

CONNECTING WASHINGTON STATE UNIVERSITY, THE STATE, AND THE WORLD • SPRING 2004

Washington State

m a g a z i n e



COVER
STORY

Mount St. Helens—*The Perfect Laboratory*

Beautiful, threatened Willapa Bay • Austere, diverse Soap Lake

features

18 **Lonely, Beautiful,**

and Threatened— Willapa Bay

by Eric Apalategui • photos by Bill Wagner

Willapa Bay is the largest estuary between San Francisco and Puget Sound. It boasts one of the least-spoiled environments and the healthiest salmon runs south of Canada. It produces one in every four oysters farmed in the United States and is a favorite stop for tens of thousands of migratory birds. And it's in trouble.

WHAT PRICE WILLAPA?

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by Pat Caraher

Over 25 years at Washington State University, alumni director Keith Lincoln built many things, including friendships and a place where alums can go to sit in the shade.

29 **Mount St. Helens— the Perfect Laboratory**

by Tim Steury • photos by Robert Hubner

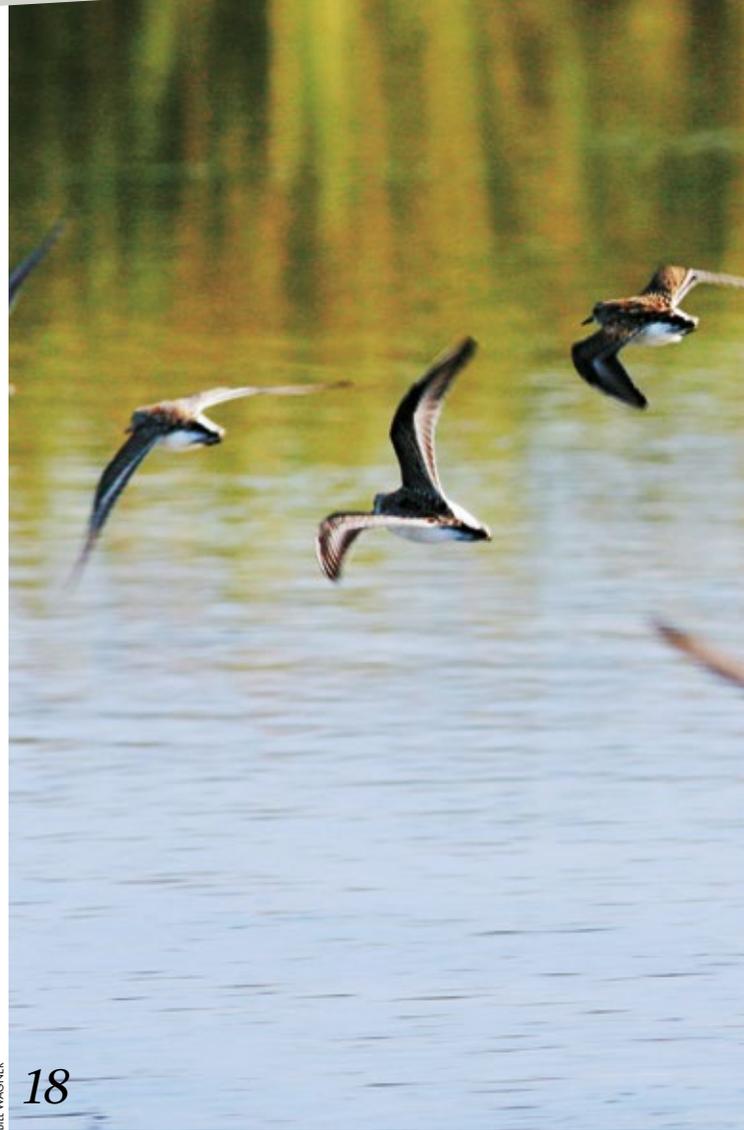
It is impossible to accept the immensity of Mount St. Helens and the effect of its catastrophic 1980 eruption unless you are able to stand beneath the enormous crater on the pumice plain and listen to John Bishop talk about lupines.

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by Tina Hilding • photos by George Bedirian

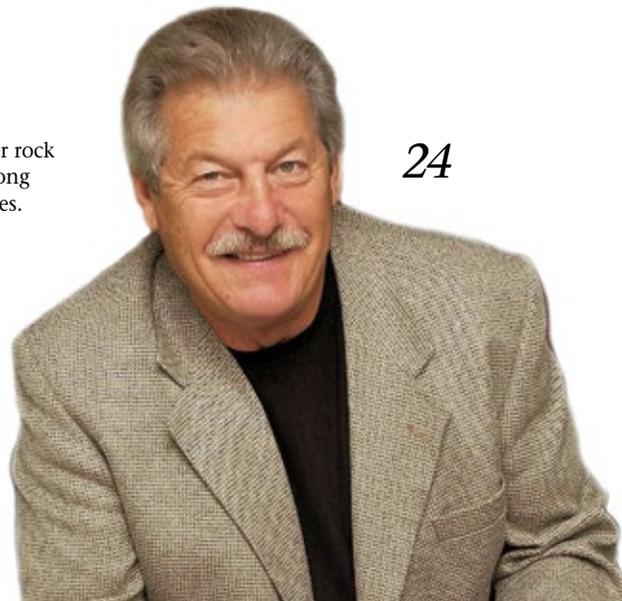
Soap Lake is surrounded by stark shores, sheer rock walls, a primeval landscape. Its waters have long been thought by some to cure certain maladies. It is also home to strange, hardy organisms that live nowhere else.

Cover: Ecologist John Bishop has followed the reestablishment of life on Mount St. Helens's pumice plain. See story, page 29.
Photograph by Robert Hubner



BILL WAGNER

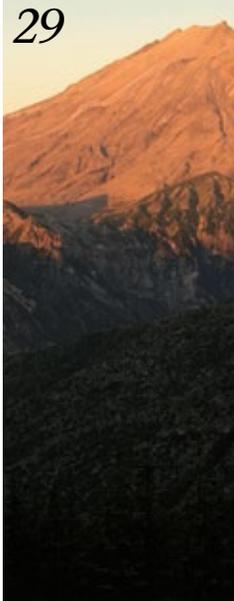
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BRENT PERTON

WashingtonState

m a g a z i n e

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LETTERS



Remembering Professor Muse

(See Raymond Muse's obituary on page 49.)

When I arrived at Washington State University as a graduate student in history, department chairman Ray Muse greeted me and asked me to be his teaching assistant. I would be embarking on one of the most wonderful experiences of my life.

Before class each morning, we would meet to discuss the day's topic. From these sessions, I quickly discovered I was learning lessons from a master teacher about life that were probably more important than the subject of history. I also heard some wonderful jokes.

Time spent with Professor Muse was special. Although he had been at it for years, he still loved to teach and perform for his students. He provided amazing connections between events and presented American history in such a logical sequence.

When he talked about the English legacy to American history, he would read a speech delivered by Queen Elizabeth I to her sailors before they sailed off to meet the Spanish Armada. His falsetto voice would bring down the house.

After I had finished marking the first set of exams in his class, he asked how the students had fared. I told him quite a few had received B's or higher. He threw back his head, laughed heartily, and said, "Fine! Fine!"

Fine!" Few things made him happier than for his students to do well in class.

Professor Muse's greatest strength, though, was his enjoyment of life. No matter how tough things appeared to me as I struggled through some of my graduate course work, I could look past the difficulties—when I was in his presence—and realize it would be worthwhile. Now, more than 25 years later, I still draw inspiration from Professor Muse.

*Robert K. Sutton '84 Ph.D. History
Bethesda, Maryland*

Sutton is the superintendent of Manassas (Virginia) National Battlefield Park and an adjunct faculty member at George Mason University in Fairfax, Virginia.

Stadium fire

I read the story on the WSU fire station with interest, especially the part about the famous 1970 stadium fire. I was one of the four student firemen on duty during spring break. We were watching TV at night in the lounge with the window curtains pulled. Someone noticed that it was getting light

outside. We opened the shades and stepped outside to a huge wall of flames across the street. By the time we got the fire truck across the street and water flowing a few minutes later, all we could do was keep the fire from spreading to the end-zone seats and the Compton Union Building next door.

We managed to save the KWSU-TV station bus parked out front by rolling it away. An automated alarm system would have alerted us immediately. Even then, I doubt we could have saved that wood stadium after the arsonist had lighted his deadly gas/detergent mix.

Our training back then was pretty skimpy, as were our salaries. We were provided room and board, and a whopping \$1.25 per day. Even so, there were still more than 10 applicants for every opening. The fire station was manned by a great group of guys. It was a wonderful place to live. I feel lucky to be a part of its history.

*Ken Frantz '71 Political Sci.
Hayes, Virginia*

Frantz founded Bridges to Prosperity, Inc., and was the subject of a feature in the winter 2002-03 Washington State Magazine.



More on Tiede

I want to commend the staff of *Washington State Magazine* for your exceptional courage in publishing in the fall issue Tom Tiede's piece, "The First Casualty."

I expect that you've received a dose of criticism from those who do not yet realize that "our lives begin to end, the day we become silent about things that matter" (Martin Luther King, Jr.).

You are a clear voice that I trust will not be silenced.

*Terry Fieldhouse '50
Nevada City, California*

Fire Department, Entomology

In the article about the WSU fire department (winter issue), one important point was left out. Chuck "Bobo" Brayton [later WSU baseball coach] was a fireman in the late 1940s. I knew him at that time. I was an SAE [Sigma Alpha Epsilon]. Bobo claimed his was the best fraternity on campus. The firemen were a close-knit group. They got room and board, but I don't think any pay.

The entomology articles were of special interest. I earned a bachelor's degree at WSU and did graduate work in forest entomology at Duke. My story is that I was not a good enough working forester to earn a living, so I taught at the college level for 31 years. My claim to fame is that I discovered and named an insect that has only been collected by one other person that I know of, and he made a special trip to where I discovered the insect and found them.

*Clayton J. Wray '50 Forestry
Lummi Island, Washington*



PANORAMAS

CHRIS MEYER, IU HOME PAGES. WWW.HOME.PAGES.INDIANA.EDU



ON THE ORIGIN OF SPECIES—AGAIN

*“Genius is the capacity
to see ten things
where the ordinary
man sees one.”*

—Ezra Pound

Above: Loren Rieseberg ('87 Ph.D. Botany), MacArthur Foundation Fellow

EVERYONE CALLS THEM genius awards, except the foundation that gives them. When describing recipients of its annual \$500,000 grants, the MacArthur Foundation avoids “genius”—rather, says the foundation, MacArthur Fellows are people who transcend boundaries, take risks, and synthesize disparate ideas and approaches. That’s a dead-on definition of Loren Rieseberg ('87 Ph.D. Botany), an evolutionary biologist at Indiana University Bloomington who received a MacArthur Fellowship in October 2003.

When Rieseberg arrived at Washington State University in 1984 to pursue his doctorate, he was a model student, energetic and eager, recalls his advisor and former WSU professor, Douglas Soltis, now at

University of Florida. Soltis handed him Verne Grant’s 1981 classic, *Plant Speciation*, and told him to find a doctoral project.

“I discovered then that I wanted to spend my life studying the origin and evolution of plant species,” Rieseberg says.

Despite Charles Darwin’s *On the Origin of Species*, exactly how new species originate has remained unclear for nearly 150 years. Rieseberg decided to take a new look at the old question by focusing on hybrids—the crossing of two species. It was a controversial choice.

Gardeners and farmers favor hybrids—hardy flowers and sturdy crops that resist disease. But natural hybrids are often sterile, unfit, and unable to reproduce. From the biological perspective, then, hybrids

were largely considered an evolutionary dead end.

That didn’t stop Rieseberg. Using high-tech tools of genetic analysis—quite new in the 1980s when he started his work—Rieseberg has studied hybridization in sunflowers, making a string of discoveries that have revolutionized scientists’ understanding of how evolution works. In a landmark 1996 study, he re-created the birth of a new species by crossing sunflowers in the lab, proving that hybridization is, in fact, an important tool of evolution.

What’s more, he came up with the same sunflower species three different times, demonstrating that evolution, commonly thought to be random, can be repeatable. More recently, he’s shown that hybridiza-

tion is a major force in sunflowers' adaptation as well.

Rieseberg is a hybrid himself: a native of British Columbia who lives in the Midwest, a former Seventh-Day Adventist turned evolutionist, a scientist who sculpts, a soft-spoken wannabe schoolteacher whose MacArthur has garnered international attention, including an invitation to lecture on evolution for the ruling family of the United Arab Emirates.

Bringing the unexpected together is Rieseberg's genius. Jeffrey Palmer, distinguished professor of biology at IU, calls Rieseberg's ability to integrate distinct experimental approaches "unsurpassed." His creative blending has led to "very convincing and elegant" confirmation of hybridization as an evolutionary process, says Edward Schilling, head of the botany department at University of Tennessee and Rieseberg's master's advisor. Eva Sanders Allen, a doctoral graduate from Rieseberg's lab who continues to work with him at IU, says she's called him a genius many times: "He remembers everything, grasps everything, sees where the holes are, and knows what new technologies can make possible."

And old technologies, too. Rieseberg has a tradition of "stoning" his graduating doctoral students—giving them a gift of a sculpture made from Indiana limestone. A few years ago, he couldn't find a sculpture he liked for a student who was leaving in just two days, so he decided to make one. He carved it with a screwdriver.

Since then, his creations have gotten more elaborate. Rieseberg wants to sculpt a near life-size buffalo for his front yard. The buffalo has become a sort of totem for him—he considers the animal a "primary dispersal agent" for the sunflower species so important to his work. ■

—Lauren J. Bryant

Architecture from the Weapons of War

Homes constructed from artillery shells. Military tanks used as foundations for bridges. Flowerpots that were once parts of missiles. In Afghanistan, a generation of war has resulted in a strange new architecture, built from the implements of destruction. A series of photographs by Washington State University professor Rafi Samizay on Afghanistan and its architecture will be on display starting March 9 at the WSU Museum of Art. Titled "Afghanistan: Land of Light and Shadow," the show is cocurated by Robert Barnstone, assistant professor in the School of Architecture and Construction Management, and Roger Rowley, Museum of Art curator and collections manager. In conjunction with the exhibit, a symposium on nation-building is planned for the WSU campus. Samizay returned to his native Afghanistan last fall after a 22-year absence to work on reconstruction efforts.

"To see people living and continu-

ing to build out of things like artillery shells and tanks shows that even in the midst of 30 years of war, there's hope," says Barnstone.

