tech campus in the Portland suburb of Tualatin. Although it's located in an industrial area, Eggert's office overlooks restored wetlands. On a spring day, Canada geese stand sentinel over their goslings, and a hawk soars overhead. It seems a fitting place for an ultra-modern company striving to bring customers a real taste of nature.

Table

"A lot of the organic products we use just taste better," he says. "Our soups and broths, in natural foods, are the industry standards for flavor and quality."

When Eggert started Pacific Foods, he expected to make tofu, but soon found an emerging market for soy milk. At the time, neither product was a grocery store mainstay. "When we first started, if you said 'tofu' or 'soy milk,' they'd look at you funny."

Today, Pacific Foods makes 170 products that line the shelves of natural food stores and supermarket health food aisles from Washington state to Washington, D.C.

Most of the products are sold in Tetra Pak aseptic containers, similar to juice boxes. Eggert chose this type of packaging because the laminated material protects food quality without preservatives and is recyclable, like glass and metal, but its lighter weight makes it convenient for consumers and uses less energy to ship.

In business parlance, Pacific Foods's dirt-to-dinner table approach is called "vertical integration." Some companies only manufacture or market goods, but Pacific Foods keeps a tight grip on as many aspects of its business as possible. For example, the company

- develops its own recipes and product lines;
- grows some of its own ingredients;
- buys other ingredients from suppliers who grow natural or organic products and meet its strict "certified to the source" guarantee;
- manufactures all products under Pacific Foods labels and affiliated brand



names, such as French Prairie Cellars boxed wines and Healthy Essentials natural pet foods;

- makes private-label products for large retailers such as Kroger (including Fred Meyer and QFC stores) and Trader Joe's, and sells bulk products to other manufacturers;

- markets and sells its products at Portland-area New Seasons stores, which Eggert co-owns, and elsewhere throughout the United States and Canada;

- turns organic waste into animal foods and compost used to grow ingredients.

Eggert leaves day-to-day details of manufacturing and packaging to his 130 employees, to whom he frequently gives credit for the company's success.

"It's about everybody," he says. "I'm just fortunate I get to be in charge and I don't have to do a lot of the work."

Eggert pinpoints his passion on two areas.

First, he helps develop new food products that fit with Pacific Foods's strongholds in the market, such as a new line of organic gravies that complement its best-selling broths.

"What we really do well are soups, and broths, and nondairy drinks," he says.

Second, Eggert doesn't just talk about his goals for sustainability because he knows many of his customers demand it.

"If he's going to promise something, he's going to follow through on that promise," says his son, Charlie Eggert.

Pacific Foods buys locally when possible, supports farming practices that protect the environment, and looks for ways to cut energy use.

In 2000, the company formed its Bio-group of Oregon division on an old lily farm near Aurora, in the rolling hills of the northern Willamette Valley. Oregon Tilth previously certified Bio-

group's greenhouses as organic. This year, the USDA-accredited organization certified nearly 40 acres of fields, and staff planted tomatoes, butternut squash, and other crops, many of them from non-hybridized heirloom seeds. In a few more years, Eggert expects the farm's organic-certified acreage to triple when 80 acres nearby are certified.

Besides growing hard-to-find products for its own Pacific Foods brands and to develop new products, managers Charlie



"A lot of the organic products we use just taste better," says Eggert. "Our soups and broths . . . are the industry standards for flavor and quality."

Eggert and Brendan McMillen grow organic vegetables, herbs, and flowers for restaurants and farmer's markets.

"We're also trying to use our farmland as a model for how you can grow organic or sustainable products the best way possible," Eggert says.

In 2001, he started Pacific Environmental Group to guide his manufacturing business to be "environmentally neutral."

In the first phase, he is finding ways to recycle every scrap of waste. In part to keep a close watch, Eggert moved his office into the warehouse devoted to recycling.

"The goal is to get rid of our dumpster," he says.

Some packaging materials, such as 40 tons of cardboard generated per month, are easy marks. Other wastes are tougher to recycle, so Eggert is working with

his suppliers to reduce or change packaging. Until then, he is finding novel approaches to cutting waste, such as converting a mountain of plastic buckets into container gardens for low-income people, in a partnership with the Oregon Food Bank. Eggert is on the food bank's board, and Pacific Foods is a major donor.

The sloppiest mountain Pacific Environmental Group has overcome is the 50 tons of *okara*, the putty-like soy residue that Pacific Foods creates every day while making nondairy drinks. Nearly a year ago, Pacific Environmental spent \$500,000 on a custom-built drier that converts *okara* into a protein-packed powder. Petaluma Poultry Co. in California feeds the powder to chickens that in turn go into some of Pacific Foods's soups, broths, and gravies. Eventually, Eggert wants to send vegetable wastes to a composting facility at the Aurora farm. The farm also buys compost made from vegetable and fruit wastes

from supermarkets such as New Seasons.

After celebrating the demise of the dumpster, which he expects by the end of this year, Eggert will search for sustainable energy sources. For example, he wants to convert tractors at the farm to use a biodiesel fuel made from plants grown there.

Unlike Pacific Foods, Eggert doesn't expect Pacific Environmental to make money, but he does think it can break even. "It'll take two or three years, maybe four."

More important, Eggert says, is setting an example to be less wasteful.

"That just becomes a mindset. Once people start thinking that way, it just helps them do things more efficiently."

■
Eric Apalategui is a writer and reporter who lives near Portland, Oregon.

by Emmy Sunleaf '02 • photography by Laurence Chen

Happy Cows, Contented Ranchers

Environmentally sound,
humanely raised,
better tasting meat

JOEL HUESBY, owner and manager of Thundering Hooves Pasture-Finished Meats, sees himself as a conductor of a great orchestra, directing a harmonious symphony of life that includes soil, plants, animals, and people. Through his unique approach to farming, he has earned tremendous peace of mind and a few dollars to put in his pocket to boot.

But it wasn't always this way for the Walla Walla, Washington, rancher. Huesby ('86 agriculture) grew up as a fourth-generation wheat farmer and spent years plowing fields and growing crops that





After much soul-searching, Joel Huesby decided to change the way he farmed altogether.

barely earned him enough to support his family.

Several years ago, he got tired of living on a treadmill that always seemed to require “bigger, faster, more” with regard to equipment, chemicals, fertilizers, and yields.

“The crops required so many expensive inputs and yet provided so little return for my effort and risk,” he says. “It seemed that everyone was making a living from my land but me.” Feeling that his business was a failure, Huesby considered getting out of farming. After a lot of soul-searching, he decided to stay in, but to change the way he farmed altogether.

Huesby replaced his tractor, fertilizers, and pesticides with livestock. Instead of wheat, he now raises pasture-fed cattle, pigs, goats, chickens, and sheep.

While not certified as organic, “Our farm now operates under the principle that nature knows best,” he says. “We seek to follow natural laws governing

the relationships between grazing animals and the grassland.”

The result is a method of farming that produces healthy, flavorful meat that also has a positive impact on the environment, animal well-being, consumers, rural communities, and farmers’ pocketbooks, says Don Nelson, a Washington State University beef extension specialist.

Nelson recently developed a holistic beef management program called “Creating a Sustainable Future for Cow-Calf Producers.” The program is much like Huesby’s, in that it entails local production, processing, and marketing of beef raised on a grass-fed system. It also utilizes a decision making process that considers the impact of a given action on each area of a farm, and that requires meeting immediate needs without sacrificing long-term goals.

Nelson believes this method of raising beef has much to offer to both producers and consumers.

BORN TO GRAZE

Nelson and Huesby say that cattle finished on grass experience greater well-being. Huesby “pasture-finishes” his animals, keeping them on pasture until they reach finishing weight or are ready for slaughter. This differs from the conventional method of raising beef, in which cattle are raised on grass until they are sent off to be finished on grain in a feedlot.

In addition, because cattle are born to graze, grass is more compatible with their digestive tracts than grain, Nelson says, and thus grass-fed cows need fewer antibiotics. So, instead of spending months in a confined feedlot, the cattle continue to feed and roam freely on grass in a pasture, which provides less stress and a more natural environment. Huesby’s herd is so docile that when he rotates them across his pastures on a high-intensity, short-duration grazing schedule, he never has to use electric prods or dogs to get them to move. “I just call my

"The crops required so many expensive inputs and yet provided so little return for my effort and risk. It seemed that everyone was making a living from my land but me."

—Joel Huesby

cows and they come in. I think they are happy animals."

Cheryl ('85 Agriculture) and Robert Cosner (x'74 Agriculture) say that while it takes longer to raise beef this way, it also reduces the cost of feed, supplements, and other supplies.

"We have kept in the black for the past 12 years because of our ability to keep our expenses to the bare bones," says Cheryl, who co-manages a holistic pasture-fed beef operation with her husband in Centerville, Washington.

The Cosners have also benefited in other ways. "We calve in the spring when green feed is available for lactating mothers and when the weather risks are almost non-existent," she says. "Because of this, we lose no calves to hypothermia . . . and have not had a case of scours in 12 years."

Under conventional ranching methods, calves are usually born during late winter. The Cosners say their cows, which calve in May, experience greater fertility due to better grazing.

Maurice Robinette, a third-generation rancher from Cheney, Washington, has also experienced great success with the 10 percent of his herd that is finished on grass and calves in June.

"My calves are marketed at 14 months instead of six or seven," he says, "but I can cut the cost to \$20 per calf from about \$230 under conventional methods . . . and make a \$400 profit."

This could be great news to U.S. cattle producers who, in light of current economic conditions, face more risk and lower returns than ever before. According to the United States Department of Agriculture (USDA), cow-calf producers earned on average about \$2 less in 1999 than they did 20 years ago. Between 1992 and 2001, the USDA estimated their average return after expenses to be negative \$30.40 per bred cow.

And though the average herd size is increasing, the numbers of producers who raise those herds are not. The USDA reports that since 1994 approx-

imately 95,000 cow-calf producers, or about one out of nine, have left the industry—most with small herds of 50 head or less. Prices have been rising since 2000, but the number of cow-calf operations still declined from approximately 830,670 to 814,400 in 2001.

Despite these trends, Nelson, who has been involved in the cattle industry since 1964, is determined to find ways for small family ranchers to survive.

He believes holistic management and product differentiation may be the tools to do this, and Huesby, Robinette, and the Cosners, all of whom have worked with Nelson on these issues, are sterling examples of how these types of operations can work.

WHOLESOME, FUNCTIONAL FOOD

In several studies, including one conducted by Jan R. Busboom, a WSU professor and extension meat specialist, and his colleagues from the University of Wyoming, grass-fed beef has been found to contain fewer calories and have lower fat content than grain-fed beef.

According to Busboom's research, when the two varieties were compared as three-ounce trimmed, uncooked samples of lean meat, the grass-fed beef was shown to contain 112 calories and 2.4 grams of fat as opposed to 136 calories

and 5.0 grams of fat in the grain-fed sample.

Despite these differences, the report noted that grass- and grain-fed beef contain similar levels of cholesterol, and are both good sources of high-quality protein. Also, grain-fed beef was shown to contain nearly three times as much mono-saturated fat, which has been found to help decrease the risk of heart disease by lowering levels of low-density lipoproteins (LDL), or "bad" cholesterol in the body.

However, Nelson says grass-fed beef also has "functional food" properties.

"These are foods that contain compounds in them that have health benefits over and above what their nutritional aspects are, such as omega-3 fats," Nelson says.

Omega-3 is a poly-unsaturated fat that has been found to reduce the risk of heart attacks, strokes, and depression, according to the American Medical Association.

In Busboom's meat analysis study, grass-fed beef contained more than three times as much Omega-3 fat than grain-fed.

Other comparative studies found grass-fed beef to contain higher levels of antioxidants such as beta-carotene and Vita-



Although the average herd size is increasing, the numbers of producers who raise beef cattle are not. Since 1994, the USDA reports that approximately 95,000 cow-calf producers, or about one out of nine, have left the industry.

min E, as well as another beneficial fatty acid called conjugated linoleic acid (CLA).

Since its discovery in 1987, scientists have conducted a flurry of research to determine CLA's role in nutrition. Following a number of studies on lab animals, it was determined to be a powerful anti-carcinogen particularly effective in fighting breast and prostate cancer, according to Terry Shultz, a food science and human nutrition professor at WSU. He says it has also been found to be effective against skin, colon, and stomach cancer.

Other studies credit CLA with having a positive effect on heart disease and Type II diabetes, because it appears to reduce body fat in animals and humans. Busboom says that while scientists do not yet know how much is needed to benefit humans, it is believed that the amounts found in grass-fed beef may be sufficient.

A DECLARATION OF INDEPENDENCE

One of the main goals of Nelson's "Sustainable Future" program is for producers to implement a profitable grassland production system that not only enhances animal well-being, but also improves the environment.

"You can use grazing animals in a way that can help the environment and minimize input costs," he says.

Huesby began to do this in fall 1994, when he wrote a declaration of independence from excessive machinery, technology, fertilizers, and pesticides. Though 2002 was his first year of raising only pasture-fed meat, he began making changes immediately after writing his declaration. One of the first of these was to use draft horses for plowing instead of tractors. "Which is more high tech—a tractor or horses?" he says. "My horses will go straight down the row, and I don't even have to steer."

Another cost-saving change Nelson recommends is to control weeds not with pesticides, but with a variety of animals such as sheep, goats, and cattle, all grazing at different times. Several years ago, he helped implement a sustainable agriculture research program called "Noxious Weed Control through Multi-Species Grazing," which called for cattle to eat grass, sheep to eat other forage, and goats to eat brush and weeds.

"Nature's strength comes through diversity," says Huesby, who uses the technique on his farm. "Multiple-species grazing allows each animal to fill a unique niche."

Though Huesby has not used fertilizers or pesticides on his land since 1995, he has seen a tremendous improvement

in his soil. Through his grazing methods, he has also seen a reduction in soil erosion and a reversal of encroaching weeds and brush that can accompany non-rotational grazing methods.

The Cosners' Centerville farm has mimicked these results. "We have had a patch of Canada thistle in one corner of our place that is virtually non-existent now because the sheep and goats keep them pruned down," Cheryl Cosner said.

Grazing animals have also increased their soil's fertility. "One area in particular was once like a concrete slab in the summer and is now as soft as peat despite the dry year," she said. "The regrowth on the grazed areas was also significantly greater than that of the swathed area. We see this in other areas too, and attribute it to how plants are physiologically stimulated by a grazing animal."

On Huesby's farm, the soil appears to love the changes as well. "Because we no longer use tractors to plow the ground, a healthy community of microorganisms has re-emerged in what is truly living soil."

SUSTAINABLE FUTURE

"The average item on the supermarket shelf has traveled about 1,200 miles," Nelson says of the international boutique of food available in most grocery stores. "Some people desire a greater connection to the food they buy."

Through buying grass-fed beef, he says, consumers can learn exactly where their beef comes from, the importance of family farms and local food systems, and even their own connection to nature's systems.

And if consumers see producers as intelligent, dependable, and dedicated stewards of the land, Nelson thinks they will keep coming back for more and make it tough for conventional competition to steal them away.

Loyalty has been a big part of Maurice Robinette's business. Several of his customers have come to him for more than 20 years for their beef.



"We include [our children] in the farm planning process as much as possible," says Cheryl Cosner. "They help us in a myriad of ways." Here Pate (10) and Chantell (13) execute a little of that planning.



Cheryl Cosner: "We have kept in the black for the past 12 years because of our ability to keep our expenses to the bare bones."

Loyalty is a big part of Huesby's operation as well, but in a generational sense.

"Ours is truly a family farm," he says. "My children are fifth-generation here."

Instead of spending long hours alone on the tractor farming wheat, Huesby is now able to include his wife, Cynthia, and their four children in the family business.

"We . . . all have talents and abilities that fit well with the jobs we give each other," he says. "What my kids are learning they never would under a commercial operation."

The Cosners also include their three children, Chantell (13), Pate (10), and Juniper (5), in their holistic cycle of farming.

"We include them in the farm planning process as much as possible," Cheryl says. "They help us in a myriad of ways . . . pushing sheep and goats to different pastures, helping us with any birthing assists we might do, riding with us when we haul cows," she says.

Robinette also teaches his two daughters how to holistically ranch, as well

as others who are interested in learning about it. Having been involved in the Holistic Management Project sponsored by WSU and the Kellogg Foundation from 1995 to 1998, he was selected to be one of five educators to teach at sustainable agriculture workshops. Now he is able to train others about holistic management consensus building, leadership, goal setting, biological planning, monitoring, and policy analysis.

Currently he, Nelson, the Huesbys, and the Cosners all belong to the Pacific Northwest Graziers Network, created in 2001 to link ranchers to each other and to collaborate and coordinate efforts in education, research, and marketing related to grazing.

"It is time to look beyond organic toward the production of locally produced, value-added products that have multiple positive attributes that appeal to a broader spectrum of consumers," Nelson says.

But while producers are great at raising beef, the hurdles of processing, marketing, and retailing grass-fed beef remain.

"It would be very hard to do on a large scale big enough to supply Safeway," Nelson said. "You would need over a million cows a year . . . that is too many to raise on grass."

But holistic ranchers can tap into markets not supplied through large corporations. Many set their sights on selling directly to restaurant owners or consumers through farmers markets or filling orders for their beef.

"There is a lot of groundwork involved . . . doing research, making up brochures, regulations, logistics of getting where you need to be," says Huesby, who travels as far as Seattle to sell his meat.

But, he says, "I feel very optimistic about my future. I am a price maker, not a price taker." ■

Emmy Sunleaf graduated from Washington State University in 2002 with a degree in agricultural economics.

For more information on pasture-finished meats:

Huesby: www.thunderinghooves.net

Cosner: e-mail cosner@gorge.net; phone 509-773-5596

Robinette: e-mail mlr@icehouse.net; phone 509-299-4942

by Andrea Vogt | in Fattoria Poggio Alloro, Italy

Tuscan Tastes & POLITICS



CORNELL CLAYTON

AS 30 AMERICAN college students strain to understand his thick Tuscan accent, Amico Fioroni waves his strong, tanned arms dramatically across a patchwork of gray-green olive groves, sunflower fields, and ancient vineyards.

"Every olive, every grape, picked by hand," he says, raising his hands up near his weathered face and rubbing his fingertips together for emphasis. "It's a choice of ours. The machines, they take everything, but with the fingers you can choose. That makes a better wine, because you can throw away the bad grapes. It's natural selection, by us."

Here on these cypress-lined hills in the heart of Tuscany, just a few miles outside the medieval-towered hill town

of San Gimignano, Fioroni and his family proudly work their "closed cycle" organic farm. Closed cycle, he explains to these Northwest college students and their Washington State University professor, means that everything he produces begins and ends here. That includes 500,000 liters of Vernaccia and Chianti wine annually; an exquisite extra virgin olive oil, vegetables, honey, and saffron; rabbits, chickens, guinea-hens, pigs; and last, but not least, his prized Chianina cattle, an ancient breed once extolled by poets during the Roman Empire. Even the forage, barley and sunflower flour used as animal feed, is grown here.

"We sell directly from producer to consumer," Fioroni explains. The line that runs between those two is very short, and the result he sums up with one simple Italian word: "*Bella*."

But new European Union policies, expanding global markets, and ever-changing agricultural trade practices are increasingly affecting how farmers like Fioroni do business. As Europe's borders blur, its residents are struggling to reconcile their differing ideas about cuisine, health standards, and agricultural trade protocol. In this country with 3,000

years of gastronomical history, devotion to quality cuisine is akin to a religion, and food and wine have always been political flashpoints. Today, Italy fights to protect its cherished national products—such as parmigiano cheese, prosciutto ham, and Chianti wine, and balks regularly at allowing "lesser quality" products across its borders. The government recently tried to ban British imports of chocolate made with vegetable oils instead of real cocoa butter, for example, insisting that it be labeled as "chocolate substitute." In the last decade, in response to the emergence of fast-food chains in Italy, producers, restaurateurs, and food lovers founded the burgeoning "slow food" movement, which promotes sustainable agriculture, traditional farm methods, and food that is prepared and enjoyed with time, care, and greater awareness. But despite Italy's complex entanglement of food, wine, culture, and politics, WSU political science professor Cornell Clayton still has trouble convincing friends and colleagues back in Pullman that this academic foray into Tuscany food and politics is more than a great vacation.

Clayton spent early 2003 in Siena, Italy, a magical, almost perfectly pre-

Amico Fioroni and Cornell Clayton



ANDREA VOGT

served medieval walled city in Tuscany, where a consortium of Northwest universities, including WSU, sponsor a study-abroad program for American college students. The program is jointly operated with AHA International, a Portland, Oregon-based non-profit organization that runs 15 different study-abroad sites worldwide. With most of the language and core courses taught by permanent Italian faculty, the Siena professorship is open to only one visiting faculty member each semester. Clayton was chosen from a pool of Northwest faculty members to teach a quarter in 2003. He taught a course on Machiavelli, Italy's famed political philosopher, as well as this class, Italian Politics, subtitled, "The Politics of Food and Wine in Italy and Europe."

"The biggest problem I have is that nobody really believes I'm working," says Clayton, who normally specializes in American constitutional law. "But I'm working harder on these courses than most of the regular courses I teach."

While food and wine were the hooks to attract students, the course work includes plenty of solid political science—the study of European political institutions, agricultural trade policy, terrorism, corruption, and current events, for example. Clayton admits that

Cornell Clayton's class on Italian politics is not much like a traditional class.



ANDREA VOGT

introducing American students to Italian politics via epicurean explorations into European wine and cuisine is a grand idea he unfortunately cannot take credit for. The course was originally the brainchild of his WSU colleague, Lance LeLoup, who designed it for a similar professorship he was awarded in Angers, France, in 2001.

"I was looking for a unique way to teach American students about French and European ag policy," explains LeLoup, the C.O. and Mary Johnson Distinguished Professor of Political Science at WSU. "Since eating and drinking is one of the best ways to get to know a new place, and since these issues have been critical to the EU, I thought it was a perfect marriage."

The bottom line, LeLoup says, is that 50 percent of the European Union budget goes into the common agricultural policy to resolve issues of trade, food safety, the effectiveness of traditional farming methods, and the role of cuisine in family structure and culture. In fact, Clayton adds, one of the biggest current political disputes between Europe and the U.S. today involves the introduction of genetically modified food products, considered safe and ethical in the U.S., but no less than heretical in Europe.

"Anybody who looks a little deeper into what we are doing will see that this is a serious area," says LeLoup, "... one that has been critical to the EU since the 1950s, and continues to be as the EU considers its 10-member expansion."

In fact, LeLoup has requested a one-year sabbatical to study the issue more in depth next year at the University of Bordeaux.

"It's very relevant now, especially in terms of French-European-U.S. relations, and WSU is in a strong position to be part of that dialogue because of its relevance in the biotech areas," he explains. "People in political science may not be out there creating new breeds of plants, but we are able to develop courses that can promote a better understanding for American students, as well as others abroad, for some of these emerging issues."

The students from various Northwest universities studying in Siena during Clayton's stay ate it up, literally. During

With 3,000 years of gastronomical history, Italy's devotion to quality is akin to religion, and food and wine have always been political flashpoints.



CORNELL CLAYTON

lunch at Amico Fioroni's Tuscan farm, University of Oregon student Matt Stringer, 19, picks up his fourth bruschetta smothered in olive oil, Pecorino cheese, and spicy homemade salami, washes it down with a swallow of dark red Chianti, and puts it this way: "After this it's gonna be really hard to go back to actual school."

It doesn't seem much like a traditional class, and that's by design. It's a pedagogical approach called "learning in the laboratory," or learning by living. For example, students are required to attend excursions to Venice, the Cinque Terre, and other regions of Italy, where they must interview locals and take in their cuisine and culture. The assignment "doesn't suck," to use Stringer's parlance. But it's not all wining and dining under the Tuscan sun, either. Students are required to attend weekly three-hour seminars during which they discuss writing and reading assignments on EU institutions and policymaking and debate news articles about complex Italian current events and agricultural trade.

"It's a weird combination, but he pulls it off," said David Rudnick, a 22-year Washington State University student from Walla Walla. "I do miss Pullman, but I know that after this I'm going to go back and end up making pasta four out of five days of the week."

For many students like Rudnick, life in Italy marks a new, more intimate relationship with the food they eat—many are learning to cook for the first time. After course excursions, for example, students are required to plan and prepare a dinner for the rest of the class showcasing the cuisine of the region. That assignment proved difficult for Western Washington University student Betsy Hartner, who, after a visit to Venice, discovered she was one of the few vegetarians in the land of liver and onions (otherwise known as *Fegato alla Veneziana*). When she began planning her traditional Venetian meal without a meat dish, professor Clayton balked: "I told her, 'You at least have to have shrimp, clams, seafood . . . something.'"

Instead of a meat dish, she brought in

her favorite cookbook, *The Higher Taste, A Guide To Gourmet Vegetarian Cooking and a Karma-free Diet*.

"One of the other major challenges with teaching this course to American students now," says Clayton, "is the large number of vegetarians, vegans, those allergic to milk products, et cetera. It can make teaching a course about the politics of food a nightmare."

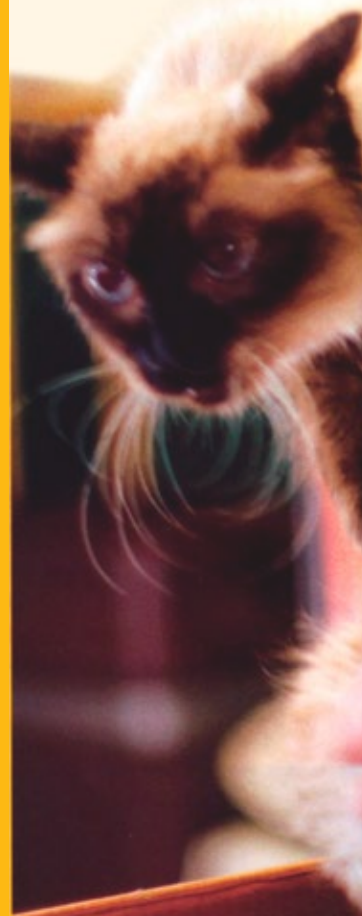
Or at least more challenging. Some of the classroom's liveliest discussions spring from the culture shock American students inevitably experience in their new European surroundings—like the day Clayton spotted several students slinking guiltily into a nearby McDonalds to binge on comfort food from home: Big Macs, fries, and supersized soft drinks.

But even the most hard-core adherents of American college life can't help but notice the difference between the thick, chewy, overly cheesy pizza delivered to their dorms in cardboard boxes and the delicious, thin-crust creations that emerge from wood-fired ovens here. And despite her aversion to meat, even Hartner discovered that many aspects of the light, healthy Mediterranean diet appeal to her vegetarian values. While she had to hold her nose through the tour of a prosciutto ham factory, she cherishes that there's a fresh vegetable market on nearly every street corner, where the produce is assuredly local, fresh, and grown naturally, because that's still what consumers expect.

Squeezed between casks, barrels, and purification vats of his humming wine production facility, Amico Fioroni pours a glass of white wine directly from an immense silver vat and holds it out for Professor Clayton and several students to smell. He expounds briefly on its low acidity and delicate perfume—a result of accurate selection of vines, careful pruning, organic fertilizing, and age-old tradition. Then, with a toast to the *Lunga Vita*, or long life, he downs it in one big gulp.