Paired with photos from recent trips will be photographs from Samizay's years as professor at Kabul University in the 1970s. Samizay is helping Kabul University develop a master plan and working with the government to design a prototype courthouse for the country. Samizay fled Kabul in 1981 shortly after being arrested. His Western education and position as a professor made him a target during the Soviet occupation. He had been the director of Kabul University's architecture school, spe-

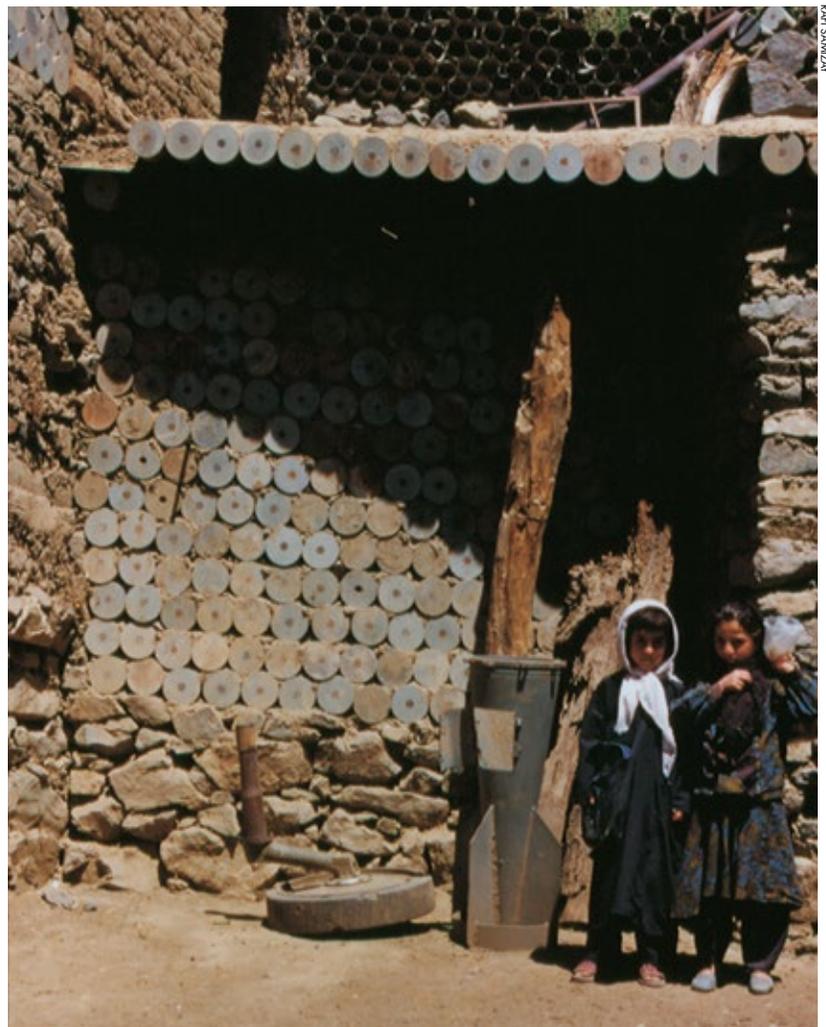
cializing in indigenous architecture and historic preservation. He is the author of a 1980 book on the traditional architecture of Afghanistan, and prior to the Soviet occupation and civil war in the country, he conducted a survey and analysis of different neighborhoods of Kabul. He has been at WSU since 1984 and served as the School of Architecture's director for nine years.

Samizay will return briefly from Afghanistan to participate in the nation-building symposium, but remains busy with rebuilding projects.

"He has a lot of guts to be in Afghanistan right now," says Barnstone. ■

—Tina Hilding

"Afghanistan: Land of Light and Shadow," a series of photographs by WSU architecture professor Rafi Samizay, will be on display starting March 9 at the Museum of Art.





Steve Smith '76,
head rose gardener
at Manito Gardens
in Spokane.

Although roses have been hybridized since the dawn of gardening, breeders did not understand the mechanics of hybridization until Gregor Mendel conducted his heredity experiments in the 1860s. Following his revelations, the breeding of new rose varieties exploded. The resulting genetic complexity offers much potential. One writer reports that any modern rose crossed with any other modern rose will produce one of 17 million possible results.

Rose breeders have exploited that genetic abundance to offer the world even more variety of late. Although people tend to think of hybrid teas, says Smith, many recent award winners have been what are called shrub roses. Besides their beauty and more prevalent aroma, another advantage of the shrub roses is their hardiness. Many of the new award winners are resistant to diseases such as powdery mildew and black spot, the thorns of Smith's existence.

He purposely keeps a few non-resistant roses as indicators. When

symptoms show up, it's time to spray. One such rose is the beautiful, but vulnerable, Christian Dior. "All you have to do is walk by it and mention powdery mildew," says Smith.

But overall, Spokane is a very good area for roses, he says. Roses love the abundant sunshine, and the low humidity means relatively low disease pressure.

Tending roses is a year-round job. As fall approaches, Smith and his assistant clip spent blooms, leaving the hips, helping the plants to begin redirecting their energy into next year's growth. With the first hard frost, Manito hosts a public cutting. Smith will then prune for winter, opening up the center of the plant, making it easier to hill it up. If time allows, they will strip off the remaining leaves, so disease spores can't overwinter.

Although he notes wryly that there are many ways to garden—he is often advised on his methods by well-meaning visitors—Smith advocates hilling soil from around each plant, mounding it up around its crown, but taking care not to dig too deep and disturb the roots. After the plants are mounded, the

The Last Roses of Summer

STEVE SMITH has good news for those of us who like to satisfy more than one sense at a time. The domestic rose, bred too long for form and color only, to the detriment of scent, is regaining its fragrance. Smith '76, the head rose gardener at Manito Park in Spokane, is showing us his charges, which in late September are still in full bloom, and we spend much of our time sniffing.

A visit to Smith's All-American Rose Selection (AARS) display garden gives a portrait of things to come. Each year, Manito and the other 130 such gardens across

the country display the new award winners that will be offered for sale to the public the next year.

In the "modern" rose garden, Smith has about 150 varieties. Over the hill are another 100 varieties of older-style roses, the old-fashioned shrub roses, the miniatures, the David Austin or English roses. In all, Smith tends about 1,700 plants.

As diverse as the garden is, Manito's collection represents but a fraction of those in existence. Smith estimates that named roses currently propagated total between 10 and 15 thousand.

A SENSE OF PLACE

OTHER WASHINGTON AARS DISPLAY GARDENS

Bellingham Rose Garden
Chuckanut Drive
Bellingham, Washington 98225

**City of Chehalis
Municipal Rose Garden**
80 NE Cascade Boulevard
Chehalis, Washington 98522

**Master Gardener
Demonstration Rose Garden**
1520 S Union
Kennewick, Washington 99337

Woodland Park Rose Garden
5500 Phinney Avenue N
Seattle, Washington 98103

Point Defiance Rose Garden
5400 N Pearl
Tacoma, Washington 98407

For more information
on AARS roses, see
www.rose.org/.

park department hauls in loads of pine needles for mulch.

Winter is the time for meetings and seminars, for keeping up on pesticide registration. Then in mid-March, Smith and his assistant start removing the pine needles. Later in the month, they begin pruning. "We prune hard," he says. They cut back all the black canes, pruning down until the center of each cane is green, sometimes down to three or four inches. Then in mid-April, they gently move the mounded soil away from the rose crowns.

"It does my heart good in spring," he says, "when I see that red new growth."

Even after 10 years as head rose gardener, Smith does not understand boredom. "Every year, I learn something new," he says.

"If you look closely, there's disease here and there. What can I do to improve on that? Sometimes the blooms tend to tip over. What can I do to improve their appearance?"

Immersed as he is in roses, does he have a favorite?

Smith leads us over to one aptly named "Double Delight." The rose's double blooms are creamy white edged with red. Its fragrance is exquisite.

"I like the bicolors," he says. He names a few more favorites. Paradise. Gemini. And Full Sail, which is loaded with luscious white blossoms. But it is clear that Smith's favoritism is not exclusive. Every rose elicits his admiration, even the disease-prone Christian Dior. ■

—Tim Steury

Spokane's Manito Park celebrates its centennial next year. Rosehill is one of several gardens at Manito, including the Duncan Formal Gardens, Joel Ferris Perennial Gardens, Nishinomiya Japanese Gardens, Lilac Garden, and the Gaiser Conservatory. It is located at 4 West 21st Avenue.

DAVID WHEELER ILLUSTRATION

A MORE EFFECTIVE NAG

Posing a question that asks people to predict their behavior



ARE YOU going to eat five servings of fruits and vegetables today?

Health care proponents regularly extol the benefits of eating five servings of fruits and vegetables a day for improved health. But are these reminders—typically relayed through the media—effective? Most advertisements *tell* us what to do, what to wear, what to buy. They rarely *ask* us to think about how we will behave.

However, in social marketing, in which messages are developed to influence people's behavior for the greater good of society, a technique called "self-prophecy" is working. The technique involves posing a question that asks people to predict their behavior. Instead of telling them what to do, you ask them if they are going to do it.

Eric Spangenberg, professor of marketing, and David E. Sprott, assistant professor of marketing, both of Washington State University, are the chief developers of the concept.

Spangenberg calls himself the "antimarketing marketer," because his passion lies not in studying how to effectively sell more cars or diet sodas, but in influencing people to do what is best for the individual and society as a whole—desirable behavior such as voting, recycling, spending time with one's children, exercising, and not smoking.

Spangenberg and Sprott's studies show that when people predict they will do something, they are more likely to do it. Asking them a question becomes a force for positive change.

Recent analysis of the technique's application shows an average effectiveness rate of 20 percent immediately following the asking of the question. Sometimes the behavior change will last up to six months after the person predicts his or her behavior.

Specific studies have shown that self-prophecy has

increased voter turnout in elections, improved attendance at health clubs, increased commitment to recycling aluminum cans, and increased alumni donations to colleges and universities.

What drives us to act upon our predictions is not entirely clear. Spangenberg and Sprott believe that self-prophecy results mainly from cognitive dissonance, which can be described as the uncomfortable feeling humans get when they say they'll do something, and then don't do it. Or you could call it guilt.

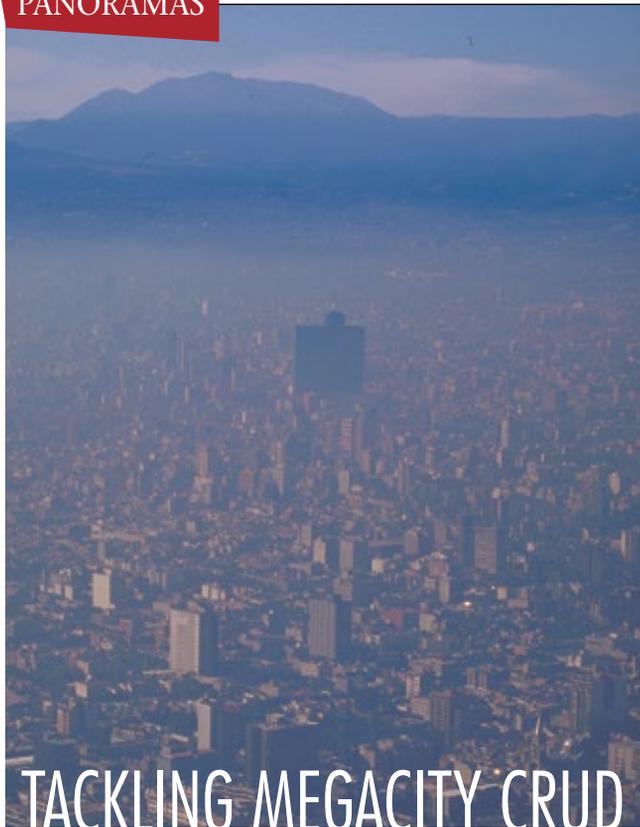
Whatever you call it, this uncomfortable feeling drives us to act consistently with our predictions. In other words, the prediction becomes a self-fulfilling prophecy.

Spangenberg stresses that before the technique is applied, the target market's social norms must be identified. People must have strong beliefs about the subject of the self-prophecy in order for the technique to be effective. Asking a group of drug users, "Are you going to stop using today?" is probably not going to work, because they are already committed to the undesirable behavior.

Social and government agencies have taken note of the self-prophecy technique. The U.S. Department of Agriculture has shown interest in using it for research and surveys in animal health inspection and regulation and in public policy. In addition, the Women, Infants, and Children Program in Washington State and WSU Extension are using self-prophecy to influence the retention rate of participants in a government-sponsored program to get families to eat dinner together.

"This technique is clearly something that can make the world a better place," Spangenberg says. ■

—Megan Guido



GUIDO ABERIO ROSSI / THE IMAGE BANK / GETTY IMAGES

TACKLING MEGACITY CRUD

ALTHOUGH MEXICO CITY has the dubious distinction of having the worst air quality in the world, its problems with pollution are not unique. Researchers at Washington State University's Laboratory of Atmospheric Research are working with a group of more than 20 universities and government agencies who are using Mexico City as a case study in how to tackle the huge problem of air quality in megacities.

Led by Mario Molina of the Massachusetts Institute of Technology, the researchers hope to gather information from a large number of groups and eventually help devise better emissions-control strategies for the region. Using various technologies and numerous agencies to gather information assures better confidence in the results, says Brian Lamb, professor of civil engineering, who led the WSU group. The information could also be used to better understand and improve air pollution problems in other major urban areas.

Lamb's group studied the emissions of organic hydrocarbons from the urban landscape. Hydrocarbons are released into the atmosphere from incomplete combustion of gasoline and other fuels and from other sources, such as dry cleaners, paint shops, and solvents. In the atmosphere, hydrocarbons react with sunlight and nitrogen oxides to produce ozone and smog. In Mexico City, the standard for ozone is exceeded 300 days per year.

While Lamb's group found that cars are a big source of hydrocarbon emissions, they also found that many cottage industries, ranging from repair shops to a factory that cleans eggs, are also significant contributors to pollution. Even painting sidewalk curbs produced significant organic molecules.

"With a population of 20 million people and horrendous traffic, they have a long way to go," says Lamb. ■

—Tina Hilding

HIGH-STAKES

THE CURRENT enthusiasm for contemporary American school criticism and reform can be traced to the 1983 federally sponsored report, *A Nation at Risk: The Imperative for Educational Reform*. Its most infamous line states, "If an unfriendly foreign power had attempted to impose on America the mediocre instructional performance that exists today, we might well have viewed it as an act of war."

Such political rhetoric is, of course, nonsense, as we will show with international and national data.

WHAT IS NOT BEING REPORTED?

Media reports tend to show that schoolchildren in the United States are behind their peers in other countries. Yet in 1992, the data for eighth-grade math performance show the world's "top 20" included 12 U.S. states. In 1998, 13-year-old science students in 14 states ranked in the top 15 worldwide. Washington State was not included in the 1992 or 1998 studies. However, Washington was in a 1999 study showing that only six nations beat Iowa and Nebraska in eighth-grade math. In science, Singapore alone scored above 14 U.S. states.

Washington State children would rank in sixth place in the world for science and 13th for math. Within the United States, the conservative American Legislative Exchange Council ranked the Evergreen State number two behind Wisconsin for K-12 education. You want world-class standards? Well, you have them.

Oh, yes, let us not forget the July 2001 laudatory announcement in *College Board News*. American high school students in physics and cal-

culus who passed advanced-placement exams went on to outperform students in the rest of the world. This showed dramatically that our best are clearly "at the top of the world in academic achievement," stated Lee Jones, executive director of the College Board's Advanced Placement Program.

"REFORM" AS HIGH-STAKES TESTING

Most states have developed high-stakes tests that punish children and schools if they do not meet some arbitrary standard or the never-defined "educational accountability." Unacknowledged is the evidence from 28 states with high-stakes tests—Washington excluded—demonstrating that between 1993 and 2000, student learning after testing was at the same level or at lower levels than it was before the high-stakes policies were implemented. As researchers in Colorado and Massachusetts report, student achievement actually goes down when high-stakes tests are instituted, or randomly fluctuates up and down yearly.

POVERTY, MINORITY STATUS, AND HIGH-STAKES TESTS

Researchers are virtually unanimous—internationally, nationally, and in the state of Washington—that family poverty is a primary determinant of student achievement. Childhood poverty predicts poor achievement on high-stakes tests. Attributes of poverty that negatively impact schooling outcomes are inadequate nutrition, a single-parent family structure, and alienation.

A child's minority status is also a

TESTS

What do they tell us?



strong predictor of poor performance on high-stakes tests, especially for English-language learners. In most cases, minority status is coupled with poverty. Applying the fairness doctrine—"do no child harm"—this is a strong indictment of high-stakes tests. Policy makers are penalizing children for conditions over which these youngsters have no control, ignoring the real social problems.

THE WASHINGTON ASSESSMENT OF STUDENT LEARNING (WASL)

The Washington state legislature mandated the WASL as a high-stakes test in 1996. This test battery has been both praised and criticized. The Washington Education Association contends that the test is neither a valid nor a reliable assessment. The test certainly has no predictive validity. Well, not entirely. As one researcher reported, students who flunk the WASL at grade 4 have

a one-in-33 chance of passing it at grade 7. These results and four years of such testing are interpreted as evidence that the WASL is creating aversive educational consequences. Fourth-grade students are apparently exhibiting characteristics of *learned helplessness*, a specific consequence of psychological stress—in this case, the stress of being given an impossible task. With flunk rates ranging from 76 percent for minority children to an overall rate of 50 percent for nearly all children, the WASL may indeed be perceived as an impossible task. This perception creates aversive test anxiety, the consequences of which become clear when one analyzes the yearly WASL reports.

We assert that tests should have both formative and diagnostic functions. Tests should provide explicit feedback to both students and their teachers, so that a provision for correction may be initiated or appropriate placement decisions made. The feedback that is provided by the WASL does not inform students or teachers on what *specific essential learning* in reading, mathematics, writing, science, and listening has or has not been mastered, or how they could reach mastery if they are "not meeting standard." The WASL does not promote student achievement, since the teacher, student, or parent does not have access to the actual test taken. In fact, the testing company, NCS Pearson of New Jersey and London, destroys each physical test booklet

after it is computer-scanned. There is no way a teacher can analyze student errors. Hence, any chance a teacher has to remediate student deficiencies is negated.

Calculating the effect-size statistic, we found that there is no overall effect on student achievement as a consequence of mandatory WASL testing. Our analysis included WASL scores from 1998 to 2002. Yearly comparisons reveal no effect. However, comparing 1998 to 2002, a small positive effect appears. We calculated the cost to gain one-percentile improvement on the WASL exceeds \$10 million per year.

For any test to have impact on instruction and learning, it must provide useful, relevant, immediate feedback to users. Further, tests must be reliable and valid. The current genre of high-stakes tests meets none of these criteria. We call on all education policymakers to question high-stakes tests, continued use of arbitrary standards, and yearly achievement targets. ■

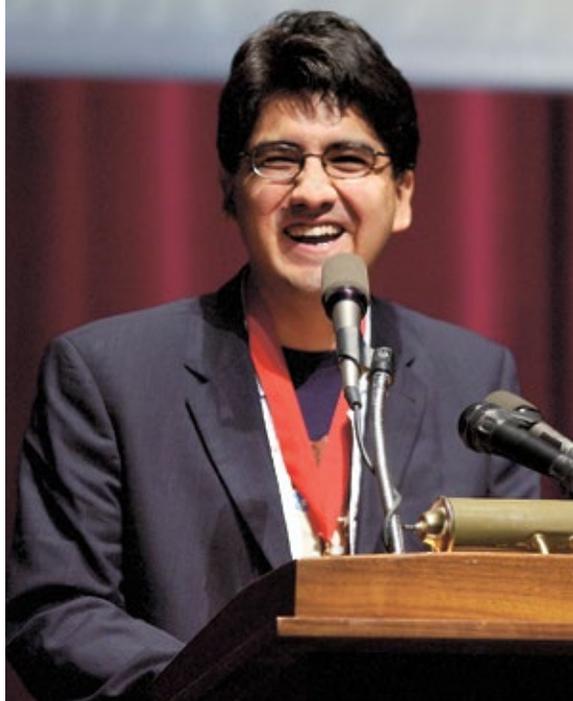
Don Orlich, a member of the College of Education faculty at Washington State University from 1967 to 1996, serves as professor emeritus in the College of Sciences, Science Mathematics Engineering Education Center. His specialty is in curriculum and instruction, with emphasis on science education. He is coauthor of Teaching Strategies: A Guide to Effective Instruction, 7th edition, Houghton Mifflin, 2004 (his 18th book).

Glenn Gifford, a doctoral candidate in the Department of Educational Leadership and Counseling Psychology at WSU, specializes in counseling psychology and test construction and analysis.

DAVID WHEELER ILLUSTRATION

REGENTS' DISTINGUISHED ALUMNUS AWARD

SHELLEY HANKS



Since leaving WSU in 1994 with a bachelor's degree in American studies, Alexie has published nine books of fiction and poetry and has written and directed two award-winning movies. Widely popular, his short stories appear in the nation's main literary magazines, find honored places in widely read anthologies, and have become standard texts for high school and college literature classes. Populated with Indians on the reservation, the homeless, and Indians trying to find their way in middle-class society, Alexie's work focuses on a side of American life that his readers rarely see. In his novels, short stories, poetry, and movies, Alexie deals with people engaged in stereotypical behavior. "Stereotypes," he argues, "portray the truth, and

spoken, accessible style, spiced liberally with humor, with which he drives his unpredictable plots.

Alexie didn't come to WSU to study literature. Rather, he began with an interest in pre-medicine, but he couldn't stand dissecting dead animals. So just by chance, he took a poetry class.

His writing career started when Professor Alex Kuo (English and comparative American cultures) lent him a book of poetry. That small event changed Alexie forever. "I had no idea how big the world is, and it was here at WSU that I learned that," Alexie told the standing-room-only audience in Bryan Hall on the day he received the award. Coming to WSU, Alexie said, helped him join a new tribe—a tribe of readers and writers. And, he added, "my two chiefs were Joan Burbick and Alex Kuo."

Kuo, along with Burbick (English), LeRoy Ashby (history), Grover Krantz (anthropology), and many other professors whom he liked, admired, and battled with, gave him a new way of looking at the world. They helped him become the author he is today.

At 37, Alexie is the youngest recipient of the Regents' Distinguished Alumnus Award, and the 33rd individual honored since the award's inception in 1962. Previous winners include Paul Allen, cofounder of Microsoft, astronaut John Fabian, cartoonist Gary Larson, and broadcaster Edward R. Murrow.

Alexie, who grew up in eastern Washington as a poor farm boy on the Spokane Indian Reservation, hopes his receipt of the award will serve as an example for minority and poor students from rural areas to follow in his footsteps at WSU. ■

—Phil Druker

Poor farm kid makes good

SHERMAN ALEXIE likes to remind people that attending Washington State University presented him with a real challenge. As a Spokane Indian, a liberal, and a writer, he did not fit the prevalent mold of students attending WSU in the late 1980s and early 1990s. Regardless, on October 10, 2003, WSU president V. Lane Rawlins presented Alexie with the University's highest alumni honor, the Regents' Distinguished Alumnus Award.

Alexie writes honestly about drunkenness, loneliness, and failure. When dealing with stereotypes, he contends, "the problem is when you say 'Indian drunk', as if all Indian drunks were alike. That's not true. Each alcoholic becomes an alcoholic for a very specific reason," and so he writes to uncover those specific reasons for his readers.

Although he's considered a literary writer, his work has gained popularity because of the plain-

that's why people are uncomfortable with them. They don't like to confront the truth." So

Sherman Alexie's work has gained popularity because of its plainspoken, accessible style, spiked liberally with humor.



SHELLEY HANKS

SOLVING BOEING'S PROBLEMS

"Why not . . . include a range of students from different disciplines . . . to work on a real project—something one might do in the real world?"

THE BOEING COMPANY has a problem.

Lindsey Caton, a Boeing vision sensors and optics specialist, has taken apart yet another \$3,500 camera that he has been trying to use to document the company's manufacturing processes. Out of it oozes Boelube, the fancy lubricant that Boeing uses for drilling airplane parts. It does not belong in the camera. In fact, the camera is ruined.

Later, Caton describes the problem via videoconference to a small group of students at Washington State University. As part of the Boeing Scholars Program, the students are developing a new protective enclosure for the camera.

Started in 1999, the program provides students needing financial assistance with two-year scholarships. Boeing also looks for opportunities to provide internships between their junior and senior years. During their senior year, the students from engineering, science, and business participate in an interdisciplinary course in which they collaborate with Boeing scientists and engineers on a project assigned by the company intended to depict real-life problems faced by the aerospace industry.

How valuable is the students' work?

Since the program's inception, students have developed a computer program to help airline customers know best how to transport a variety of live animals. They've looked at ways to recycle carbon fibers used in building airplanes,

and they've worked to understand and prevent interference in wireless networks on planes.

In the program's first year, students came up with a "paint contaminant detection vision system." When Boeing planes are built, they arrive in Seattle by train, where they are then cleaned, assembled, and painted. After delivering the new jets to customers, the company received complaints that the paint job, which had cost about \$500,000, was peeling. Boeing suspected, and the students found, that small amounts of soap residue were causing the paint to peel. The students' solution was to put a trace element into the soap, allowing it to be detected by an ultraviolet light.

The program is the brainchild of Scott Carson, a 1972 WSU graduate in product management, president of Connexion by Boeing, and senior vice president of The Boeing Company. When he was approached with the idea of having a scholarship for students in the sciences, he thought about the benefits of bringing disparate groups together. He attributes much of his success at the company to the fact that he was curious about what Boeing engineers were doing and enjoyed learning to work with them.

"It was fun to get everyone around the table to solve a problem," he says.

Why not broaden the scholarship to include a range of students from different disciplines, including science, engineering, and business, and then bring them together



Robert Olsen, Boeing Scholars Program coordinator and interim associate dean, College of Engineering and Architecture, reviews their proposed redesign of the Boeing camera enclosure with Boeing scholars Fausto Guillen, Nicole Krueger, and Deborah Curry.

to work on a real project—something one might do in the real world? Carson was inspired to focus on students from diverse backgrounds by his son-in-law, who is Hispanic and became an engineer. Carson hoped that students from diverse backgrounds would complete the package by returning to their high schools as mentors, providing inspiration for others.

While a by-product of the program helps industry with solutions to pesky problems, the primary purpose is to ensure that students are better prepared for the workplace. Carson, in fact, recently hired a former Boeing scholar. The students are gaining experience and learning valuable lessons that they may not get in their other classes.

"People think once they have a degree, they know everything they need to know," says Deborah Curry, a senior in business administration and one of the group of students working on the Boeing camera enclosure. "But you still have a learning process once you get out of college. That's something I've learned in the last month [since starting the project]."

As for Caton, he is eagerly awaiting the camera enclosure the students will devise. In the meantime, he has thought of a new project for the Boeing Scholars. His biggest problem now is waiting until next year. ■

—Tina Hilding

GRANDFATHER EXTRAORDINAIRE

Jordi Kimes had been a teacher before becoming a stay-at-home mom. She dreamed of returning to Washington State University and earning a doctorate in pharmacy. But she didn't want to put her daughters, ages 7, 3, and 1, in day care. So she called her parents. Would they be willing to watch the girls while she went to school and her husband, Ken, worked? Without hesitation, her parents said yes.

"I couldn't believe it," the WSU graduate ('94 Pharmacy) said.

In the summer of 2002, she and her family moved from Waterville, Washington, to Pullman, where she had been accepted in the College of Pharmacy. Her parents' move was more difficult. They were living in Frankfort, Michigan. Her dad, Jay Yarwood, was retired after 31 years in teaching and coaching. Her mother, Pam, was a professional singer.

The Yarwoods went from barely knowing their grandchildren to being with them up to 12 hours a day, five days or more a week. Jordi often had late labs and study lessons. Ken worked out of town most of the first semester, trying to transfer his painting business to Pullman. Pam cooked dinner many nights. Jay cleaned up afterwards so Jordi could spend time with her children. Grandpa and Grandma took the children on walks and to the park, drove them to preschool and gymnastics, and changed diapers for a year.

"I knew in my heart my decision was doing no harm to my kids when I came home late on evenings and found my dad on the floor wrestling with the girls," Jordi said. With her husband gone so much, the girls missed the physical play, but their grandfather proved to be an able replacement.

The year was challenging for all, she says, yet the joy and fun of living together was so fulfilling that her parents loaded up their 30-foot travel trailer once again last August and headed to Pullman. Midway between Pullman and Frankfort, the Yarwoods received a phone call. Their home of 35 years had burned down. School at WSU was to begin in two days. They didn't turn around. They arrived in Pullman on time to help care for their precious granddaughters. That left them to deal with their destroyed house long distance.

Jay Yarwood was named 2003 WSU Dad of the Year and recognized October 25 at the Dad's Weekend breakfast on the Pullman campus. Jordi's letter nominating him for the honor was selected from 17 others written by students. Other finalists included Gerald D. Lundt, Olympia, nominated by his son, Marc; and Roger M. Johnson, Bellevue, nominated by his daughter, Elly.

The dads were selected on the basis of their involvement with WSU, their community activities, and their children's letters. ■

—Pat Caraher

Jay Yarwood with his daughter, Jordi Kimes, and his charges.



GERHARD RICHTER, 799.2 ABSTRACT PAINTING
1993. COLLECTION OF VIRGINIA AND BAGLEY WRIGHT

3 Degrees of Cool

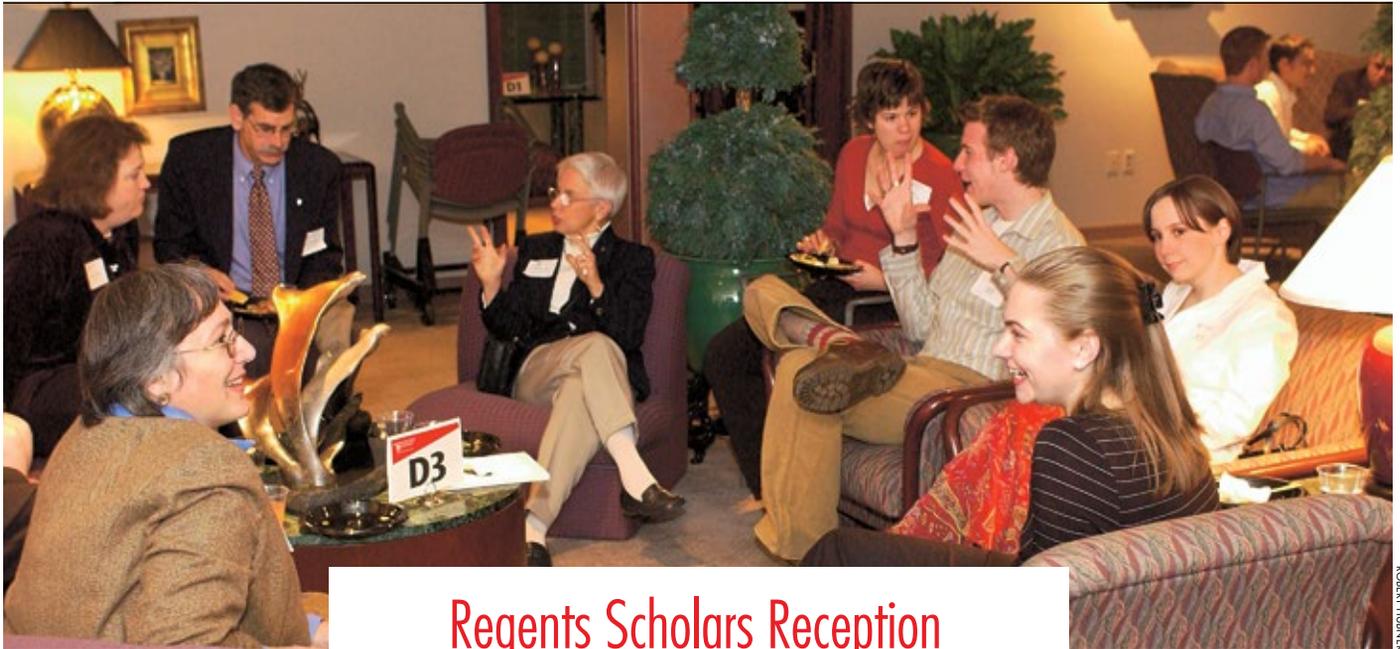
Works from the Virginia and Bagley Wright Collection

A NEW EXHIBITION from the collection of Virginia and Bagley Wright, curated by Chris Bruce, director of the Museum of Art at Washington State University, takes the definition of cool to new heights. Viewers "get into the groove" by moving through three conceptual spaces with a mix of hypnotic African and Oceanic masks, haunting minimalist paintings, and electric abstract acrylics.

Virginia and Bagley Wright, international art collectors who live in Seattle, lived in New York during the 1950s and bought works directly from artists such as Jackson Pollock and Robert Rauschenberg. The Wrights now have one of the most comprehensive postwar collections of major contemporary art in the country. For this show, Bruce sifted through the collection to see which works "had a certain vibe and resonance when put together in the same room."