■
Andrea Vogt's article, "Nurses to the Homeless" (Washington State Magazine, Spring 2002), won a silver medal in the Council for the Advancement and Support of Education feature writing awards and highest honors in the recent Spokane Public Relations Council awards competition.

S



Twice a month since 1985 Dr. Stan Coe and other volunteers have been providing free veterinary care for animals of Seattle's street people.

TREET VET

by Pat Caraher • photography by Laurence Chen



VETERINARIAN STAN COE descends 15 stairs to the basement of Seattle's Union Gospel Mission. He's carrying syringes, vaccines, pills, bandages, and animal clippers in a plastic tub. Following close behind are a man leading a rottweiler on a chrome chain, a woman carrying

a white cockatoo in a blue blanket, and a little girl about four years old clutching a cloth sack in one fist. Inside is a two-foot long python. They are the first of 54 clients, including an opossum, Coe will see today, May 10.

Every second and fourth Saturday Coe transforms the mission's dayroom into a veterinary clinic. Just left of the stairway he positions a couple of small tables. He will work at one, Dr. Marta Nobrega at the other. Across the room, receptionist Louise Garbe, 80, registers clients, passes out numbers, and keeps records. Her veterinarian daughter, Dr. Jode Garbe, is also on duty.

Business is brisk from 3 to 5 p.m. Visitors take a seat in one of 55 plastic chairs. A few animals are restless at first, then settle down on the gray tile floor, or fall asleep in wire carriers, cardboard boxes, or their owners' laps. Their ailments vary—skin problems, dandruff, allergies, diarrhea, cuts, wounds. Rarely are they undernourished.

"It always surprises me the general good condition the animals are in," Coe says. "Owners insist that their pets get taken care of before they do."

His clients are Seattle's street people. Or residents of low-income dwellings downtown, who can't afford health care for their pets.

Coe, 70, makes arrangements for broken legs and emergencies at the Elliott Bay Animal Hospital, a 15-minute drive away. He maintained a practice there until semi-retiring in November 2001 following a near-fatal heart attack.

Louise Garbe cups her hands to her mouth and calls, "Number 16." She's a former teacher. Don Rolf, Coe's assistant, has also volunteered almost since the beginning. He trained marine animals at San Diego's Sea World.

Dr. Charles W. Doney founded the street people's pet clinic in 1985, but died two years later. Coe invited his widow, Helen, to lunch, and assured her that area veterinarians, most of them, like Coe, alumni of Washington State University's College of Veterinary Medicine, would rally to the cause. They did. More than a dozen agreed to work on a rotating basis, as did technicians and other volunteers.

AFTER GIVING SAMMY, A MINIATURE DACHSHUND, a booster shot and a worm tablet, Coe tells the owner, "Come back in four weeks. It takes time for him to build up antibodies to the vaccines."

Benzie's kidneys haven't been functioning properly, reports her owner while waiting. Coe discovered a small tumor on the cat's thyroid gland in an earlier visit.

"I'm forever indebted to him for restoring Benzie back to health," the Cat Lady says.

"It's good to have a cooperative patient," Coe says with a smile. Junior, a fluffy black-haired cat, has diarrhea.

"See if you can get him on a high-fiber diet," the veterinarian says.

"I hear pumpkin is good?"

"It is if you can get him to eat it."

Coe leans close to another cat, examining one eye with an ophthalmoscope, then the other. "It's probably allergies." He washes out the cat's eyes, and then draws a blood sample. The animals seem to sense Coe's tenderness. So do the owners.

COE CITES THE THERAPEUTIC VALUE of companion animals, particularly for the people he sees. Their pets love them unconditionally, and follow them everywhere.

For some street people, the clinic is their social life.

"You get used to seeing them. You are concerned about them, not just their pets." ■



Cats and dogs are the most common clients. Other visitors include birds and reptiles, hamsters, and on this day, an opossum. The most exotic animal has been an iguana.





A line forms outside Seattle's Union Gospel Mission downtown awaiting Coe's arrival May 10.



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TRACKING THE COUGARS

CLASS NOTES

1930s

Dan Eagle ('39 Fine Arts), retired advertising man with *The Spokesman-Review* in Spokane, continues to make Cougar buttons as he has for a quarter-century. Earlier this year he created 2003 Rose Bowl ceramic mugs to honor WSU's 2002 Pac-10 championship football team. He donated 150 numbered mugs to the WSU football team and coaches.

1940s

Jean Lancaster ('47 Phys. Ed., '51 Educ.), Longview, spent 10 days on the Yangtze River, visited Siam and Beijing, and spent a week on Easter Island. Her schedule also allowed her to cross-country ski at Mt. Hood Meadows and Mt. Washington on Vancouver Island.

1950s

Raymond E. Reed ('51 D.V.M.), Tucson, was presented the University of Arizona College of Agriculture and Life Sciences "Lifetime Achievement Award" in April 2002 for his service to agriculture, his profession, community, and college.

After retiring, **Jack McCulloh** ('52 Agri. Sci.), Rapid City, South Dakota, began exploring the Black Hills with friends, tracking the 1874 Custer Expedition with a Global Positioning System unit, and mapping the results. The project has surfaced as a book entitled, *Exploring with Custer: The 1874 Black Hills Expedition*, so others can become familiar with this aspect of the area's history. (See www.custertrail.com/Pages/researchteam.html) McCulloh also started an annual class for the Community Education Organization of Rapid City entitled, "Following Custer and Illingworth in the Black Hills with a GPS."

Thomas M. Barlow ('57 Mech. Engr.) has been elected to the Board of Governors of the American Society of Mechanical Engineers. He joined the organization as a WSU junior, and has been active in many ASME committees and boards. He was named a fellow in 1990, and received the society's Dedicated Service Award in 1991. From 1960 until 1998, he worked at the Lawrence Livermore National Laboratory in a variety of engineering and management assignments. He and his wife, Sandy, retired in 1997. They live in Lincoln, California.

Betty K. English England ('58 Home Ec.) is an equine artist in Newcastle, California. B.K. England Equine Art celebrates the horse in painting, photos, poetry, and more. Products include cards, commissioned art, and photo portraits. England was born in Wenatchee, and grew up on a ranch. She began her business in 1977 after moving to California. Her artwork has been featured on covers or editorially in such magazines as *Equine Images*,

Chronicle of the Horse, *Ride!*, *Creation*, *California Review*, *The Appaloosa Journal*, *Arabian Visions*, and *Conquistador*.

Charles R. "Dick" Schaefer ('59 Phys. Educ.) retired as a lieutenant colonel and command pilot at the Pentagon after 20 years in the Air Force. He flew 5,000 hours and 135 missions during the Vietnam War, the subject of his book, *The Final Conflict: The Loss of Innocence*, published by Southern Charm Press in 2002. Following his military career, he worked eight years with TRW and 13 years with the Computer Sciences Corp. He is now a substitute teacher for Okaloosa County. He lives in Niceville, in the Florida panhandle between Panama City and Pensacola.

1960s

Carol Weitz Stueckle (x'60) is director of the Whitman County Hospital Foundation in Colfax. She writes, "Starting over at 65. A new career in national speaking combined with fundraising for our hospital keeps me working full-time."

Rick Howell ('61 Agri., '67 M.S. Agri.), Vancouver, has been named director of organization development and human resources at Columbia Forest Products, a Portland company. He will work closely with the operations and human resource managers at all mill locations.

During his 16-year tenure as president of Kansas State University, **Jon Wefald** ('61 M.A. Hist.) has seen KSU add more than 1.8 million square feet of new buildings and increase its enrollment from 13,000 students in 1986 to nearly 23,000. Over the past 15 years, KSU has had 91 recipients of Rhodes, Marshall, Truman, Goldwater, and Udall scholarships. Wefald was Minnesota's commissioner of agriculture, 1971-77; president of Southwest State University, Minnesota, 1977-82; and chancellor of Minnesota's state university system, 1982-86.

Dan Pederson ('62 Elect. Engr.) is retired on Camano Island. He named the private road leading to his place "Cougar Lane." He does consulting as Pederson Engineering.

Bruce Bayley ('63 Civ. Engr.), Portland, Oregon, is a retired structural engineer with the U.S. Army Corps of Engineers. He volunteers his time as treasurer for Portland Table Tennis Club.

James L. Lemery ('63 Bus. Adm., '65 M.B.A.) joined Southwest Community Bank, Carlsbad, California, as executive vice president/chief financial officer in February after 11 years as chief financial officer at First National Bank in San Diego. He also served as chief financial officer at the former Torrey Pines Bank in Solana Beach during the 1980s. He is a former Cougar basketball player.

Louis Martin Holscher ('68 Gen. St., '72 M.A. Soc., '75 Ph.D. Soc.) has taught at San Jose State University for 15 years, the last six as professor and chair of Mexican American Studies. In 2002, he studied the border areas of southern Argentina and Chile. He is working on a history of the Chicano music industry.

Carroll Hayden ('69 Bus. Adm.) was the mastermind behind Pullman's 2003 New Year's Eve Rose Bowl Celebration at the Gladish Community Center. The Hog Heaven Big Band opened the evening with music from the swing era, followed by The Fabulous Kingpins with classic rock 'n' roll. More than 110 people attended. "It

was successful enough that we hope it will become an annual event," he said. Proceeds were designated for the Gladish Community Center and for the Downtown Pullman Riverwalk Project. Hayden spent 33 years at the WSU Activities Center as a program advisor, recreation supervisor, and program director for recreation before retiring in 2001.

1970s

Merritt H. Ketcham ('74 Elect. Engr.), Kalama, was elected to a six-year term on the Cowlitz County Public Utility District Board of Commissioners. He is supervisor of engineering at Longview Fibre Co.



Kathi Goertzen

Don't be afraid to stumble

IN HER MAY 10 COMMENCEMENT ADDRESS, Kathi Goertzen ('90 Comm.) provided words of advice to new graduates of Washington State University's College of Liberal Arts.

"As you go out into the world and pursue your careers or the next step in your lives, don't worry when you stumble. Just remember that success is really nothing more than a succession of failures."

The news anchor for Seattle's KOMO-TV added, "Believe in something larger than yourself and get involved in some of the big issues of your time. . . . Give back. Serving the community is an honor. It's a privilege."

Some 2,250 students—2,000 undergraduates and 250 graduate and professional—took part in three 2003 commencement ceremonies in the Beasley Performing Arts Coliseum.

CLASS NOTES *continued*

Matthew J. Wanchena ('74 Arch. St.) is employed by the Airport Building Department at the Sea-Tac International Airport.

Col. **Bob Dickmeyer** ('76 Fine Arts), expedition maintenance group commander with the U.S. Air Force at Guam, is responsible for the airplanes (24) and approximately 850 people who maintain the munitions and aircraft.

Sid Gustafson ('76 Vet. Sci., '79 D.V.M.) practices veterinary medicine in Bozeman, Montana. His first novel,

Prisoners of Flight, was released June 2002 by The Permanent Press. His guidebook, *First Aid for the Active Dog*, is also scheduled for a summer release by Alpine Publications.

Michael B. Rhea ('77 Crim. Just.) is the defense attaché in Managua, Nicaragua. He was commissioned through the Army ROTC program at WSU. Assignments have taken him to Ft. Benning, Georgia; Ft. Bragg, North Carolina; Ft. Hood, Texas; Ft. Dix, New Jersey; Language School at the Presidio of Monterey, California; and San Diego. He has served in Panama

City, Panama; Mexico City; and Caracas, Venezuela, where he was commander, U.S. Military Group.

Ann Parry Haley ('78 Psych.), former public relations executive with the Boston Celtics, was named executive director of the Oakland-Alameda (California) County Coliseum Authority in July 2002. Her role is liaison with the three teams who play in the Coliseum Arena—the Raiders, A's, and Warriors. She reports to a board of directors, eight people from the City of Oakland and Alameda County, who jointly own the facilities. "Politics are a constant

overlying concern and, in that regard, Oakland reminds me of Boston," she writes.

Don Lynch ('79 Finance), Los Angeles, is author of *Ghosts of the Abyss*. The book describes the expedition filmmaker James Cameron conducted in August and September 2001, when he returned to the wreck of the *Titanic* to explore the interior of the ship. Published by Da Capo Press/Madison Press Books, and produced in association with Walden Media, LLC, *Ghosts of the Abyss* is a companion book to the 3-D, large format documentary

Software system enables precise radiation treatment for tumors

"every 1 percent [improvement] is a lot of people."

—Thanos Etmektzoglou

SELDOM DO SOFTWARE ENGINEERS get to see their work save lives. But new software developed by Washington State University alumnus Thanos Etmektzoglou is making a difference for cancer patients.

For the past 13 years Etmektzoglou has worked at Varian Medical Systems in Palo Alto, California, to develop a software control system that allows for more precise delivery of radiation to cancerous tumors.

Radiation is used in cancer treatment, because it more negatively affects cancerous

cells than healthy ones. Doctors work to provide sufficient radiation to kill the cancer cells, while keeping injury to the surrounding healthy cells and organs at a minimum. With some cancers, however, doctors may have to provide a lower dose of radiation than would be optimal to avoid damaging particularly vital or sensitive tissue and organs nearby.

Working with engineers who designed individual components of the system, Etmektzoglou's software system ties together an array of X-ray beam generation hardware, microwave power, custom motors, encoders, controllers, and other technologies. These operate within Varian's intensity modulated radiation therapy system (IMRT) to generate radiation with precisely shaped and timed beams targeted at tumors. The elaborate motion control system pinpoints the beam, even allowing for the patient's breathing movements.

The IMRT system is dynamic, rather than static, says Etmektzoglou. The treatment planning computer tailors the relationship between motions and dose. Each point in the body receives a radiation dose to exactly match the ideal prescription.

Because the IMRT delivery is more accurate, outcomes may improve dramatically.

The system Etmektzoglou developed was first used on a few patients at Memorial Sloan Kettering in New York. Preliminary data from researchers suggest that prostate cancer patients receiving the more precise IMRT treatment have a significantly higher success rate than conventional treatments—from about 64 percent to 96 percent in studies completed so far. IMRT treatments also seem to lower the rate of complications—from 10 percent to 2 percent. More studies are underway. Cancer

treatment success is usually measured in terms of five-year survival rates.

The medical field is adopting the technique and using it with other forms of cancer. Approximately 280 hospitals within 5,500 treatment centers worldwide use IMRT technology for about 10 percent of the cancer radiation treatments they perform. About 1,100 more sites are in the process of acquiring it.

While it's not clear if such dramatic improvement in outcomes will continue, Etmektzoglou says the IMRT treatments are "at least as good as conventional treatments or better."

With more than one million people receiving radiation worldwide each year, "every 1 percent [improvement] is a lot of people," he says.

"I'm fortunate to be able to see an immediate result from my work."

A native of Greece, Etmektzoglou came to the United States in 1983 to study computers. At the time he was an undergraduate student in physics, the use of computers was still relatively rare in his country. He fell in love with the new technology.

"I realized that a whole new world had opened up in terms of computation," he said.

Etmektzoglou recently earned a "Special Achievement Award" from *Design News* magazine for his work, the first software engineer to be so honored. Along with the award, he received a grant, a portion of which he donated to the School of Electrical Engineering and Computer Science at Washington State University. He holds two WSU degrees—'88 M.S. Electrical and Computer Engineering, and '88 M.S. Computer Science.

—Tina Hilding



COURTESY DESIGN NEWS MAGAZINE

Summer busy time for Canadian canoe and kayak executive

"... management skills are transferable to all sorts of careers."

—Pamela Robertson

SURROUNDED as she is by an inventory of 600 canoes and kayaks, one would think Pamela Robertson spends her summers on the water near her Waverley, Nova Scotia, home.

She'd love to. But as vice president of Old Creel Canoe & Kayak Inc., she's too busy. The Halifax-based company supplies 36 outlets and outfitting operations in Canada's four Atlantic provinces—New Brunswick, Newfoundland, Nova Scotia, and Prince Edward Island.

"You're working so hard from April through September," she says, "you don't have time to paddle yourself."

The pleasant Canadian with short, black hair and rimless glasses earned a master's degree in home economics at Washington State University in 1982. Robertson returned to Pullman last fall for a little R&R and to visit with her thesis committee chair and mentor at WSU, professor emeritus Gladys Jennings, now of Seattle. The two have stayed in touch over the past 20 years. "She continues to be my biggest supporter, and always makes a point to send me newspaper clippings, articles, or a card of congratulations," Robertson says. The two have also managed to visit periodically in Pullman, Seattle, Boston, Halifax, and Las Vegas.

Some people may consider home economics to be a "non-significant major," but Robertson doesn't. "The life skills it gives you and the management skills are transferable to all sorts of careers," she says. "It doesn't matter if you are ordering food for a hospital with 600 patients, or planning a budget for kayaks for the next year, the skills are the same."

Robertson previously worked as a community nutritionist with the Ministry of Health in British Columbia, and spent five years with a major pharmaceutical firm developing new markets in eastern Canada. In 1989 she founded Executive Plus Busi-



Pamela Robertson is vice president of the largest canoe and kayak dealership in Atlantic Canada.

ness Centre, 8,000 square feet of office space in Atlantic Canada's largest industrial park. The space was divided into individual offices, furnished, and leased to national companies. She sold the business in May 2002.

"I met a lot of people and enjoyed the challenge, but it was time for a change," she says.

Her climb up the ladder with Old Creel Canoe & Kayak has been rapid. Nearly four years ago, while still overseeing her own company, she volunteered to work weekends with the boat firm "just to have some fun and learn to kayak." As her knowledge increased, she was hired to handle the accounting three days a week. The rest of her time was devoted to organizing kayak tours for customers and working in the retail shop. A year ago May, she became vice president.

Every week she organizes a paddle and fires off an e-mail message to 600 clients

outlining a new adventure—a paddle to the Bay of Fundy, Mahone Bay, or an inland lake.

The company is the largest dealer of canoes and kayaks in Atlantic Canada, selling a wide variety of Canadian lines, including Boréal Design, Sun, Azul, Nova Craft, and Esquif, as well as kayaks from Finland and England. The company also manufactures and distributes its own line of canoes, "Old Creel." Priced from \$600 to \$2,000 Canadian, the canoes come in lengths of 14 to 17 feet. The 16-footer is the most popular. They are made of a wide variety of materials, including fiberglass, kevlar, royaalex, and cedar and canvas. Some canoes weigh as little as 36 pounds. Kayaks range in price from \$400 to \$5,000 Canadian, with the average sea kayak priced around \$1,500. In a price-sensitive market, plastic kayaks are still the most popular in eastern Canada, but there is a growing interest in the lighter, faster, and ultimately more durable fiberglass and kevlar kayaks.

Kayakers are generally well educated, well spoken, "looking for something that is fun, and are nice people to deal with," Robertson says. Typically, they are over 45 and "empty-nesters" with discretionary income. Potential buyers may test-paddle kayaks in front of the company shop located on the historic Shubenacadie Canal System.

President Bob Thorne launched Old Creel Canoe & Kayak 16 years ago. The avid fly fisherman was looking for something to do when he retired from the Royal Canadian Mounted Police. From a backyard business, it has grown well beyond his expectations.

Robertson should know. "As busy as we are in the shop during the peak paddling season," she says, "I... enjoy spending time with our customers, and it... give[s] me great pleasure to see them enjoying our boats."

—Pat Caraher

WSU ALUMNI ASSOCIATION HONORS SEALS, SHARRATT

RUPERT GRANT SEALS, ONE OF WSU'S FIRST BLACK PH.D.S

RUPERT GRANT SEALS was honored twice by Washington State University, where he gained distinction as the fifth African American to earn a doctorate ('60 Animal Science).

He received the Alumni Achievement Award "for exemplary academic leadership in agricultural education, and for his advocacy and action in creating a national awareness of the vital need for increased economic support and opportunities for African Americans at land-grant universities."

He also was named "Distinguished Graduate: Science, Education and Technology" for 2003 by the Department of Animal Sciences. Both awards were given at the April 12 animal sciences recognition banquet.

"I never expected it," the Reno resident said of the recognition. "It was a pleasant surprise."

Seals spent most of his professional career in higher education. He was professor and dean of the School of Agriculture and Home Economics at Florida A&M, 1969-74. He returned there in 1989 to direct international programs for five years, and then taught biochemistry until he retired in 1998. He was associate dean of the College of Agriculture and professor of animal nutrition at the University of Nevada, 1976-87. The recent WSU honoree also coordinated special research programs for the USDA Cooperative State Research Service in Washington, D.C., for two years in the mid-1970s.

A native of Shelbyville, Kentucky, he received B.S. (1953) and M.S. (1956) degrees at Florida A&M and the University of Kentucky, respectively, before enrolling at WSU.

His book, *Disparity: An Analysis of the Historical, Political, and Funding Factors at the State Level Affecting Black Academic Agriculture*, was published in 1998. It details some of the early politics accompanying the designation of both the predominantly white and predominantly Black land-grant schools in the 17 southern states. The Morrill Acts of 1862 and 1890 enabled both types of institutions. He notes, however, that the Hatch-George Act (1887) and the Smith-Lever Agricultural Extension Act (1914) form the real bases of land-grant agriculture, since they provide for research and development or rural economic development. It wasn't until the 1970s that the federal government stepped in with separate legislation to support historic land-grant



Rupert Grant Seals and his wife, Georgetta, returned to WSU in April.

Black colleges and universities, he says.

The April visit to Pullman was the first for Seals and Georgetta, his wife of 48 years, since they attended the 1973 national convention of the American Dairy Science Association hosted by WSU. He said he was impressed by the new buildings, and, in particular, the conversion of the historic agriculture barn into the Lewis Alumni Centre.

"The things we felt about WSU are still here," he said, recalling his four years as a Ph.D. student as "a great time."

GENE SHARRATT, RETIRED WENATCHEE EDUCATOR

GENE SHARRATT, retired superintendent of the North Central Educational Service District (NCESD) in Wenatchee, received the Alumni Achievement Award March 14 at a WSU gathering in Wenatchee.

He was recognized as "an educator who cares about others and does something positive to help the personal conditions of children."

After earning a bachelor's degree in elementary education, 1972, he taught in Alaska and Washington and at the International School in Stavanger, Norway. He completed a Ph.D. in education at WSU in 1983, and was elementary school principal in Naches, assistant superintendent in Yelm, and superintendent

in Chehalis. From 1991 until he retired in June 2002, he was credited with building the NCESD into a major educational institution.

"He has had partnership projects with nearly every institution of higher education in this state to provide better service to the educators and children in the NCESD," wrote Donald C. Orlich, WSU professor emeritus of education, in a letter supporting Sharratt's nomination for the award.

Sharratt founded "Kids First," a youth advocacy group that helps children of needy families in the Wenatchee area by purchasing school materials and clothing, even glasses. He foresaw the need to prepare the work force in north central Washington with modern skills, and marshaled area leaders in support of the Community Technology Center in Wenatchee.

In 1998-99, he initiated "Honor By Listening," a project in which high school students read Tom Brokaw's book, *The Greatest Generation*, then interviewed World War II veterans as the national news anchor had. Sharratt is also responsible for more than 200 Intermountain AmeriCorps volunteers, who tutor Native American and Hispanic children in 29 different school districts in Washington.

"He is this state's strongest advocate for quality education for all children, and is champion of the underdog," Orlich says. "In short, Gene Sharratt adds social and educational capital to our state."

Sharratt holds numerous teaching and community leadership awards, including the WSU College of Education's Outstanding Teacher Award of 1982. He has published more than 80 papers and articles in professional journals.

—Pat Caraher

Gene Sharratt, left, visits with his WSU mentor, Tom Ruff, professor emeritus of education.



CLASS NOTES continued

Cameron produced as a result of the expedition. The book was scheduled for release March 25, and the film premiered in April.

1980s

Richard L. Domey ('80 Ph.D. Speech) was recognized as a "Pullman Treasure" at a February 8, 2003 reception. He was honored for helping with the acquisition and development of the Gladish Community and Culture Center (the former Pullman High School). He was a member of the group of Pullmanites who raised the money to purchase Gladish, and served as vice president of the board of directors for five years.

Mary M. Brutsche ('81 Child & Family Studies, '90 Ph.D. Educ.), Arlington, is a child and family psychologist at The Everett Clinic. She also has a private practice one day a week, where she treats children and adolescents. She is a volunteer on the Snohomish County Head Start/ELEAP Health Advisory Committee, and is a mental health consultant for Head Start of Snohomish County.

John R. Weigel ('81 Ph.D. Econ.) was invited to Oxford, England, to present a merger case study based on his business performance analysis model at the Inaugural Strategy World Congress.

Sarah E. Lingle ('82 Ph.D. Agron.) was elected a fellow of the American Society of Agronomy in 2002. A plant physiologist with the USDA-Agricultural Research Station in New Orleans, she does research on sugarcane.

After 15 years as the assistant sports editor at *The Spokesman-Review*, **Joe Palmquist** ('82 Comm.) was promoted to sports editor earlier this year. He writes, "It has been quite a change after nearly 20 years of night shifts." His wife, **Laurie O'Dell Palmquist** ('83 Comm.), is a program manager with Child Protective Services of the Washington Department of Social and Health Services. They have three sons.

Tom Eades ('83 Broadcast Comm.) has been appointed assistant fire chief of Friday Harbor. He has lived on San Juan Island for nearly 20 years, where he's been a volunteer firefighter and dispatcher for the county.

Dan Jurdy ('83 Zoology) is athletic director at Rainier Beach High School in Seattle.

Dennis M. Kelly ('83 Comm.), president of News Talk Concepts, Inc., a consulting firm based in Mukilteo, was hired in late 2002 by KOMO Radio of Seattle to lead the station in a transition to an all-news format.

Erin D. Nuxoll ('83 Forest Mgmt.) has been elected vice president, Human

Campbell heads Seattle Foundation

PHYLLIS TAKISAKI CAMPBELL ('73 Bus. Adm.) has been named president and CEO of The Seattle Foundation, the state's oldest and largest community foundation. She succeeds Anne V. Farrell, who served in that position for 19 years before announcing her retirement last December.

"This is a dream come true for me," Campbell says, "and an unparalleled opportunity to make a positive difference in our region."

In 2002, the foundation distributed nearly \$39 million in grants, and has assets approaching \$285 million.

Campbell concluded a 28-year banking career after serving as president of U.S. Bank of Washington from 1993 to 2001. She was appointed to the Washington State University Board of Regents in 1990, served as president in 1995-96, and completed her tenure in May 2003. She also serves on the boards of Safeco, Puget Sound Energy, Pacific Science Center, and as 2002-2003 chair of the Washington Athletic Club board.



Phyllis Campbell

LATO BENCE, COURTESY OF WASHINGTON ATHLETIC CLUB, SEATTLE

Resources, for the Boise Cascade Corp. in Boise, Idaho. She joined the company in 1983 as a forester in the wood products manufacturing operation in Kettle Falls, Washington. In June 2002, she became senior manager and director of human resources. She earned a master's degree in organizational leadership from Gonzaga University in 1991.

Dave Dooley ('85 Bus. Adm.) is the new director of tennis for Shadow Wood Country Club in Shadow Wood at The Brooks, Bonita Springs, Florida. The Seattle native previously worked at the Woodmont G&CC, Fort Lauderdale, and at the Boca Pointe Country Club, Boca Raton. The members-only Shadow Wood Tennis Complex earned the 1999 Outstanding Tennis Facility Award, the top recognition in the private club category from the U.S. Tennis Court and Track Builders Association. The Brooks is a 2,532-acre community being developed by The Bonita Bay Group.