"3 Degrees of Cool" will run through February 29 at the Museum of Art, Pullman campus, located in the Fine Arts Center on Wilson Road across from Martin Stadium. Hours are Monday through Friday, 10 a.m. to 4 p.m.; Thursdays, 10 a.m. to 7 p.m.; and Saturdays and Sundays, 1 to 5 p.m. To schedule a docent-led tour, call the museum at 509-335-1910. ■

—Brenda Congdon



ROBERT HUNNER

Regents Scholars Reception YOUNG SCHOLARS, GOOD CHEER

SETH LAKE OF OLYMPIA mimicked the fetal position he reverted to the day his roommate's family met him for the first time, shivering under a hat, coat, and blanket on the couch, sicker than a dog.

A hungry John Leraas, also of Olympia, overspent his dining plan the first half of the semester. Limited to eating on \$6 a day, he bought a rice cooker and skillet to supplement his meals. Mariah Maki of Washington State University Admissions, seated next to Leraas, passed him her plate of hors d'oeuvres.

Amy Gordon of tiny LaCrosse radiated the bigheartedness and positive spirits of someone raised in a close-knit community. She rushed her roommate to the emergency

room one night and stayed with her until 4 a.m.—in a small town, you take care of your own.

Lake, Leraas, Gordon, and other WSU freshmen made a motley and engaging crew November 3 during a Regents Scholars reception in their honor. Even conveying their worst experiences to Maki and molecular biosciences professor Ralph Yount, they dished out generous helpings of humor and good cheer.

The Regents Scholars Program is the only scholarship program of its kind in Washington, where stu-

dents from communities across the state are nominated by their high school principals and guaranteed a minimum scholarship amount just through that nomination. WSU president V. Lane Rawlins established the program to both recognize Washington's top high school students and recruit them to the University. To date, 400 WSU students are Regents Scholars.

For the 2004 cohort, more than 250 high school administrators nominated students whose combined grade-point average is 3.94.

Nominees include student body presidents and senators, National Honor Society members, musicians, varsity athletes, and community volunteers. Scholarships from \$6,000 over two years to \$45,000 over four are awarded.

The reception drew roughly 200 Regents Scholars and WSU administrators and faculty who discussed the students' experiences and academics, celebrating the talents, vitality, and potential of young people embarking on a lifetime of learning.

"The most precious thing I got out of college . . . was a life of the mind," Rawlins told the scholars. "I was blessed and lucky to get that kind of an education. You're with people who are not just thinking about the textbook they're reading, but about tomorrow." ■

—Nella Letizia

"The most precious thing I got out of college . . . was a life of the mind," President Rawlins told the scholars.



MORE ABOUT THE STUDENTS

SETH LAKE • Communication major Lake graduated from Capital High School in 2003 with a 3.95 GPA. He served as newspaper editor, yearbook photo editor, freshman class president, captain of several sports teams, and middle-school tutor. He didn't plan to attend WSU initially, but his first visit to Pullman, combined with the scholarship, persuaded him. "The thing that impressed me was the people. The whole sense of community was awesome."

JOHN LERAAS • When he isn't eating, physics major Leraas does a mean impersonation of WSU chemistry professor Kerry Hipps. For Halloween and the class final, he donned Hipps's duds of choice—a cowboy belt, buckle, and boots. "I told him if I have to think like a chemist, I better dress like a chemist." The 2003 River Ridge High School graduate with a 4.00 GPA was student body president, National Honor Society vice president, fly-fishing club founder and president, and member of DECA, Key Club, and the wrestling team.

AMY GORDON • Elementary education major Gordon graduated last year from LaCrosse High School in a class of 12 with a 3.96 GPA. Class valedictorian, NHS president, Washington Junior Miss contestant, and class or student body president and vice president several times over, Gordon has some 10 WSU alumni in her family. Even the high school counselor who encouraged her to apply for the Regents Scholarship is a WSU alumna. "I've always wanted to be a Cougar. I was raised a Cougar."

SPORTS|SEASONS

LONG-HITTING KIM WELCH PUTS WSU ON THE GOLF MAP

*"She's a fabulous competitor."
—WSU Golf Coach Walt Williams*



SHERY HANKS

KIM WELCH has a surprising knack for hitting a golf ball long and straight. The rest of her game isn't bad either. She finished fifth in the 2003 NCAA Women's Golf Championship, two strokes back of

the winner in a field of 140 golfers. And she was only a sophomore in her first national tournament.

Welch's ability to distance the ball from the tee seems to defy the law of physics. She carries 135 pounds on a lean five-foot-six frame—not the physical stature of a power hitter. Still, she can drive a ball 300 yards on occasion. Her average is 290 yards, according to Walt Williams. The Washington State University golf coach surrenders 15 yards on his drive to his team captain.

"Kim can generate club speed like no one else," he says. "She's probably the longest hitter in women's collegiate golf."

How does she do it?

Williams slowly shakes his head from side to side searching for an answer. "I hate to use the term 'freak of nature,'" he responds. "It's almost a 'Tiger-esque' swing," in reference to another of golf's long hitters.

When Welch addresses the ball with her driver, she positions her feet shoulder width and her hands far from her body. She swings her club back in a wide arc, then quickly forward. Her hip rotation through the swing is very fast. The ball explodes off the club face.

Her tremendous length off the

tee shortens the rest of her game. "Hitting a sand wedge into a par four is a huge advantage over using a six iron," she says. She finds the par fives fun. That's where she tries to make up strokes or extend a lead. "I've never been a player to shoot 15 pars in a round. I'm not that consistent." A round of 72 more likely would include four bogeys, four birdies.

Welch's game is multi-dimensional. She strikes her irons well, but sees room for improvement. She's trying to perfect a 50-yard lob she can add to her arsenal. During her freshman year, Williams suggested she experiment with a cross-handed putting grip. She's comfortable with it now, and her putts are truer.

Mentally she doesn't get too high on good shots, too low on bad ones. She will carry on a conversation with other golfers on the course. But when it comes to analyzing and executing her shots, she's all business.

"She's a fabulous competitor," Williams says.

In an interview with *Washington State Magazine* last fall, Welch seemed at ease, smiled frequently, and twisted a fistful of long, black hair that she parts in the middle. She's majoring in psychology and is on track to graduate in May 2005. Graduate school and professional golf are future considerations.

"There are many things in life that are more important than golf. I just have fun with it," she says. "Golf will always be there for me. I try not to get too far ahead of myself [in looking ahead]."

Like three older brothers and an older sister, Kim began playing golf when she was seven in Sacramento, California's summer "Little Linksters" program. Her parents encouraged their five children to stay with the game at least until they were 12. By that time, Kim developed a

fondness for golf, excelled, and decided to continue. This pleased her dad, Pete, a "golf nut" who works for the post office. He was known to play as many as 54 holes at one time with his brother "and loved it," Kim says. Her mother, Kazuko, is employed by the state Finance Tax Board.

WSU's first All-America female golfer began attracting national recognition as early as her freshman season following victories at the universities of Idaho and Oregon. In 14 events as a sophomore, she placed in the top 10 nine times, in the top 25 twelve times.

During her career, she's averaged 75.4 strokes per round. Last March she successfully defended her Duck Invitational title at the Shadow Hills Golf Course in Eugene, Oregon. She won by 14 strokes. No other WSU women's golfer has ever captured a tournament championship in back-to-back years.

In the 2003 NCAA showdown last May, she carded rounds of 76-72-77-74.

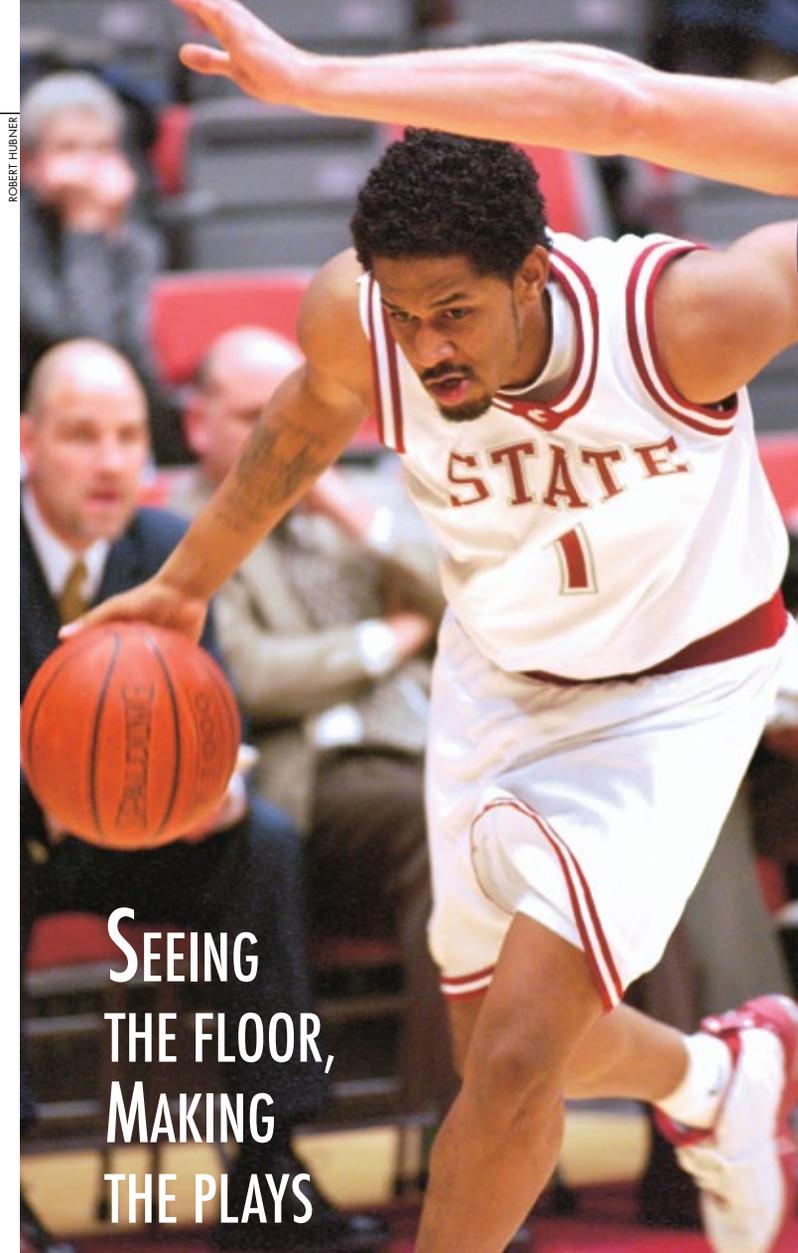
Her 299 total was 11 strokes over par, but only two behind national champ Michaela Parmlid of USC.

Given the conditions at the 6,225-yard Kampen Course in West Lafayette, Indiana, the rain, wind, and temperatures barely in the 50s, Welch was generally pleased with her play. A string of five bogeys in the final round "didn't help," she says, "but I put myself in a position to win."

Of the season ahead, she says, "I'm not a person to make goals. I just want to see the team do well, as well as last year."

If Welch continues to play to her capabilities, Williams predicts a bright future. "She's just a great player, a good kid, a leader for our team. She has put Washington State University on the map as far as women's golf goes." ■

—Pat Caraher



SEEING THE FLOOR, MAKING THE PLAYS

"I've had to adjust a little. But I still come out and play as hard as I possibly can."

—Marcus Moore

VERY LITTLE EVER GOT IN MARCUS MOORE'S WAY.

Faced with an obstacle, Washington State University's senior point guard could usually flash that Crest-friendly smile or whip around it with an ankle-buckling crossover dribble.

But last summer nothing, not the movie-star smile, not the Mach-3 quickness, could get Moore where he wanted to be—into the first round of the National Basketball Association draft.

So after taking trips to predraft camps in Chicago and Portsmouth, Virginia, and not being assured a spot in the first round—guaranteeing a contract—Moore thought it over. He talked to his family in Inglewood, California, and decided to return for his final campaign in Pullman.

"It was never set where I was going to go [in the draft]," Moore says. "I knew I could come back [to WSU] if I needed to. I talked



Marcus Moore

to my mom and dad, and it was a pretty easy decision to make.”

Not that anyone would have blamed Moore if he had decided to take his chances with the draft or head overseas to pursue his professional aspirations. With Dick Bennett being named the Cougars’ new coach last spring, and the prospect of playing his senior year in an unfamiliar system, it was almost expected and entirely understandable if Moore didn’t return.

Only, a funny thing happened. Moore did what he thought would benefit him the most in the long run. And that did not include a circuitous route to the NBA through the minor-league hinterlands of the NBDL, CBA, or any other alphabet league.

“To tell the truth, we went about things not expecting him back,” Bennett says. “We were led to believe by a number of people that he was very likely to leave. Marcus was up front with us and wanted the chance to go.”

And when Moore decided to return, he did with an open mind, despite some initial misconceptions about Bennett’s style of play.

“It’s a different approach,” Moore says. “I don’t think we play a boring style of play. We slow things down, because we want to get things right. We want to get good shots.”

Bennett, who took Wisconsin to the Final Four in 2000, employs a disciplined style of play, emphasizing defense and a patient offense that takes high percentage shots. It’s been called ugly and boring, but it works.

And most of Bennett’s new charges—including Moore—were used to a more freewheeling approach under former coach Paul Graham.

“It’s been a bit of struggle, not just with Marcus, but with others like [guard] Randy Green, as well,” Bennett says. “They’ve been playing this way for a few years now, and they have their habits, and it’s hard to break those.

“But Marcus probably has had to make the most change. I have to give him a lot of a credit. He’s had to come in here and work harder than he’s had to before.”

The gifted six-foot-six, 220-pound athlete ranks among WSU’s top 10 in career scoring, assists, and steals. He’s seen his scoring go down—from 18.2 points per game to 13.8 this season—but is averaging a team-leading 3.8 assists and 1.83 steals per game.

His ability to see the floor and make plays has never been in question, but now Moore is just as likely to slip a no-look pass to a cutting teammate as he is to launch a three-pointer.

“I’m learning to take the best shot available,” Moore says. “I’ve had to adjust a little. But I still come out and play as hard as I possibly can. I obviously look to try and be a leader. As a basketball player, I know this is good for me and us.”

Bennett realizes Moore’s return has given him a difference-maker in his first season of Pac-10 play. He also believes it couldn’t have worked out better for Moore’s professional future.

“I think it can help him try to reach his long-range goals,” Bennett says. “When he plays a more free style of play, it exposes some of his weaknesses. I think he’s more selective now, and he understands. I must tell you, I’ve had no difficulties with him. We get along well—he’s an enjoyable player to be around.” ■

—Jon Naito '03



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Building a better bee trap

BEE TRAP MANUFACTURERS like to use chemical substances called pheromones to attract bees into traps and away from people. Problem is, they don’t always work.

Providing the right amount of pheromones is imperative. Too many pheromones or too much of any one of their components repels bees, and the amount of pheromones optimal for attracting bees may vary during a day, depending on temperature and light. Prashanta Dutta, assistant professor in mechanical and materials engineering, has been working with Spokane-based Sterling International to build a better bee trap—one in which the release of very tiny amounts of pheromones can be carefully monitored and adjusted.

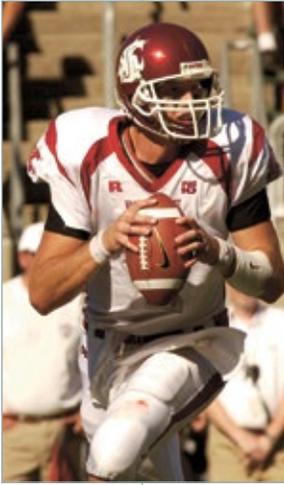
Dutta, who is part of Washington State University’s Microscale Thermofluid group, is developing a microfluidic-based bioreactor to synthesize insect pheromones. The micro-bioreactor will precisely dispense the exact amount of ingredients to best attract insects.

The group’s main focus is to develop an electrokinetic-based micropumping technology that is cheap, quiet, reliable, and environmentally friendly. Recently, they built the first-generation micropump on a polymeric chip that measures two microns by 300 microns by two centimeters, or about one-fifth the thickness of a human hair, and is driven by a three-volt battery.