Kenneth J. Fridley ('85 Civ. Engr.) has been named head of the Department of Civil and Environmental Engineering at the University of Arizona's College of Engineering. He previously was associate dean of research and interim chair of the Department of Civil and Environmental Engineering at the University of Nevada. Earlier he coordinated the structural engineering and materials division at Washington State University, where he was a professor of civil engineering.

R. Chris Longston ('86 Comp. Sci.) has been a truck systems manager at Paccar/DAF for 16 years. He has been living in the Netherlands for two years on an international assignment for Paccar.

Thomas Alvin Jones ('87 Geol. Engr.), Bothell, is an associate and geotechnical engineer for Zipper Seman Associates. He is serving as a volunteer on a bridge design study in Port D'Paix, Haiti.

Peter R. Mills ('87 M.A. Anthro.) received his Ph.D. from the University of California, Berkeley in 1996, and now is an associate professor of anthropology at the University of Hawaii at Hilo. His book, *Hawaii's Russian Adventure, a New Look at Old History*, was published by the University of Hawaii Press in 2002. It deals with 19th-century encounters between Russian/Alaskan fur traders and Hawaiian Islanders.

John R. Woods ('87 Acct. & Finance), Portland, Oregon, is regional comptroller for Kinetic Systems in Wilsonville. He and his wife, Meagan, report the birth of their first child, Joshua, December 2, 2002.

Richard Cho ('89 Mech. Engr.) is assistant general manager and associate legal counsel for the Seattle SuperSonics of the National Basketball Association. He serves as the bridge between the players and the complicated rules of the NBA's collective bargaining agreement. According to a March 21, 2003 story in the *Puget Sound Business Journal*, he has proven his worth as a software developer. The Sonics are considered one of the NBA's most technically advanced teams in terms of software application.

Steven R. Woods ('89 Hotel & Rest. Adm.) is director of sales and marketing for Eddy's Catering in the Kansas City Bartle Hall Convention Center, Kansas City, Missouri.

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CLASS NOTES *continued*

1990s

Scott Bleeker ('91 Ag. Econ.), Spokane, has joined Banner Bank as assistant vice president and commercial loan officer. He previously was a business banking officer at Sterling Savings Bank.

Alan Cunningham ('91 D.V.M.), American Fork, Utah, has published

a book, *Sleeping With Angels*, directed towards animal companion loss. A second book he is compiling, *On Angels Wings*, is a collection of short stories from authors who have lost beloved animal companions. Cunningham is a full-time night emergency veterinarian at Animal Emergency South in Sandy. He also is enrolled in his first year of medical school at The School of Health Sciences, Antiqua.

Terrance R. Thomas III ('91 Bus. Adm.), a major in the Marine Corps Reserves, was called into active duty in support of Operation Enduring Freedom, while assigned to the Third Air Naval Gunfire Liaison Company at Terminal Island, California.

Meghan Wiley ('92 Hotel & Rest. Adm.), assistant general manager of Pullman's Holiday Inn Express, has

been named Manager of the Year for 2002 by the Washington State Hotel and Lodging Association. She also was named 2002 Director of Marketing for the Year by Six Continents Hotels and Resorts. She started marketing blitzes when the hotel opened in 1994, and had WSU students call on WSU employees who booked rooms for out-of-town participants in college events. The students asked those people what

Petland owner started from the ground up

What happens when Fluffy dies?

DAVID BIELSKI knows where the bodies are buried. "Samantha." "Bubbles." "Fluffy." In fact, the owner-president of Petland Cemetery, Inc. lives on the grounds of the adjoining Fern Hill Cemetery, which has been in the family for three generations. The two cemeteries are situated above the Wishkah River on the north side of Aberdeen.

Bielski's grandfather, Paul, started working at Fern Hill about 1924 after immigrating from Germany, and eventually acquired ownership. When he died in 1947, his son, Hans, purchased Fern Hill. Seeing a need, he and Glenn Hilliard ('54 D.V.M.) founded Petland in 1973. In the beginning most of Petland's services were burials—more than 200 in all. But after adding a crematorium, Petland has performed more than 55,000 cremations.

"I dug a lot of those graves and set a lot of those headstones," Bielski says of Petland and Fern Hill, which consist of one-and-a-half and 125 developed acres, respectively. The work helped pay his way through Washington State University ('70 Comm./Radio-TV). Today he keeps three drivers on the road most of the time covering western Washington and Oregon from Port Angeles to Portland and east to Enumclaw.

Think of companion pets—cats, dogs, snakes, turtles, ferrets, mice, birds. Nine chances out of 10, Bielski has done a cremation or a burial. Three years ago he added horses and calls on equine clinics in western Washington and Oregon. In the spring he travels to Pullman to visit WSU veterinary students, provides pizza, and counsels them on how he deals with clients who may be grieving about a beloved pet that has died or is dying.

"Every one of these kids has compassion," he says, "but there's little time in their busy curriculum for them to learn how to advise Mrs. Jones about the aftercare of her

cat." What happens when Fluffy dies? What are the owners' options? How do veterinarians deal with an owner's emotions?

"They [the students] need to be exposed to that," Bielski says. "Eighty percent of clients will return to or judge a veterinarian on how well that particular doctor handles the aftercare of their pet."

THERE'S A LIGHTER SIDE to Bielski's work, too.

Eight or nine years ago, he received a phone call on a warm June evening.

"Do you take cats?" the lady asked.

"Yes."

"Large cats?"

Right then, he says, he knew the conversation was going somewhere.

"How big?"

"I have a 600 pound tiger?"

The call turned out to be "legit." A Siberian tiger with one of the touring Shrine Circuses had died in Los Angeles. Enroute to a performance in Seattle, the owners spent four days trying to locate a veterinarian to examine the tiger, assure it hadn't been abused, and provide a death certificate.

Bielski hung up the phone, called a driver, and the two of them made a hasty trip to Seattle.

In February, he received a call from Seattle's Woodland Park Zoo, another one of his clients. The deceased was a 14-foot, 1,400-pound giraffe.

Bielski took the opportunity to inquire about other residents of the zoo that might someday need his services.



David Bielski at Petland Cemetery

"We've got a really old hippo cow. She's got to be about 6,000 pounds," the attendant said. "She's doing fine . . . probably has another four to five years."

Bielski breathed a sigh of relief.

Aside from such calls, he says, "A lot of the work is the same every day, but different, too. I never really know from day to day what may be coming, and I really enjoy it."

He's excited about a new service Petland has introduced. He asks owners for a favorite photograph of their pets, which he has laser engraved on the urn, along with a verse. "It's a keepsake for clients who want to remember their companion pets in a special way."

—Pat Caraher

World War II decision influenced Brimble's career

"I don't want to teach. I want to be a veterinarian."

—Bob Brimble

A single gunshot wound influenced Bob Brimble to change his career direction more than 50 years ago.

While serving with the U.S. Army in China during World War II, he was shot in the leg. The nearest doctor was 10 days away by pack mule. But after five days on the trail, he chose to be tended by a veterinarian who came to his aid.

The decision not to be treated by a physician, Brimble believes, cost him a Purple Heart, because an attending physician did not provide official certification of the battle-related wound. However, as a result of the veterinarian's concern and care, Brimble decided to pursue a career in veterinary medicine at Washington State College. The profession gained thereby a skilled and dedicated animal doctor.

Brimble already had a WSC degree when he enrolled in the veterinary program in 1945. He had come to college in 1939 from Coulee City, planning to teach. During his junior year, he met Maryhelen Laney of Selah in a chemistry class. She was majoring in pharmacy. The couple dated from then on.

After graduating ('42 Veterinary Science), Brimble received a commission as a second

lieutenant. He was shipped to China, where he spent three-and-a-half years as a liaison officer with Chinese troops during the opening of the Burma Road. Awaiting his return, Maryhelen ('43 Pharm.) worked as a pharmacist in Everett for two years.

"He was down in the jungle fighting," she says. "I wrote to him every day. One time when he got back to camp, he had 100 letters waiting for him."

Bob was discharged with the rank of major in 1945. The couple was married that May.

"I don't want to teach," Maryhelen recalls her husband saying soon after he returned. "I want to be a veterinarian." Then he told her of his life-changing experience of injury and recovery while in China.

She encouraged him to pursue his new career aspiration, even though it meant four more years of school. "Don't always wish you had," she told him.

Five months after their wedding, they drove back to Pullman from Ft. Benning,



Bob Brimble spent more than three years in China after receiving his commission as an Army second lieutenant at WSU in 1942.

Georgia, so he could enroll at WSC. She worked at Higgins Drug Store in downtown Pullman until he completed his second degree ('50 D.V.M.).

Brimble spent more than 35 years as co-owner of a successful large- and small-animal practice, the Town and Country Animal Clinic in Portland, Oregon. His experiences were varied. He recalls the time, for example, his medicine froze in a Montana winter when he rushed from the car to treat a sick cow. Another time, he spent 98 days in traction after he suffered a crushed femur while trying to treat a horse.

"He loved it all," Maryhelen says, even the "leftover" animals their young children, LeAnn and Randy, would take home from the clinic.

Long retired in Portland, the Brimbles fondly remember their college days and life in Pullman. "WSU was very good to us," Maryhelen says. "If it hadn't been for WSU, we would never have been able to accomplish what we did."

In recent years, the couple has made generous gifts to the WSU veterinary college to demonstrate their appreciation and love for animals, the veterinary profession, and their alma mater.

"Animals were certainly a big part of our life, and they are for a lot of people," Maryhelen says. "This seemed like something we could do to give back."

—Emmy Sunleaf '02



Maryhelen and Bob Brimble agree that life has been good to them.

Brayton has his day in the sun, as WSU retires his number

"No. 14 will always be a symbol of everything that is good about Cougar baseball."

—Tim Mooney, WSU baseball coach

DAN WODRICH couldn't attend Bobo Brayton's banquet. He wanted to be there when Washington State University honored its winningest coach May 24 by retiring baseball jersey no. 14. He played second base for Brayton in 1977-80, fulfilling a dream he had growing up in Kennewick. But on the day of the banquet, Wodrich, his wife, and three daughters were attending the funeral of a 13-year-old girl, a friend of the family. Sometimes life throws you a curve.

Not one to let Brayton's milestone pass without comment, Wodrich ('81 Mech. Engr., '83 M.S. Mech. Engr.) sent a letter. Brayton shared parts of it with the 225 people attending the recognition dinner in the CUB.

Wodrich noted the parallels between Cougar baseball and life. He expressed the heartfelt respect he has for the man who mentored him.

"You always called me by my name, not a number," he wrote.

Wodrich was not the fastest or the strongest. Still Brayton saw something special in the 18-year-old prospect. He invited him to play Cougar baseball, and later tagged him with a nickname. "Woodpile," or just plain "Woody," became part of WSU's rich baseball heritage.

"There was kind of a rhythm to Cougar baseball," the 1980 team captain wrote. "Like day and night, season after season . . . get there early, make the play, get the out."

"You showed us how to get down in front of the ball. You got down," he said of Brayton. "Like a hand in a glove, you were a good fit."

One generation passes on what it learns to the next, Woody continued. Generations overlap. Cougar baseball traditions become enriched. The sun is out. The Cougars are here.

Even on those dark days when things aren't going right, when it would be easy to back away from a challenge or give up,



Brayton joins football greats Mel Hein (7) and Jack Thompson (14) as the only Cougar athletes to have their uniform numbers retired at WSU.

Woody remembers his coach's admonition, "You've got to play better longer."

Former first baseman Hal Brunstad ('66 Zoology) told his coach, "You had a way of giving everyone a day in the sun."

"He beat Stanford with a hit through the hole," Brayton recalled of Brunstad. "He's 57 years old now, and he's never forgotten that."

And like several other Cougars, Brunstad sent his son, Kevin, to WSU to play for Brayton.

Practically every guy who played for Brayton could tell a story.

"I learned more about baseball in one year from him than I'd ever known," said Pat Crook ('62 Bus. Adm.), senior catcher on Bobo's first team.

Paul Tomlinson ('62 Police Sci.), captain the same year, occasionally delivers motivational speeches to company executives. He cited Brayton for providing his players with "a vision for excellence," but admitted, "Half of us were in awe of you. Half of us were in fear."

Current WSU coach Tim Mooney thanked Brayton for his continued support, and as chair of a \$1.2 million fund-raising drive to enhance Bailey-Brayton Field with a new synthetic surface.

"He's there because he wants us to be suc-

cessful," Mooney said. "No. 14 will always be a symbol of everything that is good about Cougar baseball."

At the May 24 WSU-UCLA baseball game, a white banner bearing a red no. 14 encircled by a baseball was unfurled on the rightfield fence. The 77-year-old coaching legend threw out the ceremonial "first pitch." As the ball smacked into the catcher's glove, he jabbed a fist into the air to signify a strike. The Cougars went on to win 15-2, appropriately pounding out 14 hits.

"They're not retiring no. 14 just for Bobo Brayton," he would say that evening. "It's for all the players, too."

Brayton always told his players, "Make the most of where you are." That applies

to life, as well as baseball. When his players looked for greener pastures somewhere else, he encouraged them to "Stay here . . . get the degree."

During his 33-year (1962-94) coaching career at WSU, Brayton won 1,162 baseball games, and captured 21 league titles, including 11 straight in the old Pac-8 and Pac-10 Northern Divisions. Twice ('65 and '76) he took WSU to the College Baseball World Series.

Charles Frederick "Bobo" Brayton ('50 Phys. Educ., '50 Educ., '59 M.S. Phys. Ed.) came to WSU from Birdsvew, a small logging community in Skagit County. He wore no. 14 while earning 12 varsity letters at WSU, becoming the school's first baseball All-America in 1947 as a shortstop, and during more than three decades as baseball coach.