Microfluidic technology takes advantage of chemical properties of liquids and the electrical properties of semiconductor materials. At the microscopic level, the electrochemical properties of liquids are very dominant. This unique characteristic is very suitable for selective control of chemical and biological molecules or components in a sample solution. Dutta has been studying these unique properties of fluids in microscale that could possibly be utilized in a variety of chemical, biological, and bio-analytical fields. ■

—Tina Hilding

DID YOU KNOW ... ?



That Cougar Student-Athletes Are Succeeding in Competition?

In the last four years, WSU has climbed from 131st in the NACDA Directors' Cup standings to 55th (out of 265 Division I programs). In addition, the Cougars' 2002-03 point total of 351.5 was a school record.

Cougar Football was crowned co-champions of the Pac-10 and defeated the University of Texas 28-20 in the 2003 Holiday Bowl. This is the third consecutive year that the Cougars have appeared in a bowl game, and they are the only Pac-10 team to finish in the Top 10 of the AP poll for three straight years (2001-10th, 2002-10th, 2003-9th). WSU is also the first Pac-10 team *ever* to post three consecutive 10-win seasons since the Pac-8 / Pac-10 Conference was formed in 1968.

Eighteen student-athletes were named All-Americans during the 2002-03 school year.

That WSU's Student-Athletes Are Setting High Marks in the Classroom?

WSU Athletics' graduation rate is currently 67%, five percent higher than the overall University rate.

Forty-nine percent of all student-athletes earned over a 3.0 GPA in the spring of 2003, the highest percentage ever for Cougar Athletics. Sixty-four percent of all female student-athletes maintain a 3.0 or higher cumulative grade point, and six teams maintain a 3.0 or higher cumulative GPA.

Track and field student-athletes Eric Dudley and Ellannee Richardson were awarded prestigious NCAA Postgraduate Scholarships last spring. WSU has not had a student-athlete receive this honor since Jason Hanson (football, 1988-91).

Eric Dudley was named 2003 Academic All-American of the Year for Track.



That WSU's Student-Athletes Are Actively Involved in the Community?

168 Cougar student-athletes accounted for over 950 hours (an average of 63.8 hours per week over 14 weeks) of community service during the Fall 2003 semester through the Team CARE program.

WSU's student-athletes, both as teams and as members of Team CARE, support groups like Alternatives to Violence of the Palouse, the Whitman County Transplant Fund, and the Breast Cancer Support Group of the Palouse, as well as many others. Many also serve as "Reading Buddies" at local elementary schools and help mentor community children.

That Your Support Will Enable Cougar Athletics to Achieve Even More Success?

As one of the most visible programs on campus, Cougar Athletics provides a window through which the entire nation views Washington State University, and our student-athletes are some of our best ambassadors. As a result, the Athletics Department is fully integrated with the rest of the University and Director of Athletics Jim Sterk sits as a member of President V. Lane Rawlins's Cabinet, ensuring that our programs continue to be "in step" with the University's overall mission.

The competitive success of WSU's teams leads to increased national exposure for the entire University community. It has been proven that when the Cougars win, not only do donations to the athletics department increase, but overall support of the University climbs as well. After WSU's appearance in the 1998 Rose Bowl, the University saw a 21% increase in first-time freshman admissions, over 10,000 new donors began supporting WSU, and there was a \$4.684 million increase in donations to WSU.

To those individuals and corporations who are members of the Athletic Foundation, THANK YOU. Your support has helped Cougar Athletics achieve the success we see today, and your continued involvement will only serve to take us to new levels of excellence.

If you are not already supporting Cougar Athletics, please consider doing so by becoming a member of the Athletic Foundation today. Your support not only assists in the education of 485 deserving young men and women, it helps to elevate the "World Class. Face-to-Face." mission of Washington State University.



Lonely, Beautiful, Willapa Bay's





AND Threatened

advocates fend off invasions



CHARLIE STENVALL skims an airboat across Willapa Bay on a placid summer morning, rousing 15 Canada geese whose complaints sound like an unsupervised junior high band practice.

Ahead, flocks of western sandpipers flash white and gray, as the shorebirds turn away from the approaching boat in choreographed waves of wings. Nearby, a Caspian tern dives into shallows after small fish, while in the distance two peregrine falcons flush wading birds off open mudflats. A bald eagle perches in a snag on the shore of the bay's forested Long Island, watching the boat pass below.

With a turn of the giant fan, Stenvall slides the boat down an alley of inch-deep water and enters an expanse of grass growing thicker than field corn.

Stenvall, manager of the Willapa National Wildlife Refuge, steers into a pocket of water enclosed in a wall of green. He cuts the airboat's engine, and the rumble of the fan blades whirs to a stop. Then, near silence. The honking of geese and screech of raptors fade into the light breeze, replaced by the faint *scritch* of swaying blades of grass.

To the newcomer, the lush meadows, broken only by vein-like channels that gather the outgoing tide, might seem like some of nature's best work. But to Stenvall, the silent savanna sends an earsplitting message that precious Willapa Bay—tucked into Washington's rainy southwestern pocket—is in peril.

The culprit isn't the belching factories, agricultural runoff, and urban sprawl that endanger most of the na-

tion's great bays. Instead, the scariest threat to Willapa is this spreading carpet of grass, *Spartina alterniflora*.

"We have sort of an idyllic estuary"

WILLAPA BAY, also known as Shoalwater, is the largest estuary between San Francisco and Puget Sound. It boasts one of the least-spoiled environments and the healthiest salmon runs south of Canada, produces one in every four oysters farmed in the United States, and is a favorite pit stop for tens of thousands of migratory birds.

And it's in trouble.

The infestation of *Spartina*, imported by accident from the East Coast, collects enough silt to raise the bay floor by up to a foot, turning much of Willapa's enviably productive tidal zone into a giant, unkempt lawn. At the same time, other introduced plants and animals and two opportunistic species of native shrimp also threaten to spoil the pristine bay.

"If you lose Willapa Bay, it's of both state and national significance," says Kim Patten ('83 Ph.D. Horticulture), a Washington State University researcher and associate professor of horticulture who is a leader in the battle for the bay.

"I think it's a national treasure, because every estuary in North America would try to emulate it. There's no other estuary out there like it," Patten says. "We have sort of an idyllic estuary. It's not perfect, but for all intents and purposes, it's a very functioning estuary. You don't get better than that."

Environmentally, aquatic landscapes from Chesapeake Bay to San Francisco

Bay are infamous for what they've lost. Willapa Bay's protectors want to make it renowned for what it kept. They're starting to get noticed.

Last June, the National Audubon Society ranked Willapa Bay second—just behind part of Florida's Everglades—on its *Cooling the Hot Spots* report detailing wildlife areas threatened by invasive species. That followed a similar listing in the National Wildlife Refuge Association's 2002 report, *Silent Invasion*. And the Nature Conservancy has made protecting the bay and its rich watershed one of its highest Washington priorities.

Senator Patty Murray ('72 Recreation) and her colleagues helped secure another \$1 million in federal funding for this season's work, the second in a six-year, multi-partner plan to eradicate *Spartina*. The state is pitching in hundreds of thousands more.

"It's so common for us to not realize what we've got until we lost it," says U.S. Representative Brian Baird, D-Vancouver. "This wonderful bay faces some real threats. *Spartina*, for example,

is a nightmare. It can turn the Willapa Bay into the Willapa Prairie."

In a lonely wooded place

WILLAPA BAY DIDN'T always garner so much attention, and many of its residents—human and animal both—embraced the quiet life.

For generations, Native Americans gathered shellfish, caught salmon, and built sheltered winter villages on the shores of Willapa, pronounced "WIL-uh-puh." The name comes from the Indian *Kwalhioqua*, or "in a lonely wooded place."

That description still fit the bay in November 1805, when Corps of Discovery explorer Captain William Clark, scouting the "low pondey country" north of the Columbia, missed it entirely.

Fifty years later, just after the start of California's gold rush, early white settlers found treasure of their own in Willapa: oysters. Towns such as Oysterville and the now-defunct Diamond City—named for a bleached mountain of shells piled at the northern tip of

Long Island that glistened when the sun pierced the cloud cover—sprang up at mid-century to ship oysters by the hundreds of millions to San Francisco. The salmon canneries came too, spawning more villages, and the bay buzzed with commerce.

But in the 19th century, Willapa Bay again became a lonelier place. The native Olympia oysters and salmon runs dwindled. Many people left, and some of their towns have long since rotted into the woods. Oystermen spared their livelihoods by importing large Pacific oysters, which to this day they farm like a crop, as their neighbors grow cranberries and timber on Willapa's sparsely developed shores.

Oyster growers of the late 1800s may have unwittingly imported an unseen menace that would haunt their great-grandchildren: *Spartina*. For generations, the new plants were mere tufts on the bay's 47,000 acres of tidal flats. Over time, however, the grass quietly adapted to an environment with no natural predators. By last summer, *Spartina* had infested 12,000 acres and was expanding 20 percent a year. It already had pushed shorebirds off some of their best foraging grounds and was poised to elbow out oyster growers.

"All I'm doing is killing stuff"

FOR A BUNCH of bird-loving, oysters-on-the-half-shell types, the language used for ridding Willapa Bay of *Spartina* is downright militaristic.

"All I'm doing is killing stuff," said Jonathan Bates, an equipment operator for the wildlife refuge, one day last July. At the time, he was rumbling across *Spartina* meadows aboard a tank-like tractor outfitted with sprayer nozzles to mist the grass with Rodeo herbicide.

Closer to the tide line, where smaller *Spartina* bunches called "clones" hadn't yet formed meadows, airboat crews drew

An airboat crew moves along the bay-side edges of the tall *Spartina* meadows that are taking over parts of the south end of Willapa Bay. U.S. Fish and Wildlife Service workers from the Willapa National Wildlife Refuge spray dye-colored herbicide on the *Spartina*.





Willapa Bay, the largest estuary between San Francisco and Puget Sound, boasts one of the least-spoiled environments and the healthiest salmon runs south of Canada, produces one in every four oysters farmed in the United States, and is a favorite pit stop for tens of thousands of migratory birds. And it's in trouble.

herbicide pistols and blasted the grass with blue-dyed herbicide.

"The plan," says airboat crew leader Darrin Zavodsky, "was to divide and conquer."

The tractors all are armed with GPS units to map their progress, and at least one has infrared sensors that signal the sprayer nozzles to fire only when it detects plant matter.

Last summer, the wildlife refuge, the Washington State Department of Agriculture, and the bay's oyster growers treated *Spartina* on 5,000 acres in the bay. It was a landmark year: they killed nearly 10 times more grass than any previous year and, for the first time, gained ground against *Spartina*. This summer, partners including WSU and the University of Washington have mapped out a strategy to treat another 3,000 acres while mopping up new shoots on mudflats they treated in 2003.

Until 2003, more than a decade of spraying, mowing, and tilling *Spartina* had proven futile, while a UW study of

plant-eating insects remains unproven. Stenvall, the wildlife refuge chief, credits WSU researcher Patten, whom he jokes is Willapa's own "mad scientist," with finding a way to make common herbicides kill the pesky grass in harsh conditions—without harming the bay's fragile ecosystem.

This year, Patten's work should bring a new weapon to their arsenal: federal and state agencies' expected approval of imazapyr for use in the bay after Patten exhaustively tested the herbicide. Imazapyr, compared to Rodeo, requires less chemical and shorter drying times to kill *Spartina*.

Kim Patten of the WSU research station at Long Beach shows a ghost shrimp that he drew from the bay bottom near Nahcotta.

Stepping-stone for birds

PATTEN, AN EXPERT in small-fruit horticulture, naturally spends many workdays in the greenhouses and bogs at the Cranberry Research Station on the Long Beach Peninsula, the 25-mile finger of land that separates Willapa Bay from the Pacific Ocean. At other times, he's testing ways to kill *Spartina* or bur-





“Oyster growers have always been environmentalists to a point. We have to be, because we need clean water.” —John Herrold

rowing shrimp that plague the oyster industry.

On a spring day last year, however, Patten was up to his wader-encased shins in Willapa Bay mud off Porter Point—counting bird poop. The whitish plops, along with stick-like footprints, are helping Patten document where migrating birds feed during stopovers at Willapa Bay. He also employs high-tech surveillance cameras mounted on platforms in the bay and lower-tech surveys with binocular-armed volunteers to collect his data.

Patten’s research isn’t complete, but his aim is to scientifically document what he and various bird experts already know from observation: shorebirds, whether dunlins and dowitchers or sandpipers and plovers, HATE *Spartina*.

“You still have skeptics out there that do not believe *Spartina* affects shorebirds,” Patten says.

President Franklin D. Roosevelt established Willapa National Wildlife Refuge in 1937 to protect habitat for migrating birds. But as *Spartina* has thickened, Willapa’s legions of shorebirds have thinned.

Shorebirds flock to unspoiled tidal flats to peck for worms, midges, nematodes, and other critters that make up the “groceries” that fuel the birds’ long migrations along the West Coast. Some also will forage among the stubble and wrack of dead *Spartina*, but they won’t venture into living meadows where predators might lurk.

“Willapa Bay is one of the few stepping-

stones of habitat left for migrating birds from South and Central America to Canada and Alaska,” says Nina Carter, policy director for Audubon Washington. She helped lobby her national organization to train a spotlight on Willapa’s disappearing habitat for short-billed dowitchers and tens of thousands of other shorebirds that migrate through each year.

Environmentalists to a point

THE SUN RISES through a September mist that covers Willapa Bay like a down comforter.

John Herrold eases the family boat, the *Tokeland*, over submerged oyster beds marked only by spindly branches poking into the mud 14 feet beneath the bay’s surface. He flips a lever to winch an oyster “bag”—a heavy-gauge metal basket hanging from steel cable—off the port side, until the bag’s open mouth dredges against the soft bay floor. He lowers a twin bag off the starboard side.

Three and a half minutes later, Herrold pushes the lever again, and the port-side bag rises with a groan of the winch, slightly tilting the 95-year-old boat toward the bag as it emerges from the water, chock-full of oysters.

His brother, Roy, grasps the bag in gloved hands and, in one quick motion, swings the load toward the boat’s cabin and unlatches the basket. Six hundred pounds of oysters crash to the deck. Roy plucks an orange starfish out of the pile, as his brother lowers the empty bag back into the bay.

“It’s not scientific at all,” John says, reaching for the starboard lever.

An hour and 360 bushels of oysters later, the Herrolds steer the *Tokeland* toward the family home on Cougar Bend, where the Naselle River pours into Willapa Bay. The brothers are third-generation oystermen, not uncommon at Willapa, and one branch of their family tree stretches back to the Chinook tribe that foraged for shellfish before Europeans arrived.

“It’s always the same around here,” muses Roy, “but it’s always different.”

“The big change is *Spartina*,” John says. “I’ve seen it [go] from nothing to what it is now.”

“For the most part we’ve kept our beds clear,” he adds, pointing out some of their tidelands where the grasses have taken over the higher elevations but have been painstakingly cleared closer to the water. “We do everything it takes.”

As with *Spartina*, the oyster industry—worth about \$32 million a year to the region—suffers the brunt of any environmental imbalance on the bay. Leaky septic fields and unknown bacteria sources harm water quality, while some of the bay’s 40 invasive species—including voracious European green crabs and deadly oyster drills—threaten their wallets.

“Oyster growers have always been environmentalists to a point. We have to be, because we need clean water,” John says.

Growers also are battling the “political

nightmare” of burrowing shrimp. Unlike *Spartina*, the shrimp are natives. But they have been multiplying out of control since the 1950s—perhaps in response to declining predators such as salmon and sturgeon and the damming of the nearby Columbia River, which historically flushed the bay with fresh water, killing salt-loving shrimp.

Last year, oyster growers agreed to phase out their controversial, 40-year-old practice of controlling shrimp with carbaryl, a pesticide found in flea powder. The decision settled a costly legal battle with environmental groups, but it also left growers without an effective, affordable way to keep the shrimp in check. Patten and other scientists are helping growers try to find the solution, as the carbaryl clock ticks out by 2012.

Meanwhile, as with *Spartina*, overpopulated shrimp threaten more than just oysters and clams. They destroy tidal wildlife habitats for many species.