As a final gesture at the banquet, he called "Butch," a student dressed up in the uniform of the University's cougar mascot, to the podium.

"I've worn no. 14 ever since I was a freshman in high school. Now, I'm bequeathing it to Butch, and all the Butches hereafter."

"I want it to live on [at WSU] long after me."

—Pat Caraher

CLASS NOTES *continued*

hotels they were using and what hotel needs they had.

Nancy Barga ('93 Educ.) is assistant principal at Sehome High School in Bellingham.

Angelique S.C. Grant ('94 Comm., '01 Ph.D. Higher Ed. Adm.) is director of development at Princeton University for the Princeton-Blairstown Center. The center is located in northwest New Jersey, but her office is on the Princeton campus. She reports that each year more than half of the freshman class starts its four years with a freshman outdoor leadership trip. "We also work with urban underserved youth in New Jersey, New York, and Philadelphia, teaching them conflict resolution, team building, and leadership skills," she says.

Carl Christoferson ('96 Bus. Adm.) has been named manager of sales for the west coast market by Windsor Mills. The manufacturer of high-quality specialty lumber, molding, and millwork makes its headquarters in Windsor, California.

Susan J. Tornquist ('96 Ph.D. Veterinary Path.), a Corvallis, Oregon, veterinarian and assistant professor of clinical pathology at Oregon State University, has been inducted into the Morris Animal Foundation. The foundation now claims 155 veterinary professionals on its honor roll. She was cited for her work on behalf of llamas and alpacas.

Shelley Goss ('98 Polit. Sci., '98 Bus. Adm.) is recreation coordinator for the new city of Spokane Valley. She designs and runs recreation programs, including day camps, pre-school activities, dances, tennis lessons, and sports camps. She also works with the city's senior center, planning events for seniors.

Brock Ledgerwood ('98 Agri., '99 Teaching Cert. Elem. Educ.) and Adela Maldonado were married May 24, 2003 in Grandview. Brock is employed by Mabton High School, and Adela works for the Sunnyside School District and attends Heritage College in Toppenish.

Sandra Wilson ('98 Educ.) teaches English and journalism at Puyallup High School and is advisor to the school newspaper.

2000s

Chris Cashman ('00 Comm.) has joined KSTW UPN 11 as the station's new on-air host for such projects as *Mariners Bullpen*, a locally produced, live, 30-minute pre-game show that was launched March 29, 2003. "Getting to do what I have dreamed about in the town [Seattle] I grew up in is an

amazing thing," he says. "I couldn't be more excited."

January 25, 2003, **Bryce Littlefield** ('01 Crop Sci.) and his dad, Gregory Littlefield, Moses Lake, were selected to carry the Olympic Torch in Pasco on its way to the Winter Olympic Games in Salt Lake City.

Russell Pillar Lucas ('01 Food Sci. & Hum. Nut.), Manteca, California, is supervisor of Leprino Foods, which he says is the world's largest single-site mozzarella plant.

Farouk Dey ('02 Educ.) is assistant director for career development in the Career Counseling Center at the University of Florida.

Tonja L. Koob ('02 Ph.D. Civ. Engr.) has started her own engineering firm in New Orleans—GAEA Engineering Consultants, LLC.

Mike and **Kristen Buckley Lee** ('02 M.Ed.) report the birth of a son August 22, 2002. Kristen is a teacher in the Kennewick School District. Mike is a reporter for the *Tri-City Herald*.

Marine Corps Sgt. **Matthew R. Olsen** (x'02) has been called to active duty in support of Operation Iraqi Freedom. He has been assigned to the Marine Corps Bulk Fuel Company "C" in Phoenix, Arizona. According to the Marine Corps, an armored division could consume an estimated 500,000 gallons of fuel per day, more than twice that consumed by Gen. Patton's entire Army during World War II.

Haida Peterson ('02 Music Educ.) won the six-state regional Collegiate Artist Performance Competition of the Music Teachers National Association January 25 in De Kalb, Illinois. She is a graduate assistant in flute, and studies under Professor Christine Smith in the Western Michigan University School of Music in Kalamazoo. She has performed with more than a dozen orchestras and ensembles, including the Washington-Idaho Symphony, WSU Symphony, WMU Symphony Orchestra, and Western Winds, and for productions at the Kalamazoo Civic Theater.

Philip Rust ('02 Civ. Engr.), a graduate research assistant at the University of Idaho's National Institute for Advanced Transportation Technology, was chosen NIATT's Student of the Year for 2002. He is pursuing a master's degree in civil engineering with emphasis in traffic engineering at the UI.

Chris Storm ('02 M.S. Entomology) was hired in January 2003 by the Lodi-Woodbridge (California) Winegrape Commission as technical coordinator of sustainable viticulture. His thesis at WSU focused on integrated pest management of the grape leaf-hopper.

IN MEMORIAM

1930s

Mildred Nutting ('30 Home Ec.), 95, February 22, 2003, Spokane. Homemaker.

Gladys Casteel ('31 Office Adm.), 94, April 17, 2003, Hamilton, Montana. Deputy school superintendent of Okanogan County. Executive secretary at the War Manpower Commission in Seattle. Worked for the U.S. Department of Labor National Employment Service. During WWII, attained the rank of lieutenant junior grade in the Navy with the U.S. Employment Service. Retired in 1970 after 30 years of service. Spent adult life in Seattle and Olympia areas. Chi Omega sorority.

Charles Meenach ('31 Agri.), 93, March 21, 2003, Spokane. Agriculture extension agent in San Juan County and Garfield County. Became State 4-H Club agent in 1941 and manager of the Spokane Interstate Fair in 1955. Retired in 1975.

Edward Wolf, Sr. ('32 Pharm.), 94, April 4, 2003, Spokane. Pharmacist in Rathdrum, Idaho; Pendleton, Oregon; Chewelah, and Cheney. Bought the Broadway Pharmacy in 1940 and operated it until 1952. Purchased the River Ridge Pharmacy, selling it in 1967. Worked at the Holy Family Hospital pharmacy, then was the supervising pharmacist at Eastern State Hospital at Medical Lake. Retired in 1976.

Robert Fulfs ('38 Ani. Husbandry), 87, April 4, 2003, Pullman. Family farmed. Strong supporter of agriculture at the local and state levels. Recipient of the Outstanding Alumnus Award in 1988 from the Department of Animal Sciences at WSU. Sixty-eight-year member of the Ewartsville Grange. Credited with writing the grange resolution that resulted in the law allowing citizens to pay sales tax only on the difference in value when they trade vehicles and farm equipment. Member of the National Farmers Organization.

1940s

Beth L. Barrett ('40 M.A. Bus. Adm.), 85, December 31, 2002, Medford, Oregon. Homemaker.

Stanley Dragnich ('40 Civil Engr.), 89, November 26, 2002, Richmond, Virginia. Served 27 years in the Army and Air Force. Retired in 1967 as a lieutenant colonel. Spent two years with an engineering firm in Saigon, Vietnam. His military career included tours of Alaska, France, Panama, Greenland, and Germany, in addition to Seattle, Walla Walla, Dallas, San Francisco, and Washington, D.C.

James C. Kraft ('41 D.V.M.), 84, April 25, 2003, Bellevue. Major in the Veterinary Corps while serving with the Army

during WWII at Randolph Field, Texas. After the war opened Seattle Veterinary Hospital and, later, the Ballard Veterinary Clinic. Past president of the Washington and King County chapters of the American Veterinary Medical Association. Received the WSU Foundation's highest honor, the Weldon B. Gibson Distinguished Volunteer Award, in 1996.

Lucille H. Baker ('42 Home Ec.), 82, November 25, 2002, Olympia, cancer. Worked for a number of Washington state agencies from 1961 to 1990, including Commerce & Economic Development, Employment Security, Superintendent of Public Instruction, and the Division of Social and Health Services. Also served as a legislator and a member of the Higher Education Personnel Board.

Carroll Dow ('43 D.V.M.), 81, January 5, 2003, Lodi, California, Alzheimer's disease. Veterinarian, nursery owner, and grape grower in Lodi.

Robert Harvey ('43 Chem.), 81, March 28, 2003, Siesta Key, Florida. Army veteran of WWII and Korean War, retired as captain and received a Bronze Star. In 1986, retired as president of Amax Engineering and Management Group in Norwalk, Connecticut.

Leland Parker ('43 Engr.), 85, March 30, 2003, Corona, California. Ordnance specialist at the Pentagon during WWII. Worked for the National Bureau of Standards (now the Navy Welfare Assessment Center), transferring from Washington, D.C., to Corona in 1952. Retired in 1972. Later, created Parker Engineering, an agricultural engineering firm. Developed two patents and numerous agricultural products over 30 years.

Jean DeGlow ('44 Pharm.), 81, February 7, 2003, Spokane. Pharmacist.

William Corrigan ('46 Econ.), 68, December 10, 2002, Copalis Crossing, Washington, amyotrophic lateral sclerosis. Had a 27-year career in the U.S. Air Force. Was a pilot, air operations officer, and comptroller. Served in Vietnam and received the Distinguished Flying Cross, Meritorious Service with two Oak Leaf Clusters, Air Medal with six Oak Leaf Clusters, Joint Service Citation, Air Force Outstanding Unit Award with three Oak Clusters & V Device, Air Force Organizational Excellence Award, and Vietnam Service Medal with four Bronze Stars. Lived in Spangle for 18 years before moving to Copalis Crossing for two years.

Mary Jane Woerner ('46 Gen. St.), 79, March 14, 2003, Spokane. Volunteer and gift shop buyer-manager at both St. Luke's and Deaconess hospitals in Spokane. Assisted her husband in his business for nearly 40 years. Kappa Kappa Gamma sorority.

IN MEMORIAM *continued*

William Yerkes ('48 Botany, '52 Ph.D. Plant Path.), 81, March 29, 2003, Grand Rapids, Michigan. Retired professor and former chairman of plant pathology at Grand Valley State University in Grand Rapids, where he spent nearly 15 years. Previously worked for Kimberley-Clark Corp. as a scientist at Neenah, Wisconsin, and earlier for the Rockefeller Foundation at Mexico City with the Green Revolution project. Served in the Pacific with the Army Medical Corps during WWII.

Jack Carlson ('49 Bus. Adm.), 77, January 29, 2003, Portland. Production analyst for Champion International. Lived in Eugene, Oregon; Lebanon; Stamford, Connecticut; and Santa Rosa, California.

Velma Williams Hyatt ('49 Home Ec.), 75, February 13, 2003, Spokane. Lived in many locations, including New Orleans; Salinas, California; Bahrain; and Ghana. Homemaker. Member of the WSU Cougar Club Directors' Circle for 12 years.

1950s

Archie Dale Buys ('50 Pharm.), 81, January 4, 2003, resided in Heber, Utah, died in Mesa, Arizona. Medic and X-ray technician in the Army during WWII. Pharmacist and store manager for Pay-

less Drug Stores in Oregon and Washington for more than 30 years.

Wallace Rasmussen ('50 Educ.), 90, February 22, 2003, Wilsonville, Oregon. High school teacher and superintendent in North Dakota, high school principal in Prescott, Washington. Retired as an elementary school principal in Phoenix, Oregon.

William Merritt Smith ('50 Phys. Educ.), 86, February 7, 2003, Federal Way, heart failure. Earned a physical therapy degree from Stanford, and started the Physical Therapy Department at Deaconess Hospital in Wenatchee, where he worked until 1960. Later employed by the William H. Rorer Pharmaceutical Co. as regional manager in Chicago, and traveled the West Coast as a broker/manager until retiring in 1986. Sigma Phi Epsilon fraternity.

Ivan Corbridge ('52 Ph.D. Ag. Econ.), 85, October 15, 2002, Provo, Utah, pulmonary fibrosis. Participated in the invasion of Normandy during WWII as a captain in the Army Air Corps. His company was cited for meritorious service. He was awarded the Bronze Star. Professor of agricultural economics at Brigham Young University, 1952-82, during which time he served in foreign assignments in Argentina, Venezuela,

Canada, and Mexico. After retiring, he served on assignments in Saudi Arabia and Peru.

Vernon Colenbrander ('54 Animal Sci.), 77, February 7, 2003, Bellingham. Named the 1954 WSU Agricultural Student of the Year. Dairy extension agent in Whatcom County, 1957-60. Became a professor in dairy nutrition at Purdue University in 1965. Retired from Purdue in 1990 and moved to Mabton to raise alfalfa. Moved to Lynden in 2000.

Shirley T. Gunston Dugan ('57 Home Ec.), 73, December 12, 2002, Tacoma. Worked in San Francisco before returning to Tacoma. Retired decorator/realtor.

Doris Spangler Gollnick Harwood ('57 Educ., '77 M.A. Educ.), 67, April 3, 2003, Spokane. Private piano teacher for years in Pullman. Taught music in Moscow public schools (1981-89) and Lewiston, Idaho, public schools (1991-95).

Capt. Donald Holsten ('57 Econ.), 67, February 8, 2003, Houston, Texas, liver cancer. Joined the Navy in 1957, serving in Alaska, Spain, Germany, and Japan. Retired in 1982 from the Navy's Tactical Exploitation of National Capabilities Office, which coordinates and disseminates intelligence from space systems. Then was a consultant with

Systems Planning Corp. in Arlington, Texas, and taught business classes at Montgomery College. Lived in Rockville, Texas, for 25 years before moving to Houston in 2002.

Betty Jean Vellias ('58 Music), 66, October 8, 2002, Roy, brain aneurysm. Teacher, principal, and assistant superintendent for elementary education in the Bethel School District for 30 years. Retired in 1990.