“*Spartina* has been devastating to the birds,” says Dick Wilson, a Bay Center oyster grower and bird-watcher, “but so have the burrowing shrimp.”

Nahcotta oystermen Dick and Brian Sheldon are working on both problems, but it costs plenty. For example, they figure in the past few years they’ve spent \$6,000 an acre to clear the *Spartina* from just one of their 90-acre plots on the bay. The land is only worth \$200 an acre, and it’s in a spot that’s frankly better for feeding birds than fattening oysters.

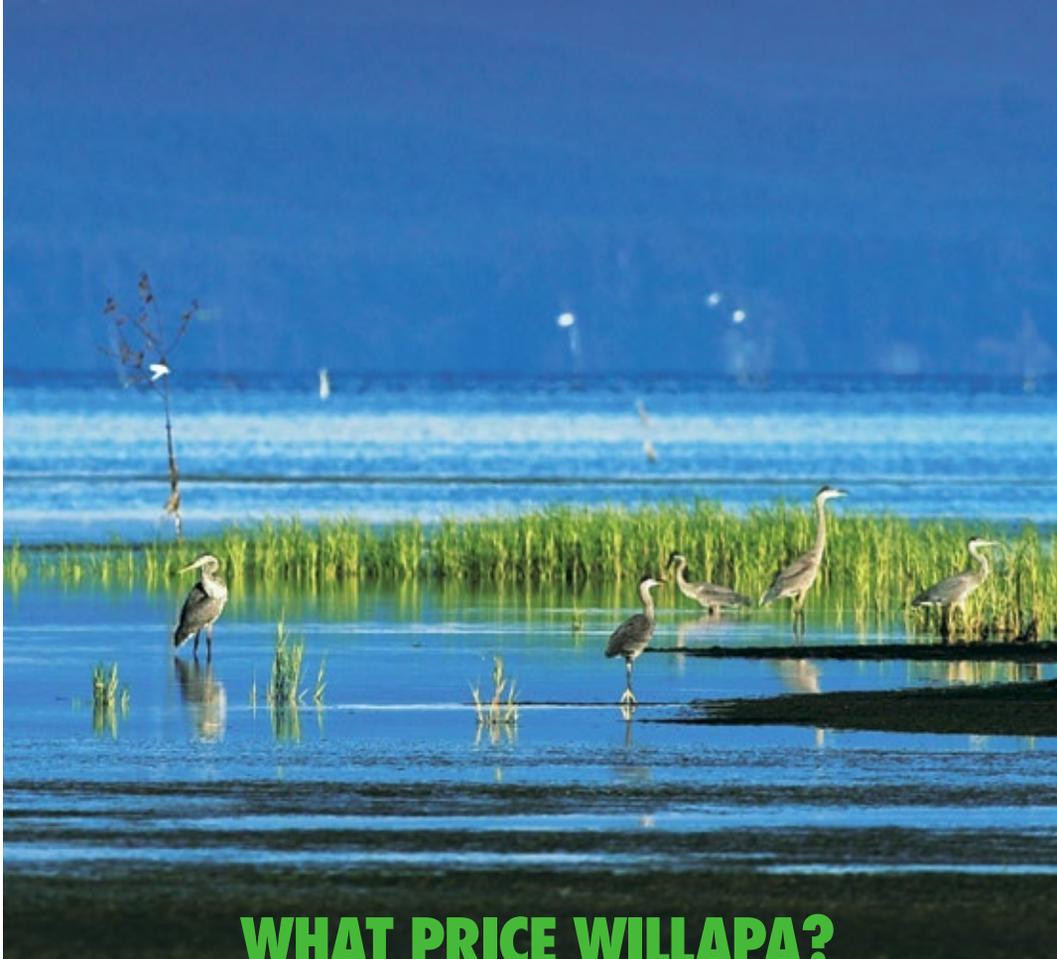
“Most of us have a family history of up to 100 years in the bay,” Dick Sheldon says. “I just couldn’t see the bay going down the toilet.” ■

Eric Apalategui wrote about Pacific Foods founder and CEO Chuck Eggert in the fall 2003 Washington State Magazine.

Bill Wagner is a photographer for the Lovview Daily News.

*Biologist Sally Hacker at WSU Vancouver also combats *Spartina*, though a different species. *Spartina anglica* threatens Puget Sound. Washington State Magazine reported on Hacker’s work in Summer 2002.*

For more photos of Willapa Bay, visit our Web site, washington-state-magazine.wsu.edu.



WHAT PRICE WILLAPA?

Willapa Bay has one of the West Coast’s richest ecosystems—full of birds and salmon, clams and crabs. Many environmentalists might argue that you simply can’t put a price tag on such a precious gem.

But Dave Williams begs to differ. He is the great-great-grandson of the man who platted the Columbia River fishing town of Ilwaco and great-grandson of the man who founded Oysterville and helped start the bay’s shellfish industry 150 years ago. Williams also is president and CEO of environmentally minded Shorebank Pacific, which he believes might just be America’s only commercial bank with a biologist on staff.

In 2001, Williams assigned staff scientist Kathleen Sayce to put a dollar sign in front of Willapa Bay—not to sell it off, but to better understand what’s at stake.

Sayce’s conclusion: Willapa Bay’s pristine environment is worth between \$700 million and \$1.7 billion, equivalent in value of up to \$136 million every year. By comparison, the \$1 million the federal government has paid in each of the past two years to rid the bay of its biggest threat, *Spartina* grass, seems like a bargain.

Sayce’s figures include broad estimates of the value of the fishing industry, including salmon, crabs, and shellfish; recreational activities ranging from fishing to clamming to bird-watching; and a quality of life that attracts many of its human inhabitants.

Her estimates leave out the bay’s ability to enhance the region’s overall environment, which she says could triple its value. Nor does the accounting factor in the rich upland areas containing abundant timber, fertile farmland, and coastal communities.

Bay backers such as Williams have been trying “like mad” to use Willapa Bay’s pristine reputation to get a higher price for its products. Similarly, Linda Rotmark, executive director of the Pacific County Economic Development Council, likes to market the area as “Nature’s Best Effort.”

With only a few budding exceptions, Williams says, “So far that premium is not established. It needs to be.”

KEITH LINCOLN



Keith Lincoln '61

Retiring alumni director had “the best job at WSU.”

IF KEITH LINCOLN'S sky-blue 1967 El Camino pickup wasn't sitting in front of his Pullman home, it was likely parked behind the Lewis Alumni Centre. On some weekends, the longtime executive director of the Washington State University Alumni Association would make the five-minute drive to campus, open the center, and often provide visitors a personalized tour.

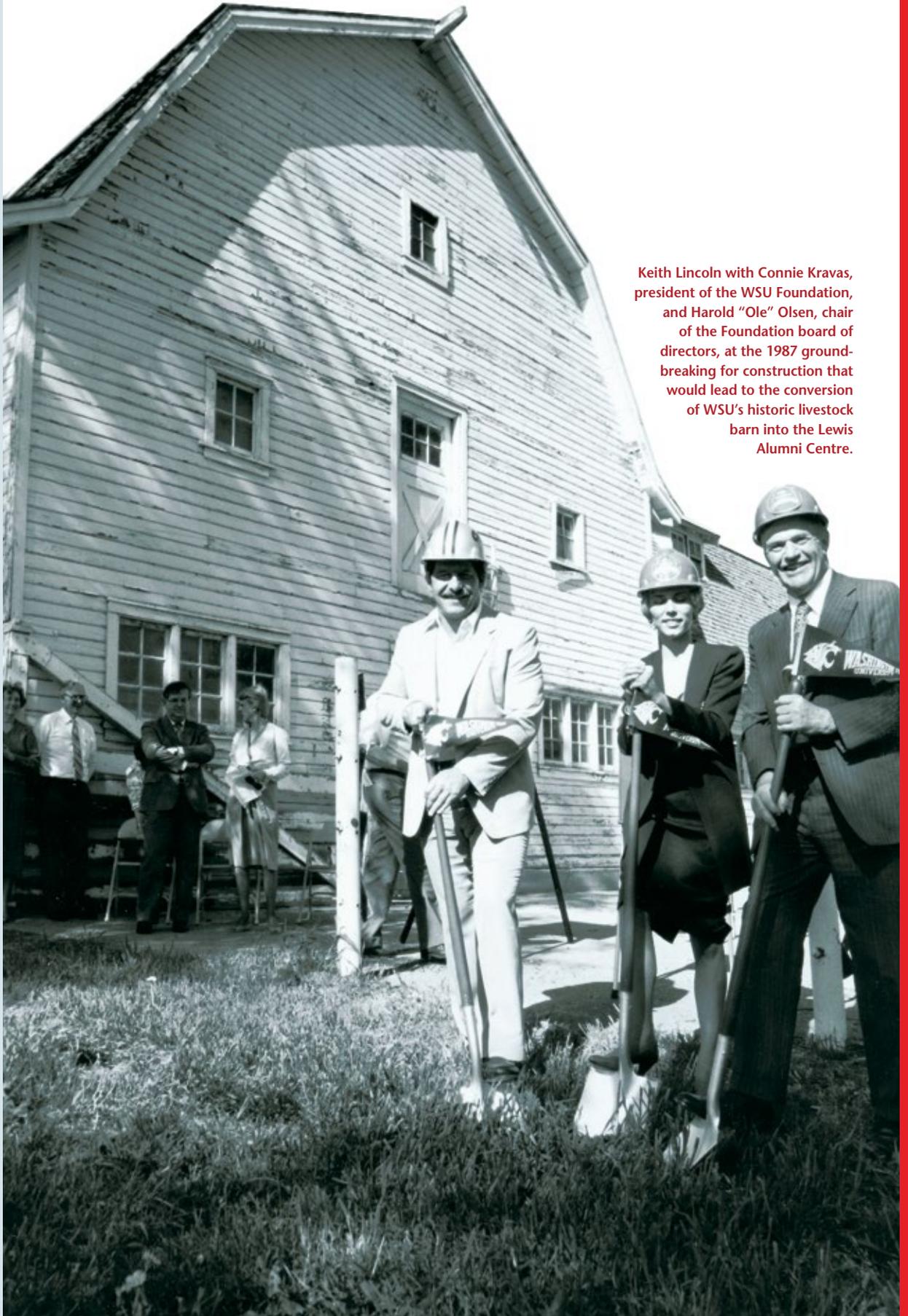
That came with the territory for one who always claimed to have “the best job at WSU.”

In early September, Lincoln stepped aside after 25 years, making room for his successor, Tim Pavish, and moved upstairs to a small office. Lincoln plans to stay on with the University at least until May, possibly as a consultant in another area.

Sitting in his office, he's as comfortable as the pair of loafers he wears. He favors polo shirts and khaki pants. A product of the '50s, he grew up in southern California, but he and his wife, Bonnie Jo, have found no better place to live than Pullman.

BUILDER

by Pat Caraher



Keith Lincoln with Connie Kravas, president of the WSU Foundation, and Harold "Ole" Olsen, chair of the Foundation board of directors, at the 1987 groundbreaking for construction that would lead to the conversion of WSU's historic livestock barn into the Lewis Alumni Centre.

“Keith pumped new life into the Alumni Association. In his quiet way, he pushed all of us.”

—Keith Jackson '54

His reputation preceded him when he arrived at WSU as a freshman in the fall of 1957, having attracted attention as a quarterback at Monrovia High School near Pasadena. Cougar football coach Jim Sutherland offered him a scholarship. At WSU he became a triple-threat halfback and earned the nickname “The Palouse Moose” from a Spokane sports-

writer. His accomplishments on the gridiron led to his being one of the early inductees into the WSU Athletic Hall of Fame in 1979.

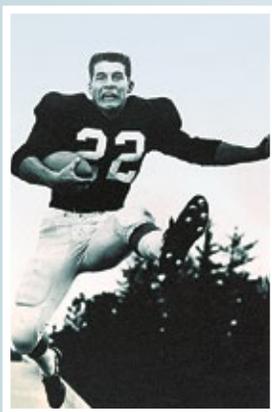
Last fall the Athletics Room in the alumni center was named in his honor at the recommendation of the alumni board.

He rarely talks about football, though. No football

mementoes occupied his office, save for a modernistic painting of a running back—not Lincoln—breaking a tackle.

He purchased the piece from artist Ernie Barnes, a former San Diego Chargers teammate.

“It was a great opportunity,” he says of his nine years in pro football. “I have good memories.”



Lincoln as a Cougar running back.



Lincoln and Cougar mascot Butch are longtime institutions at WSU.



Lincoln with WSU president Samuel H. Smith and Stan Schmid, vice president of university relations, at 1989 dedication.

LEWIS ALUMNI CENTRE

Lincoln's pride and joy is the \$4.5 million Lewis Alumni Centre. It attracts nearly 14,000 people and 350 to 400 meetings each year. Lincoln visited WSU's historic livestock barn on the east side of campus for the first time in 1982. It was scheduled to be demolished. Stan Schmid, then vice president for university relations, asked him if it could be saved as an alumni center. Lincoln replied, “Yes, if it is structurally sound. But if we do it, it will be done with class, or I won't touch it.”

WSU wood engineers found the old building to be structurally safe. The barn was spared. The Board of Regents gave approval for the renovation and enlargement project. By 1989 the facility had been transformed into today's campus showpiece. Distinguished WSU alumnus and ABC sportscaster Keith Jackson '54 once described it as “the living room of the University.”

Jackson and Lincoln's college roommate, Dan Nelson, headed fund-raising for the center. The three would sit at length and talk about “a place where tired old alums could go sit in the shade” when they came back to campus.

“Keith pumped new life into the Alumni Association. In his quiet way, he pushed all of us,” Jackson says.

Lincoln has been directly involved in all phases of the alumni center—planning, design, fund-raising, construction, furnishings, and operational procedures.

“Keith was truly the barn builder,” says colleague Bob Smawley. “The center is one of the legacies he leaves the University.”

FRIEND-RAISER FIRST

When E.G. “Pat” Patterson retired as WSU alumni director in 1978 after 26 years, he looked at his assistant as an “ideal successor,” but with one reservation. Keith seemed uncomfortable, even bashful, about asking people for money, says Patterson. He thought Lincoln's high profile as a former athlete would “open doors and bring in gobs of money” for WSU.

“Keith did turn out to be a good fundraiser,” Patterson said recently. “But that effort began with his involvement in the alumni center. He always maintained he was a friend-raiser first.”

Lincoln found innovative ways to generate money. He sold 8,500 ceramic floor tiles, each engraved with the donor's name. Now donors can go to a computer in the center and with a few keystrokes access a grid showing exactly where their tiles are located. He also arranged for the purchase of sculptures and beautiful paintings. A large, colorful, mixed-media mosaic entitled, “Magic in the Hills,” by alumnus and sculptor Harold Balazs of Spokane, hangs above the stairway to the Great Hall. Lincoln also acquired a beautiful chandelier, crystal art pieces, and the four life-size bronze Cougar sculptures that line the entryway.

COUGARS REMEMBER LINCOLN

ALUMNI GOALS PARALLEL UNIVERSITY'S

No University representative is more connected with alumni than Lincoln. The Alumni Association's goals, he says, parallel those of the University: cultivate friends, create good will, recruit students, and develop legislative liaisons.

While making friends for WSU is what he does best, in private Lincoln says the Alumni Association deserves credit for "setting the table" for many gifts the University acquires. For example, the Lewis Alumni Centre was constructed entirely with private donations and in-kind services. Lincoln will point out that 29.9 percent of Cougar alumni, one of the highest rates among public universities nationwide, contributed to Campaign WSU from 1992 to 1997. The University's first big-time fund-raising effort exceeded \$275 million.

"We treat all people the same, warm and friendly, whether they are a million dollar contributor to the University, or if they don't give a thing," he says of the philosophy he and his staff shared. He's also grateful for the untold hours

alumni devote to their alma mater "with no strings attached."

"You aren't going to be any stronger than your volunteers. You can implement all kinds of programs, but the real key is alumni support."

ALUMNI VISIBILITY

Lincoln's commitment to WSU has been unwavering, alumni say.

"With vision and tenacity, Keith has heightened the association's visibility on campus through the rebirth of a barn . . . and throughout the country and the world by nurturing regional leadership," says Shelley Carr, Olympia, alumni president in 1986-87. "Under his leadership, the fierce loyalty and dedication of WSU Cougars everywhere was given voice and opportunity."

During his tenure, the Alumni Association has expanded its outreach in 27 alumni districts from Hawaii to Washington, D.C., including 17 in Washington state. Alumni clubs have sprung up in Hong Kong and in Japan. Alumni alliances have been forged with Native Americans, Chicanos/Latinos, Asian Americans and Pacific Islanders, and

"During my years on the alumni board, I realized how much Keith loved his job and how happy he was to be at WSU. I remember how passionately he fought for support for programs like Crimson Company and Hilltopics, and what a driving force he was in the campaign to make the Lewis Alumni Centre a reality."

—Stan Coe '55, Seattle, Alumni President, 1984-85

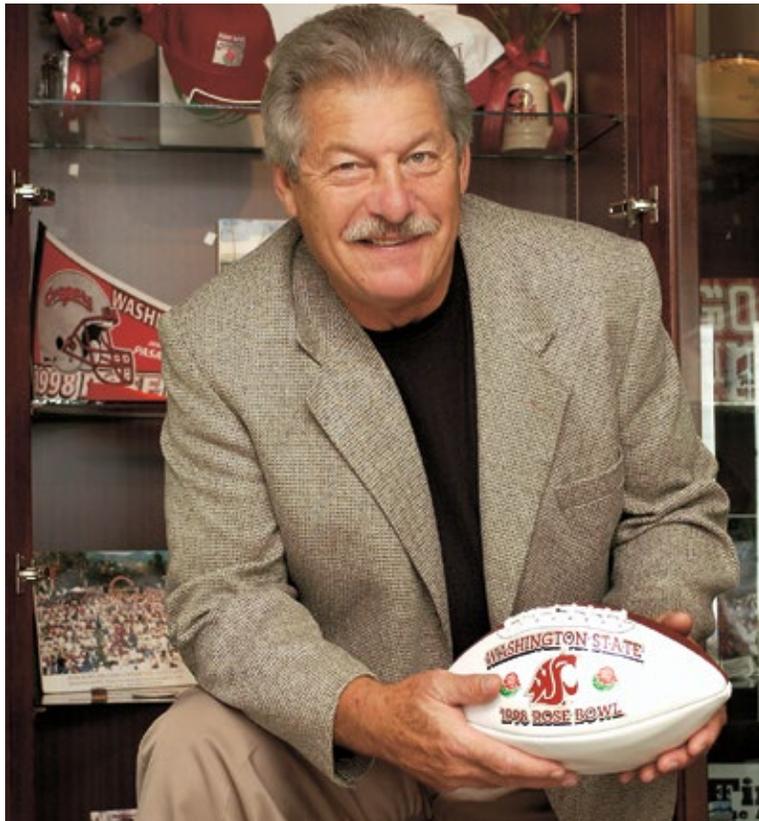
"He never left anything undone when it came to the alumni center. He even did some hammering and nailing every now and then. The effort he put into it, you just can't replace."

—E.G. "Pat" Patterson '46, Pullman, Alumni Director 1952-78

"Keith is never too busy to call me each day about what's going on at WSU, and to ask how my family is. Since my stroke, he is always ready to assist me when I visit WSU. It's difficult to put into words what a wonderful person and friend Keith is. He's just one hell of a guy."

—Phil Lighty '40, Burlingame, California

The Athletics Room in the Lewis Alumni Centre has been dedicated in Lincoln's name.



ROBERT HUBNER

African Americans. WSU colleges and branch campuses now have constituents on the alumni board of directors. Four alumni representatives sit on WSU's Athletic Council. The alumni president is an ex officio member of the Board of Regents.

Lincoln takes particular pride in the association's ability to complete the alumni center and present it to the University. "We made a promise to the original investors that we would do it first-class. I think we've done that . . . set a benchmark. The center does a great job of positioning the University in the state, and goes with WSU's tag line 'World Class. Face to Face.'"

"We didn't leave any money on the table during the 14-month construction period," he says. When the center was debt free, an endowment fund was established. Key to the fund was the adoption by the association of an affinity-

or credit-card program. A portion of all purchases made by cardholders is returned to the association. The fund helps maintain the center, and supports alumni programs and services.

"No one could have been more conscientious in directing the affairs of the organization," says former alumni president Joe Caraher (1947-48, 1977-78), Klamath Falls, Oregon.

Three generations of Cougars still talk about the 1998 pregame Rose Bowl football rally staged by the Alumni Association. To pull it off, Lincoln admits he took "a little gamble." Familiar with the Cougar culture and the fact that fans had waited 67 years for WSU to play in "the granddaddy of all bowl games," he was banking on everyone being there. The Cougar faithful didn't disappoint. More than 20,000 flooded one fairway of the Brookside Country Club adjacent to the stadium.

"People had a great time," he says with a smile. "It's something they will remember."

ALUMNI VOLUNTEERS MAKE A DIFFERENCE

In 1977 Lincoln introduced the Crimson Company student show choir. Two dozen singers and dancers with musical accompanists performed on campus and spread the WSU word around the state during its annual spring break tour. In 2000 the popular group was disbanded, a victim of economics.

He oversaw the creation of Alumni Leadership Scholarships and the Alumni Achievement Award. Approximately 500 top high school students from Washington have received scholarships, and nearly 400 alumni, who have brought distinction to WSU and/or their community or profession, have been recognized. "If you have awards, they should be given on a regular basis so long as you don't dilute them," he says.

Lincoln is grateful for the support of WSU presidents Glenn Terrell, Samuel H. Smith, and V. Lane Rawlins. He cherishes his interactions over the years with alumni presidents and directors, as well.

"Working for the Alumni Association, you don't often get a lot of recognition.

You are in the trenches. It's a blue-collar job. But to see the difference these volunteers are making for WSU is rewarding," he says. "We've been fortunate to have great leadership."

The longtime executive remembers only one occasion when he didn't look forward to going to work—following an evening of student unrest on the Pullman campus in May 1998. Concerned alumni and parents kept his office phone busy. "What's happening over there?" they wanted him to explain.

"I can apologize and did," he says. "More important, people just want you to listen to them."

Lincoln listens.

"If you want Cougar pride, then you have to hear their complaints, too. I try to give them their day in the sunshine."

The Student Alumni Connection, initiated by Lincoln, claims more than 300 members. They've become directors and deputies of the Alumni Association in their communities, infusing the organization with new ideas and enthusiasm.

"Some people say that status quo is okay," Lincoln says. "The truth is there's much more we can do—from membership to communications and outreach—given resources.

"If you look at what we are trying to do, developing a strategic plan, it becomes complicated. We need growth. It's not like some people used to view the Alumni Association. I can see a huge change."

He's confident the University will decide to take a bigger stake in the association and the major role it plays. When that day comes, he says, "the Alumni Association will be ready."

Lincoln was not a member of the search committee that selected Pavish, but spent several hours visiting with his successor shortly after his arrival.

"Tim's a quality guy . . . who has been successful. He's coming back to his alma mater for the right reasons. He wants to be here. He looks at Pullman as the place to live, work, and raise his family. He has great love for the University.

"I'm predicting it won't take Tim long to realize he has the best job at the University." ■





Mount St. Helens

Utter devastation created the perfect laboratory

by Tim Steury • photography by Robert Hubner

N“NO BIOLOGICAL LEGACY.”

The phrase John Bishop uses to describe the effect of Mount St. Helens’s eruption on the main blast zone, the pumice plain, holds an understated charm. By now,



everyone has heard the story of Mount St. Helens—how it blew on a Sunday morning in May 1980, after rumbling for weeks, an earthquake triggering an enormous landslide, hot gas and rock debris blasting across the landscape at 1,100 kilometers an hour, devastating 60 square kilometers and killing 60 people. But it is impossible to accept the immensity of the mountain and the eruption’s legacy, unless you are able to stand beneath the enormous crater on the pumice plain—and hear Bishop, an ecologist at Washington State University at Vancouver, talk about lupines.

No biological legacy. Trees, birds, elk, bacteria, spring flowers, humans—

all simply vaporized. A whole region was completely sterilized.

But this devastation left a rare and perfect laboratory, a clean slate on which to observe the fundamental process of “primary succession,” the reestablishment of life where there was none.

Here on the pumice plain, on a perfect August morning 23 years after the eruption, plumes of dust and ash blow off the volcano’s rim, now 1,200 feet lower than it was before the eruption. The students working for Bishop have scattered across the plain, checking experiment sites. Grasshoppers clatter around us, and a raven whoosh—whooshes overhead, toward Spirit Lake



The massive landslide that triggered the 1980 eruption swept into Spirit Lake, raising its elevation by 60 meters. Trees mowed off by the following lateral blast still cover the surface of the lake.

What is it that controls

to the south. Elk scat is everywhere. The occasional rumble of rockfalls in the crater drifts across the plain. Life has returned to the pumice plain, but the echoes of cataclysmic drama are very much with us.

Imagine how startling it must have been, when in the midst of this devastation, scientists discovered a lone lupine plant barely a year after the eruption. How could it possibly have gotten there? Lupines are not mobile, says Bishop. Birds, which serve as distributors of many plants, don't seem to care for lupine seeds. And lupine seeds are hard and heavy, lacking the adaptations of wind-borne seeds. Normally, lupines spread slowly. The seed heads shatter, the seeds fall to the ground and sprout, and the lupines march incrementally, albeit inexorably, across the landscape. Bishop has observed voles gathering seeds. But no vole journeyed across the barren pumice plain to plant a lupine.

So how else could that original seed have arrived, except by wind? *Lupinus lepidus* var. *lobbii* is considerably smaller than most lupines. It is adapted to hot, dry, alpine conditions and grows mainly on the slopes of volcanoes. Its seeds are small, and the wind blows fierce in these mountains. So the seed could have—no, must have—arrived by wind. But the original plant's conception is still no less mysterious, for a very basic reason.

Even though lupines, with the help of rhizobial bacteria that colonize their roots, can pull nitrogen from the air and transform it to the form of nitrogen all plants need to grow, they also need phosphorus. But the plain was sterile, with no nutrients available for plant growth.

Bishop can only speculate. Plants were not the first organisms to repopulate the pumice plain. The first would have been insects. Blown in by the same strong winds that must have carried the first lupine seed, they fell into a barren world with only each other to eat. To imagine the steady deposition of insects is to understand, to some extent, the inexorable force of life. And so eventually,

primary succession on Mount St. Helens?

presumably, enough insects arrived, and died, and were recycled through other insects, to build up enough phosphorus to nurture that first lupine.

Once that first lupine got established, says Bishop, it became an ecosystem engineer. Legumes produce more soil nitrogen than they consume, making it available for other nitrogen-dependent plants. As the lupines grew and died, they provided organic matter to start rebuilding the soil. They also attracted insects, which would add, as they died, other nutrients.

In the first 10 years after the eruption, lupine patches were the place to be. Other plants had ventured onto the pumice plain, but they stuck right next to the lupines. Meanwhile, that first lupine had become millions. But its spread was not unchecked. Many

herbivorous insects love lupines, especially when they're the only meal on the mountain. Most are moths and their caterpillars: leaf-miners, caudex-borers, cut-worms, each of which attacks a different part of the plant.

And this brings up a basic question of ecology. How are populations regulated? Top-down or bottom-up? The top-down hypothesis suggests that predators control populations. In spite of ravenous herbivores, predators eat enough of them to maintain a nice balance that makes this green world possible.

The bottom-up hypothesis suggests that it is resources that control population. And ultimately, of course, we know that it's the resources that really control things. But, says Bishop, impose predation on a system, and things get complicated very quickly.

One of the many herbivores drawn to lupines, the leaf-miner wraps the plant in a web, then "mines" the interior.



It's this complication that drives Bishop's research. What is it that controls primary succession on Mount St. Helens? Early in his work on the mountain, Bishop noticed that things were not quite as one would expect in the lupine patches.

John Bishop (left) and assistant Matt Ogburn check a light trap for moths that they will take back to the laboratory.



A number of different herbivores love lupines. But their behavior and demography are, to say the least, odd. If you were a hungry caterpillar, where would you head for lunch? Why, the thickest part of the lupine patch, of course. But such is not the case. In fact, the high-density patches are devoid of insect herbivores. Move out to the lower-density patches, though, to the suburbs of lupineville, and the herbivores are happily profuse.

Bishop and postdoctoral researcher Jenny Apple are testing two opposing explanations. The first is that herbivores do indeed move in, early on, to the dense patches. But so do their predators, the ants and spiders and caterpillar-hunter

beetles. As they colonize the thick patches, they suppress the herbivores.

The other explanation might be that the lupines in the high-density patches are poor-quality food sources. Because of their density, they compete for limited resources, providing lower-quality food for the herbivores. Moths simply choose not to lay their eggs where the food quality for their young is poor.

Bishop has shown that the phosphorus of the denser areas is indeed lower. Plants in the outlying areas have more nitrogen and phosphorus available, and Bishop has shown that caterpillars indeed grow faster on those plants.

In fact, food choice and population patterns could be controlled by basic nutrients. A subdiscipline within ecology, ecological (or biological) stoichiometry, is based on our understanding that all life is composed of three basic nutrients: carbon, nitrogen, and phosphorus. Organisms use nitrogen to build protein and nucleic acid, the basic ingredient of DNA. Phosphorus is used primarily for nucleic acid.

“People have long thought that the amount of nitrogen in an environment is what limited plant and insect communities most of the time,” says Bishop. “But maybe it’s not just nitrogen, but also phosphorus.”

If you grind up a plant, says Bishop, and measure the amount of carbon, nitrogen, and phosphorus, and then do the same with an insect, you can compare those amounts of each nutrient and ask whether the carbon-nitrogen ratio in an insect is such that it could get sufficient nitrogen from that plant. Theoretically, an insect could be limited by either nitrogen or phosphorus. Given a nutrient-poor system, it could be that the nitrogen-phosphorus ratio is what actually drives the whole process within an ecosystem—in this case, the pumice plain. It could be that insects choose to feed on the plants with the correct N-P ratio and ignore those with a poor ratio.

Unlike plants, insects have a relatively fixed N-P ratio. So if they’re eating a phosphorus-poor plant, they can’t change their own N-P ratio. Instead, they have to eat more, until they get enough P.

By the time we stop for lunch in a patch of willows at the stream coming down off the volcano’s glacier, Bishop has gathered a list of research questions that still beg to be addressed. Relatively neat questions about nutrient availability and the effect of lupines on other plants. And much bigger, overwhelming questions. For example, have the lupines and herbivores coevolved since the eruption? In addition to funding from the National Science Foundation, Bishop recently received a grant from Murdock for equipment that will enable him to do more specific genetic analysis. He has lupine seeds from 1985 that he is eager to compare with current lupines to see whether they have adapted to this intense episode of herbivory. The perfect ecological laboratory has much yet to reveal. ■

or more photographs of John Bishop's research and Mount St. Helens, visit our Web site: washington-state-magazine.wsu.edu.

Experiments with lupines and herbivores in Bishop's Vancouver laboratory are shedding light on the chemical balance that controls an ecosystem.





EXTREME DIVERSITY

by Tina Hilding • photography by George Bedirian

From the
strange waters of
SOAP LAKE
come unique
forms of life

AT FIRST GLANCE, Soap Lake doesn't seem to offer much to 21st-century science.

Amidst a largely treeless primeval landscape, the lake is surrounded by stark shores and sheer rock walls.

A few lakeside resorts and cabins dot its shores, where Native inhabitants once came for beneficial mineral baths. The adjacent town of Soap Lake, Washington, located 20 miles north of I-90 near Moses Lake, is one-fourth the size of its earlier heyday, when people came for treatment of a malady similar to gangrene.

But landscape rather than history prevails. Civilization seems a mere blip on the area's timescale. Even the water itself seems never to change. The lake is permanently stratified, so that its two layers have not mixed for at least 2,000 years, the longest documented stratification of any lake on earth.