1960s

Gerald "Gary" Poor ('61 Ag. Econ.), 79, April 3, 2003, Lynnwood. County extension agent in charge of 4-H Club work in Longview. Began work in cooperative extension at state level at WSU in 1954. After retiring in 1980, he was a realtor for Century 21 in Pullman for nine years.

Kenneth A. Domina ('69 M.Ed.), 75, June 18, 2003, Ritzville. Teacher and principal in Trout Lake, 1961-64. Principal at Ritzville High, 1974-77, at Washtucna High, 1977-82, and at Joyce High, 1982-84. Substitute teacher until 1998.

1970s

Timothy Douglas Moore ('72 Pharm.), 53, March 5, 2003, Columbus, Ohio, cancer. Joined The Ohio State University Hospitals and College of Pharmacy in 1973. Received his master of science degree in 1979 from OSU. Clinical professor in the College of Medicine's Department of Family Medicine and in the College of Pharmacy. Later, increased responsibility to senior director of pharmaceutical services. First recipient of the Richard B. Davies, M.D. Award for his efforts in integrating behavioral healthcare programs. Author and/or co-author of more than 100 publications.

Ben Burtzloff ('74 Pharm.), 63, November 13, 2002, Liberal, Kansas. U.S. Army veteran. Registered pharmacist in Washington and Missouri. Worked 18 years at Southwest Medical Center Pharmacy in Liberal. Retired in 1999.

Lynnette Stoltz Johnson ('74 Music), 51, March 13, 2003, Woodland. Band and classroom teacher for Yacolt and Amboy schools in Woodland and for the Green Mountain School District. Taught pre-school and adult GED classes in Brewster and Woodland. Member of the Battle Ground Community Band.

Robert Rodney Johnson ('75 Police Sci.), 53, April 4, 2003, Lacey. Joined the Aberdeen Police Department as a patrol officer in 1975. Promoted to detective sergeant in 1983. Became supervisor of the Grays Harbor County Drug Task Force in 1989, but returned to Aberdeen detective division in 1990. Assigned to supervise drug task force in 1992. Retired in 1993. Received *Aberdeen Daily World's* Police Officer of the Year award in 1985.



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The Cougar Cruiser will run same day, round-trip service to the following Saturday WSU games in Pullman:

September 20	New Mexico	2:00 pm	\$55
September 27	U of O (away game in Eugene, OR)	12:30 pm	\$65
October 4	Arizona	2:00 pm	\$55
October 25	Oregon State	2:00 pm	\$55
November 8	UCLA	4:00 pm	\$55
November 15	ASU	2:00 pm	\$55

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Orlando "Red" Duran ('77 Industrial Tech., '77 Teaching Cert.), 64, December 27, 2002, Alameda, New Mexico. Taught industrial arts in the Cuba and Los Lunas schools in New Mexico. Worked at Albuquerque Technical Vocational Institute and the University of New Mexico.

1980s

Gina Tomasi ('84 Engl.), 42, January 30, 2003, Gig Harbor, cancer. Served as chief executive officer of Irving Cares, Inc. Was an English-as-a-second-language trainer for a Vietnamese relocation project.

Guy Stehly ('87 Ph.D. Pharm.), 49, March 6, 2003, La Crosse, Wisconsin. Worked for the National Oceanic Atmospheric Administration at the Great Lakes Environmental Research Laboratory in Ann Arbor, Michigan, 1987-88; the Armstrong Aerospace Medical Research Laboratory at Wright-Patterson AFB in Dayton, Ohio, 1989; and the Food and Drug Administration's Fishery Research Laboratory on Dauphin Island, Alabama, 1990-93. From 1993 on, he was a research pharmacologist at the Upper Midwest Environmental Sciences Center in La Crosse.

Faculty & Staff

Marvin Fairbanks, 81, February 17, 2003, Nampa, Idaho. WSU civil engineer and surveyor for 25 years.

Oliver H. Johnson ('36 Agri., '52 M.S. Agri.), 91, June 21, 2003, Pullman. Joined WSC as an instructor in bacteriology and public health and as campus sanitarian in 1947. Moved through the ranks to assistant professor ('52), associate professor ('65), and professor ('73), splitting his time between his academic department and overseeing plant operation for University sanitation. Retired in 1976.

Jan Noel ('73 D.V.M.), 54, May 3, 2003, farm accident on family farm she owned with her husband, Jim Henson, near Enterprise, Oregon. Joined the WSU faculty in 1979 as a project development officer for International Program Development and associate project director, Western Sudan Agricultural Development Project. Prepared proposals and served as U.S. coordinator for projects totaling more than \$100 million. At the time of her death, she was associate director of International Programs and an associate professor in the Department of Veterinary Microbiology and Pathology at WSU.

Sylvia Deavitt Steele, 71, February 22, 2003, Tiburon, California. Alpha Gamma Delta sorority.

Sherry Vaughan, 60, April 13, 2003, Portland, Oregon. Started at WSU in 1983 as an assistant professor in the College of Education, promoted to associate professor in 1989. Named acting associate dean in 1990. Went to WSU Vancouver as associate dean and associate professor in 1994. Returned to full-time teaching in 1995. Retired in 2001.



Wine researcher Sara Spayd pours a glass of experimental wine for Walt Clore in WSU's IAREC wine library at Prosser.

Walter Clore: a wine visionary

THE PROSE IS DELIBERATE, straightforward, and academically understated: "If harder varieties free of diseases are used and the best cultural practices known to obtain full vine maturity are followed, it is feasible to grow European grapes in favorable sites in south central Washington."

Those words from Bulletin 823 by Chas Nagel, George Carter, and Walt Clore, exciting as they were in 1976, still could only suggest the potential of Washington's barely nascent wine industry. By convincing Washington farmers that they could grow *vinifera* grapes, the source of fine wine, Clore, who died this past January at 91, empowered Washington to join the ranks of the world's greatest wine regions.

Six months after Prohibition was repealed, Clore decided he didn't want to work in an Oklahoma refinery any more, so he applied to Washington State College to pursue an advanced degree. WSC offered him a half-fellowship at \$500 a year. He and his new wife, Irene, moved to Pullman in 1934. When he finished his degree in horticulture in 1937, he accepted a position with the Irrigation Branch Experiment Station—now the Irrigated Agriculture Research and Extension Center—as horticulturist. He was the third faculty member at the site.

Clore started out working with tree fruits and small fruits, but eventually became trans-

fixed by Washington's potential for *vinifera*. That interest grew to trials of different varieties around the state. "Walt was Johnny Grapeseed," says Nagel.

Many of the best vineyards of southeastern Washington are sited based on Clore's recommendations. After he retired from WSU in 1976, he consulted with many wineries around the state.

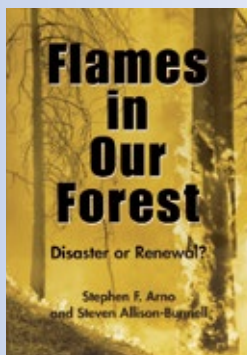
He also left his name prominently around the state. WSU offers the Walter Clore Scholarship. One of Columbia Crest Winery's vineyards, atop the Horse Heaven Hills, is the Walter Clore Vineyard. Last year, Columbia Crest released 2,000 cases of a 1999 Bordeaux-style blend and named it Walter Clore Private Reserve. In the works is the Walter Clore Wine and Culinary Center in Prosser.

A couple of months before he died, Clore told the *Wine Spectator*, "With all the things they put my name on, I feel I should be six feet under." Sometimes, justice prevails, and honor precedes the grave.

—Tim Steury

Walter Clore was profiled in a larger article on the Washington wine industry in the premier issue (November 2001) of Washington State Magazine.

BOOKS, etc.



Flames in Our Forest: Disaster or Renewal?

By Stephen F. Arno '65 and Steven Allison-Bunnell

Island Press, Washington, D.C., 2002

Forest fires have been much in the news. Beginning with the Yellowstone fires in 1988, the West has lived through a series of intense fire years. In 2000, the federal government spent nearly \$1.6 billion fighting fires. But over the same period there has been a discordant message: fires, we are told, shaped the forests and the wildlife that inhabit them; fires are, in fact, necessary to the continued existence of many species of plants and animals. Smokey the Bear's message of fire's destructive nature, his plea on behalf of other woodland creatures that "fires destroy more than trees," has lost its venerable certainty.

Are forest fires good or bad—or some of each? *Flames in Our Forest: Disaster or Renewal?* is a primer to this debate. Stephen Arno ('65 Forestry), a forester who has been at the vanguard of rethinking the role of fire in forests, and Steven Allison-Bunnell, a science writer, have combined their talents to produce a book that skillfully and judiciously examines the issues. Beginning with a brief history of fire suppression in the 20th century, they discuss the physics and chemistry of fires, and how life has responded to fire and shaped the variety of forests that were present when Euro-Americans arrived in the West. They conclude with a review of how to adapt to and live in the fire-prone forests of the West.

The writing is clear and accessible to non-specialists. The text is enhanced with well-chosen photographs, line drawings, and helpful graphs. Although written for a general audience, the book includes more than 20 pages of references that an interested reader can use to examine the issues in more detail.

Western forests are the focus of divergent interests. Jobs, recreation, wildlife habitat, and—increasingly—human homesites are all at stake in deciding how to manage these lands. The changing understanding of the role of fire in this management system has been controversial because it challenges once-sacrosanct beliefs. *Flames in Our Forest* is a helpful place to begin sorting out the issues.

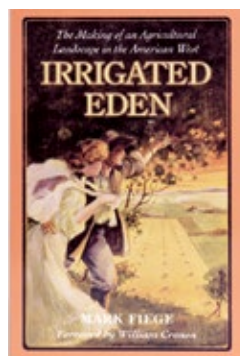
For more information, see <http://www.islandpress.org/index.html>.

—Dale Goble, Margaret Wilson Schimke
Distinguished Professor of Law, University of Idaho

Irrigated Eden: The Making of an Agricultural Landscape in the American West

By Mark Fiege '85

University of Washington Press, Seattle, 1999.



This gem of a book is actually about the gem state, Idaho—specifically, the Snake River Plain of southern Idaho, where farmers, engineers, lawyers, bankers, and politicians have carved an agricultural landscape out of the parched and dusty sagebrush desert. With deft prose and engaging anecdotes author Mark Fiege ('85 M.A. History), a professor of history at Colorado State University, systematically traces the 100-year history of the creation and maintenance of the irrigation infrastructure that made farming possible in the Snake River plain. Praising it as "an ingenious, intricate, technological system," Fiege nevertheless offers sober assessments of the economic inefficiencies, ecological losses, engineering foibles, and political finagling that comprise the darker side of Idaho irrigation history.

For such a focused book, there is remarkable breadth here. Fiege discusses the technological system itself; the federal laws that authorized it; the funding schemes that paid for it; the government agencies and private interests that built and managed it; the legal battles over land and water rights that directed the flow of system costs and benefits; the ecology, geology, and hydrology at the foundation of the system; the farmers who grew the crops, the workers who picked them, the processors and distributors who transformed and marketed them; the ways the system functioned as intended and the ways it got out of control; and the individuals and organizations that imagined, explained, defended, criticized, and revamped the system. His story is balanced, complex, and accessible.

An overriding theme of this study is that of the "hybrid landscape." Similar to historian

Richard White's thesis in *The Organic Machine: The Remaking of the Columbia River*, Fiege shows how the irrigated landscape of southern Idaho is "an ambiguous entangling of artifice and nature." Fiege wants to move his readers beyond the conventional view of landscapes as either natural or artificial—the irrigated landscape is neither and both. The supposedly artificial irrigation system is too leaky and unpredictable to be called "plumbing." The degree of "control" exercised by system managers over water and crops is frustratingly limited. And the supposedly conquered "natural world" constantly intrudes on the system in the form of floods and droughts and a biological avalanche of plants, insects, birds, mammals, fish, and fungi, all thriving on the life-giving waters around the reservoirs, canals, and fields—a hybrid landscape indeed.

There are important lessons here. As Fiege puts it, "It is in these apparently unnatural places, I believe, that we most directly confront the reality of our deeply tangled and problematic relationship to the natural world that we inhabit." How we judge that tangled and often problematic relationship is mostly left up to the readers. Fiege reserves his own judgment for the most part, which will delight some readers and disappoint others. No one, however, will go away from this book without having their view of irrigated landscapes enlarged and enriched.

For further information, see <http://www.washington.edu/uwpress/search/books/FIEIRR.html>.

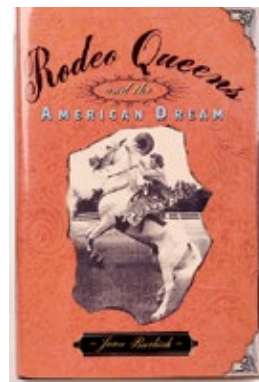
—Paul Hirt, Associate Professor of History,
Washington State University

Rodeo Queens and the American Dream

By Joan Burbick

Public Affairs, New York, 2002.

Whether we meet them in a pasture, at a burger joint, or in a comfortable kitchen, the women in Joan Burbick's *Rodeo Queens and the American Dream* take us beyond the dust and glitter of the rodeo that for one season made them royal. Burbick, an American studies professor at Washington State University, began her engrossing study by wondering, Where are the former rodeo queens whose pictures appear annually in local newspapers? How have their lives turned out? Talking with the women yielded much tougher questions. More than a series of interviews, *Rodeo Queens* explores rodeo as an American "cultural ritual." Without losing sight of the women behind



those daredevil charges into the arena, Burbick explores rodeo's myriad connections—to fluctuations in the economy, to the dams that changed the face of farming and ranching, to shifting relationships between Indians and non-Indians, and more recently to corporate America.

For some of the older women—two are in their 80s—rodeo was just plain fun, a change from the daily hardships and pleasures of ranching. Other former queens describe how an early and deep connection with horses has spurred their commitment to their communities and to the land. Recent queens, those of the permed hair and expensive rhinestone-studded outfits, expose the commercial and deeply conservative strains of today's rodeo. For these young women, rodeo delivers more stress than fun; for the audience, it performs a “make-believe West”—just what cheering fans appear to want.

Burbick, with her camera and microphone, is always present in this complicated story. She's no stranger to the American West or to rodeo, yet she never hesitates to reveal her surprise, disappointment, even dismay. In the end, she is still wondering, Can we replace this worn-out parody with a “cultural ritual” that honestly engages *all* the people of our community, the tough truth of our history, and the beauty of our land?

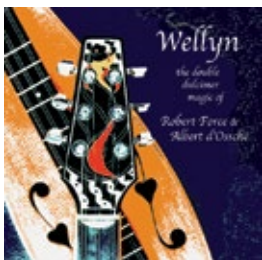
For more information about *Rodeo Queens*, including a brief excerpt, see www.publicaffairsbooks.com/books/rod-sum.html

—Patricia Keith, Professor of English,
Lewis-Clark State College, Lewiston, Idaho

**Wellyn:
The Double Dulcimer Magic of
Robert Force & Albert d'Ossché**

Wellyn International, 2000

In 1966, while a student at Western Washington University, Robert Force first heard the “sweet music” of the Appalachian Mountain dulcimer. He went to a local violin maker, showed him a picture, and asked him if he could build one for him. So it was that Force, living on the West Coast, began his love affair with an instrument which had its roots in the Scotch/Irish heritage of the pioneers who settled the eastern mountain range that gives this indigenous American instrument its name.



Over the next five years, Force sought other players and perfected his playing style. In North Carolina, he met Albert d'Ossché, whose techniques and music closely paralleled his own. They began a collaboration which would span more than 20 years, until d'Ossché's death, and

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that would revolutionize the world of dulcimer music.

The music of Force/d'Ossché is more than just basic melodies. The melody is most certainly there, but the rhythm and dynamics of the arrangements are what make their music sing. These, the real foundations of the music, are what truly speak to the soul of the listener.

The CD, *Wellyn: The Double Dulcimer Magic of Robert Force & Albert d'Ossché*, reveals the full range of sound that the dulcimer is capable of creating. Primarily an instrument used to play folk music, in the hands of Force/d'Ossché, it takes us far beyond that genre. *Wellyn* spotlights the innovative playing style Force and d'Ossché have brought to the dulcimer world, and it offers an interesting combination of original and traditional pieces.

The title song, an original piece by Force, is a prime example of the driving style of music so characteristic of the duo. It moves from major to minor, and is played using an unusual full-barre style, not at all traditional, and an indication of the future wave of new compositions for the dulcimer.

All of the cuts on this CD are compelling in their originality of style and substance. The more familiar pieces, 'Dixie,' 'Waltzing Matilda,' and 'Wabash Cannonball,' were a particularly pleasant surprise when treated to the Force/d'Ossché style. This CD promises to delight every listener.

For more information, including music samples and much, *much* more, see <http://www.robertforce.com>.

—Lynn Holberton

Besides playing both the mountain dulcimer and the hammered dulcimer, Lynn Holberton writes feature articles for the newsletters of both the Cincinnati, Ohio, Dulcimer Society and the Hills of Kentucky Dulcimer Club.

Robert Force is director of Washington State University's North Olympic Peninsula Learning Center. See WSM, summer 2003, p. 15.

Margarita: A Guatemalan Peace Corps Experience

By Marjorie DeMoss Casebolt '47
Red Apple Publishing, Gig Harbor, Washington, 2000

Starting at age 62, nutritionist Marjorie DeMoss Casebolt ('47 Home Economics Education) served two years as a Peace Corps volunteer in Guatemala. In *Margarita: A Guatemalan Peace Corps Experience*, she narrates her efforts to educate pregnant and nursing mothers in the basics of nutrition, sketches portraits of fellow volunteers, and describes the harrowing effects of poverty and ignorance among community members. She also provides a wealth of detail about her daily life, from her difficulties with Spanish to her annoyance at family members who insist on keeping the radio on at full volume.

Because her story reads like a string of undigested journal entries, offering little in the way of narrative structure and thematic development, it risks losing the interest of readers. Nevertheless, those who stick with Casebolt to the end will find themselves caring a great deal about the author and the people she writes about. And that's no small achievement for a writer.

For more information, e-mail redapple@wa.net, or visit <http://redapplepublishing.com>.

—George Bedirian

Opening Minds: A Journey of Extraordinary Encounters, Crop Circles, and Resonance

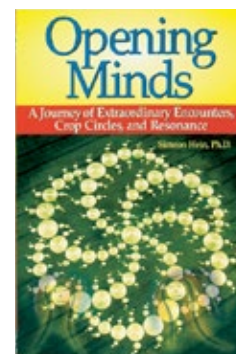
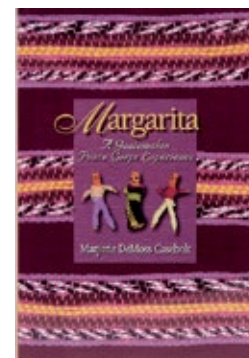
By Simeon Hein '93
Mount Baldy Press,
Inc., Boulder,
Colorado, 2002

In *Opening Minds: A Journey of Extraordinary Encounters, Crop Circles, and Resonance* Simeon Hein ('93 Ph.D. Sociology) sets out to show that Western rationalism and the rise of technology have alienated us from our world and from each other, but that by tapping into the "quantum perspective," we can access hitherto unknown realities and achieve integration with the universe. Hein provides an insightful sociological critique of information technology and our uses of time, then launches into discussions of his own experiences with "the universal mind grid" through resonant viewing (a form of telepathic perception), encounters with extraterrestrial beings, and some of the stranger aspects of crop circles. For the most part, he maintains an attitude of restraint toward the bizarre events he describes. But at times he succumbs to his own fascination with them—as when, for example, he describes a sexual encounter between a friend and an extraterrestrial female.

Summing up, he writes, "To advance our own personal and ecological integration . . . we need to unlearn . . . anachronistic truths about our personal limitations . . . We merely need to remember . . . that we are unlimited beings in a mysterious, infinite universe."


For more information, see www.mountbaldy.com.

—George Bedirian



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Caldwell Bequest Benefits Research and Undergraduate Education in Veterinary Medicine

Delbert "Tex" and Ellen Caldwell, longtime residents of Moscow, Idaho, were cattle ranchers, dairy farmers, and animal lovers who sought to make a difference for the College of Veterinary Medicine at Washington State University. Their relationship with WSU developed through a clinician for the college, who traveled to their farm to treat their cattle. In leaving their estate to the college to fund its highest priorities, the Caldwells demonstrated their faith in WSU to perpetuate their values. The college designated a portion of their bequest to complete funding on key endowed faculty positions, and created an endowment, named for the Caldwells, for scholarships and research.



Professor Stephen A. Hines with veterinary medicine students and patient.

A Presidential Event

WSU president emeritus Sam Smith, WSU president V. Lane Rawlins, and WSU president emeritus Glenn Terrell joined 185 attendees on April 10, 2003 at the Sand Point Country Club in Seattle to celebrate the publication of Dr. Terrell's new book, *The Ministry of Leadership*, at a benefit for the WSU Libraries. *The Ministry of Leadership* is available from WSU Press by calling 1-800-354-7360 or online at <http://wsupress.wsu.edu>.



In Memoriam: Jan C. Noel


The Malawi Project (page 59) is just one of many partnerships with developing countries led by WSU's Office of International Programs/Development Cooperation in collaboration with faculty, staff, and students across the University. On May 3, 2003, International Programs/Development Cooperation lost a valued leader, when Jan C. Noel was killed in an accident on the Oregon farm she owned with her husband, Jim Henson.

Noel had extensive experience in countries in Africa, the Middle East, Central Asia and the former Soviet Union, Europe, and Latin America. She planned and conducted numerous workshops, conferences, and other activities in the United States and in developing countries for local, regional, and national organizations in agriculture, animal health, higher education, and related topics. Her experience encompassed both laboratory and field activities and the effective transfer of technology.

Noel received her Doctor of Veterinary Medicine degree from WSU in 1973. She joined WSU in 1979 as a project development officer for International Programs Development. At the time of her death, she was associate director of International Programs/Development Cooperation and an associate professor in the Department of Veterinary Microbiology and Pathology.

Noel cared about the people she worked with both at WSU and abroad, balancing excitement about the possibilities of international development work to improve people's lives with a realistic assessment of how to make a project successful in the field. Her leadership and expertise will be sorely missed.

Memories



They met at a Common Ministry Function. Following Easter services on the Koinonia House lawn, Josh dropped a plastic egg and exclaimed, "Laura, you missed one!" Inside Laura discovered an engagement ring.

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www.wsufoundation.wsu.edu/giftplanning.

A Model of Successful Development in Malawi

With its growing population of 11 million, Malawi faces one of the highest population densities in Africa, extreme poverty, widespread soil and forest degradation, declining farm productivity, and acute wood shortages to meet basic energy and building needs. It has also been the focus of some of Washington State University's most successful development programs since 1986.

Under the leadership of Prof. Trent Bunderson, and with investment from USAID, the Rockefeller Foundation, and others, WSU has engaged 77 partners from public, private, and nongovernmental organizations. The goal is to enhance the quality and relevance of WSU's education, research, and outreach/service programs in an increasingly interdependent world. A key focus is to develop, test, and extend new technologies with farmers to increase farm productivity and income levels with improved management of the natural resource base. The Malawi program offers opportunities for WSU students and faculty to participate in technology development and extension with world-class researchers.

A new two-year initiative under WSU involves the establishment of a resource center to streamline technical support services to partners and clients on a semi-commercial basis. It includes responsibilities for conducting and contracting research to refine and improve technologies and to explore new opportunities. The aim is to greatly increase extension education on the following technologies:



- Reforestation with a focus on indigenous trees
- Soil and water conservation
- Soil fertility improvement through agroforestry and other organic means
- Improved conservation and management of communal resources
- Small-scale irrigation using

manually operated treadle pumps

- Supply of safe drinking water and eco-sanitation to reduce the incidence of disease

WSU's successful partnerships in Malawi are serving as models for sustainable agriculture to fight hunger, promote economic growth, and conserve natural resources around the world. Achievements at the farm level have involved the adoption of improved practices by 400,000 farm families on 50,000 hectares of land and the planting of over 20 million trees. These results are helping families to cope with the all-too-familiar problems of food shortages, malnutrition, disease, and environmental degradation.



a THOUSAND WORDS Photograph by Tim Steury



Harrah, Washington

Boeing Gift Advances Research in MIVAC® Technology

Technology that will transform industries ranging from food processing to pharmaceuticals is being developed at Washington State University's Agricultural Research Center by renowned scientist Carter Clary, an assistant professor in the Department of Biological Systems Engineering in the College of Agriculture and Home Economics.

Dehydration research has been Prof. Clary's focus for more than 20 years. Among the devices in the Food Processing Pilot Plant at WSU is a microwave vacuum dehydration technology (MIVAC®) prototype vessel that utilizes heat, microwaves, and vacuum to create an improved dehydration process for fresh fruits and vegetables. The patent portfolio for MIVAC® technology was donated to WSU by the Boeing Company, opening the door for Clary, the principal investigator for MIVAC® research at WSU, to demonstrate the applications for this revolutionary research. News of the Boeing gift received global attention, prompting inquiries from international and U.S. companies interested in commercial applications of MIVAC® technology.

Prior to his arrival at WSU in August 2001, Clary served on the faculty at California State University, Fresno, where his research applied the principles of MIVAC® to raisins made from white grapes—utilizing a 40-foot-long MIVAC®



Carter Clary and graduate student Andrew X. Gamache prepare to remove a sample from the MIVAC® unit.

batch prototype. The prototype system extracts moisture from all areas of fresh food simultaneously, while retaining the food's color, flavor, appearance, and nutritional value. The technology holds promise for products ranging from better tasting Meals Ready to Eat used by the U.S. military, to prepared grocery foods, to pharmaceuticals derived from bio-

products. Because MIVAC® preserves biological compounds during the drying process, it broadens the potential for plant-derived products.

Food applications are particularly exciting, Clary notes. Guests at dinners showcasing the technology could not identify dishes prepared with dried foods. While this was an effective way to showcase the new technology, the capacity of the system was not sufficient to produce samples for market studies. "More research is needed to understand the underlying principles of refining the design and putting together a technology package for commercialization," Clary says.

Prof. Clary's expertise adds a new dimension to microwave and radio frequency dehydration research underway at WSU. The Boeing patent portfolio will advance his research, providing potential for further technology development at WSU.

Dreams Realized...

"Thanks to the Forst Artist-in-Residence Fund, I have the tremendous experience of working alongside outstanding faculty like visiting professors Carole Silverstein, Julio Sims, and Richard Holland. This has greatly enhanced my education."

—Jeanne Fulfs, Fine Arts graduate student

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face to face with students.**



Fine arts student Jennifer Law at work in the studio.

Florence Handy Forst (WSC '36) and her husband, Edward, made their dreams a reality through their thoughtful estate plan. Using a variety of charitable gift options, they established the Forst Artist-in-Residence Fund to bring world-class artists face to face with Washington State University students and to provide for their daughter, Mary Ann Barbee. "My parents' first consideration was providing for the family," shares Mary Ann. "With the help of the WSU Foundation, they were delighted to find estate planning options that met the needs of the family, while also fulfilling dreams of students at Washington State University."



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To learn more about using your bequest to support a scholarship, professorship, or other University priorities, contact the Gift Planning Office, Washington State University Foundation, PO Box 641925, Pullman, WA 99164-1925, 800-448-2978, gift-planning@wsu.edu, <http://wsufoundation.wsu.edu/giftplanning>.