It's Soap Lake's unchanging nature that attracts researcher Brent Peyton,



Because extremophiles spend their lives in inhospitable places,



Graduate student Catherine Albaugh examines Soap Lake extremophile cultures with Professor Brent Peyton in the laboratory.

ROBERT HUBNER

associate professor of chemical engineering at Washington State University. In a place that time seems to have forgotten, Peyton is working to learn about tiny microorganisms that could be key to solving 21st-century problems in areas from pharmaceuticals to environmental cleanup. The lake may even be of help in the search for extraterrestrial life-forms.

Peyton is examining the tiny bacteria that make their home in Soap Lake, a harsh environment that is toxic to most higher life-forms. The microorganisms are called extremophiles, because they live in highly unpleasant places where few others can live, like the bottoms



they have developed unique biological processes.

of oceans, dry desert salt flats, or ice-covered lakes in Antarctica. The water at the bottom of Soap Lake, for example, is five times saltier than ocean water, and contains high, naturally occurring concentrations of carbonate, chloride, sulfate, and sulfide. Because extremophiles spend their lives in such inhospitable places, they have developed unique and potentially useful biological processes. The enzymes they produce, for instance, are tougher and more stable than typical enzymes, and could be used in chemical reactions that take place under harsh conditions.

Peyton spent several years trying to

solve environmental problems on the Hanford Nuclear Reservation—in particular, the movement of contaminated groundwater that someday may make its way to the Columbia River. In his research, he used commonly found bacteria to precipitate uranium and other heavy metals out of groundwater and to lock them up as solids in the soil. He was one of four WSU researchers, in fact, to receive a \$900,000 grant from the U.S. Department of Energy in a multidisciplinary project to work on the bioremediation of chromium.

Enter *Halomonas campisalis*

BUT IT WASN'T until he began work-

ing with chemical companies to figure out a way to use microorganisms to clean up hazardous chemicals from their waste streams that he became interested in extremophiles. Because these streams contain high levels of salt, the companies must dilute them with lots of fresh water before they can begin to clean them up. The process can be expensive, time consuming, and wasteful.

The search for microorganisms that can survive the harsh conditions of high-salt waste streams led Peyton to his research on extremophiles. Searching near Soap Lake, he found *Halomonas campisalis*, which he named for the salt flats where it makes its home. *H. campisalis* looks like a cross between cotton candy and a jellyfish when grown in a lab culture, with delicate pink tendrils that reach out in all directions. Living in a salty waste stream, the microorganism eats hazardous chemicals called phenols, converting them to harmless carbon dioxide and water. In an alkaline environment, *H. campisalis* produces muconic acid, a precursor to nylon, a valuable product in the chemical industry. Both capabilities are something that the chemical industry may be able to use.

“These capabilities can be used where normal organisms would roll over and die,” Peyton says.

National Science Foundation Grant

SOAP LAKE'S unique organisms have attracted the attention of the National Science Foundation. With an \$840,000 NSF grant, Peyton, Holly Pinkart of Central Washington University, and Melanie Mormile of the University of Missouri-Rolla are studying the lake as an NSF microbial observatory, exploring life in its natural extremophile communities. Among the questions the scientists want to answer are how the bacteria have survived at the lake bottom for thousands of years, what types of food they eat, and the rate at which they transform natural carbon compounds. The researchers are isolating new organisms that have never before been characterized. In particular, they are focusing their work on the deep, anaerobic por-

Some scientists believe that life may have begun in a lake similar to Soap Lake.

tions of the lake. Peyton hopes that some of these new types of microorganisms could be useful for industrial applications.

“There is a lot of value in just understanding life in these extreme environments,” he says. “Life is much more diverse than people typically think.”

Some scientists believe, in fact, that life may have begun in a lake similar to Soap Lake, and that the lake could offer clues to where life on other planets might exist. Some believe that Mars, for instance, once had seas that have since dried up. As the seas dried, small pockets of salty water, perhaps similar to Soap Lake, may have remained. Data from Soap Lake will be used to improve satellite-based searches for similar areas on other planets. As part of the project, the researchers are providing data for the Virtual Planet Database being developed by the Jet Propulsion Laboratory at the California Institute of Technology that will be used in the search for extraterrestrial biological systems.

A New Consortium

REPRESENTING WSU, Peyton has joined with scientists from the Department of Energy’s Idaho National Engineering and Environmental Laboratory (INEEL) and Concurrent Technologies Corporation, a nonprofit based in Johnstown, Pennsylvania, to establish the Consortium for Extremophile Research. The group is dedicated to researching and developing new products and processes that use the unique capabilities of these microorganisms.

The researchers are working on several projects, including the use of alkaline-loving bacteria to dispose of industrial wastes; understanding climate change through the study of methane-forming bacteria in the Arctic; and decontaminating radioactive wastes on surfaces.

Peyton is one of a group of researchers who envision using alkaphiles—bacteria that love alkaline environments—to convert agricultural waste to useful products and chemicals. The group is also looking to use microorganisms in the destruction

of pesticides, nerve gases, and high explosives. Microorganisms from Soap Lake have successfully degraded the pesticide atrazine, for instance.

The three participating institutions all have significant expertise that makes them valuable partners in the consortium. The WSU researchers are leaders in using haloalkaliphilic microbes as catalysts in chemical reactions for environmental applications. INEEL researchers have demonstrated expertise in extremophile microbiology for a variety of bioenergy, national security, and environmental applications, including removal of radioactive contaminants from surfaces. Concurrent Technologies specializes in getting research transferred and applied in the public and private sectors.

“Putting together this consortium builds something bigger than the sum of our already-strong programs and will bring our research all the way from its start in the laboratory to application in the marketplace,” says Peyton.

Running Out of Time?

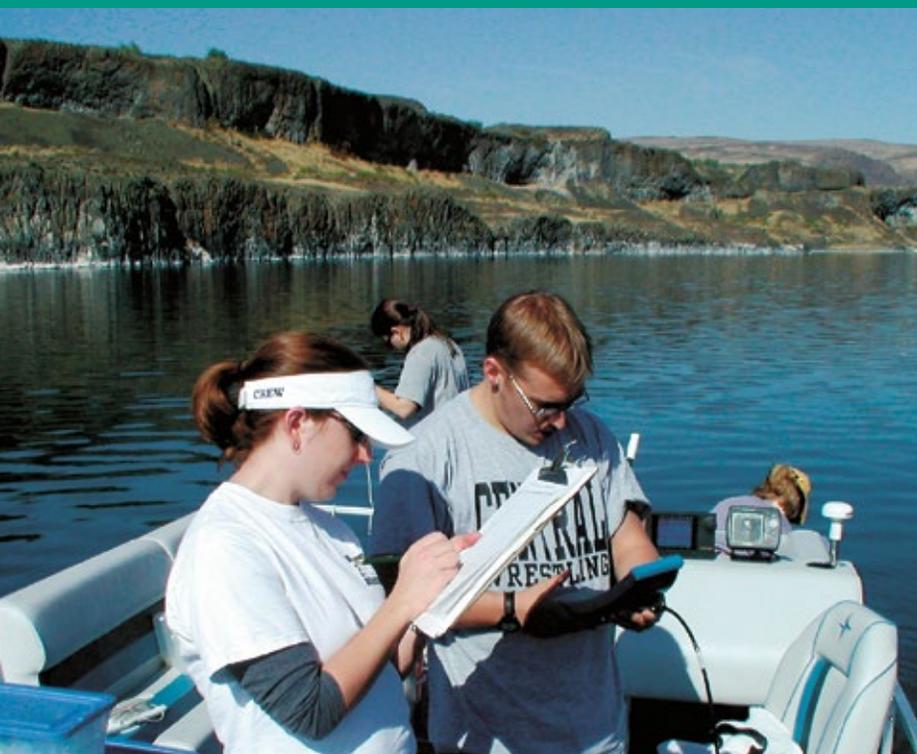
PEYTON ACTUALLY doesn’t often go to Soap Lake to take samples. That’s because when he does, he usually comes home with several microorganisms that nobody has ever seen before. Instead, he spends most of his time learning about the metabolic reactions and properties of the microorganisms he’s found.

He compares the desolate Soap Lake to the heart of the rain forest. Like the rain forest, the lake is home to many organisms with unique capabilities, perhaps some with the potential to solve pressing human problems. And, like the rain forest, this unique environment is constantly under threat, ranging from possible dilution by irrigation projects to pollutant runoff from a variety of human activities, endangering valuable organisms that aren’t even known yet.

As Peyton sends his collecting equipment to the bottom of this seemingly timeless lake, time, in fact, may be running out. ■

Tina Hilding is communications coordinator for the College of Engineering and Architecture.

Catherine Albaugh and Steve Wakefield, a student at Central Washington University, record data, including pH, temperature, dissolved oxygen, salinity, and conductivity, at Soap Lake.



BRENT PEYTON





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TRACKING THE COUGARS

*"The bigger,
the more complex,
the better we like it."
—Ron Morford*



As president of General Construction Company, Ron Morford is making a splash in Puget Sound.

BRIDGES, DOCKS, & DAMS

Some of General Construction's best work is under water

by Pat Caraher

RON MORFORD was only 19 when he built his first house. A quarter century later, he's still in construction—only on a much larger scale. The president and district manager of General Construction Company oversees projects in Washington, Oregon, California, and Alaska. Annual contracts total between \$150 and \$200 million, making it one of the largest construction companies in Washington. The payroll includes 130 salaried staff, plus 400 to 500 laborers and craftsmen.

According to Morford, marine and heavy civil construction accounts for the bulk of the business. He lives on Bainbridge Island, not far from district headquarters in Poulsbo.

Since it was founded in Seattle in 1911, the company's activities have been extensive around Puget Sound, although during the last five to six years it has done fish-mitigation work on Bonneville, John Day, and Ice Harbor dams on the Columbia River, as well as on the dam on Lake Shasta, California. General Construction built the Port of Seattle's first dock, Pier

66, in 1912, and replaced the aging pier in the early 1990s as part of the Central Waterfront Project. The effort included construction of the Cruise Ship Terminal, Odyssey Maritime Discovery Center, International Conference Center, and Downtown Seattle Marina. Other landmark projects are Shilshole and Des Moines marinas and the aircraft carrier piers at Everett and Bremerton.

The company also is a leader in the construction of floating bridges. It participated in the building of the original Hood Canal Bridge and the 520 Floating Bridges in 1959, and later built a new section for the Lacy V. Murrow Floating Bridge across Lake Washington and the draw-span section of the replacement Hood Canal Bridge.

When the Murrow bridge linking Seattle and Mercer Island sank in a November 1990 windstorm, General Construction came to the rescue. First the adjacent bridge had to be saved after its anchor cables had been severed by the sinking bridge pontoons. Early the next year, the company was the successful bidder on the replacement bridge.

"The state put a bonus in the clause, because it was an emergency project," Morford explains. "General Construction completed the \$88 million Lacy V. Murrow Bridge replacement a year ahead of schedule. Crews worked multiple shifts, six days a week.

"We had a good team with a good plan, and were able to execute it," he says. "Our philosophy is to try to get better from the start, then build faster, improve, and make a few bucks as we go."

Morford was project engineer on phase I and project manager on phase II of the Alsea Bay Bridge on the Oregon coast at Walport. Cost of the structure, featuring Y-shaped support piers, was \$43 million. The replacement bridge was completed in 1992 after 42 months.

As part of a team consisting of Bechtel Infrastructure and Kiewit, General Construction received notice in August 2002 to proceed on a new \$615 million Tacoma Narrows Bridge. It is being built 40 to 50 feet south of the existing suspension bridge. The project is expected to take five years.

The second Narrows Bridge presents many challenges—sporadic strong winds, high tides flowing one way and then the other twice daily in the waters beneath the bridge site, and "serious, big-time currents" that can exceed eight knots in both directions.

"Our experience is in building the foundations . . . all the parts of the bridge under the water," Morford explains. The other partners on the job focus more on "the parts you get to see and drive on."

Plans call for constructing two large concrete caissons. Each will measure 90 by 130 feet in water or up to 150 feet deep. The caissons will then be sunk about 70 feet below the ground.

"That's like building

two 220-foot-tall buildings underwater," Morford says. "Most of the projects we do are very difficult. It's not like building tract houses."

Despite the economic turndown, the company has "a larger backlog and more business today than we have had in our 90-year history," he says. It is involved in two joint ventures—the \$322 million Benicia-Martinez Bridge and the \$1.04 billion San Francisco-Oakland Bay Bridge, with 2005 and 2006 completion dates, respectively.

The 1982 Washington State University civil engineering graduate grew up around construction—his father, Paul Morford, is a 1959 civil engineering alumnus—and joined General Construction right out of college.

He's proud of the bridges, docks, dams, and landmark structures General Construction has worked on, "even though most of the public wouldn't know that we built them." Having helped the company carve a niche in heavy marine construction on the West Coast, Morford says, "The bigger, the more complex, the better we like it." ■

CLASS NOTES

1940s

Donald H. Greeley ('41 Gen. St.), Satellite Beach, Florida, writes, "When we aren't traveling as tourists somewhere, we spend the balance of our time in Florida." He has retired from the military and from Boeing.

Myron D. Calkins ('42 Civil Engr.) retired as director of public works for Kansas City, Missouri, in 1986 after more than 21 years in that position. In 2002, Kansas City and the American Public Works Association published his oral history, which was prepared by Frederick M. Spletstoser, a history professor at William Jewell College.

1950s

Richard Gordon ('58 Physics) and **Annette Weissenborn Gordon** ('59 Speech Comm.) are retired in Richland. Richard keeps busy with his consulting company, Knowledge, Ltd., golf, and "intense relaxation." Annette is involved with the Steven Ministry, volunteer tutoring, and serving allied arts in Richland.

Since 1985, **Barre Toelken** ('59 M.A. English) has directed Utah State University's Folklore Program. Earlier, he taught folklore and medieval literature for 19 years at the University of Oregon. He is the author of several books on folklore.

1960s

June R. Aprille ('67 Zool.) is provost and chief academic officer of the University of Richmond (Virginia), a school of 3,400 students with an endowment of \$1 billion.

1970s

Susan Wayenburg Hinz ('70 Comm.) retired June 30, 2003, after more than 28 years at Washington State University. Most of her career was spent as editor of the *WSU Calendar-Bulletin*, which became *WSU Week*, the University's internal publication for faculty and staff. She now teaches public relations courses at the University of Idaho and WSU. A past president of the Pullman Chamber of Commerce, she is serving her second term on the Pullman City Council.

Philip Levendusky ('71 M.S. Clinical Psych., '73 Ph.D. Clinical Psych.) received a 2003 Career Achievement Award from the American Psychological Association. He is director of psychology and psychology training and vice president of network development for McLean Hospital, the largest psychiatric teaching facility of Harvard Medical School.

Sheila Helgath ('71 Botany, '74 M.S. Forestry & Range Mgmt.) is manager of environmental certification systems

at Pacific Lumber Co. in Scotia, California.

Norman F. Sather ('71 Bus. Adm.) is CEO of the Tacoma-based Pettit Oil Co., with offices in Hoquiam, Port Townsend, and Port Angeles.

Paul J. Fletcher ('72 Civil Engr.) has been promoted to the rank of major general in the U.S. Air Force. He is deputy for Air Force Plans and Programs at the Pentagon in Washington, D.C.

Jim Kresse ('73 Comm.) has been promoted to news editor at *The Spokesman-Review*. He has been with the Spokane daily newspaper for 24 years.

Carol Parker ('74 Ph.D. Educ.) is counseling program chair of Southwestern College in Santa Fe, New Mexico.

Janice M. Stroh ('74 Human Relations, '87 M.B.A.) began her new position as vice chancellor for finance and administrative services at Pima Community College in Tucson, Arizona, last September.

G. Scott Eymmer ('75 Political Sci.), Nampa, Idaho, was elected chairman of the State Broadcasters Association. He is vice president and general manager of KIVI-TV, Channel 6 (ABC) in Boise, and KSAW-TV (ABC) in Twin Falls. He and **Sandi DeFreese-Eymer** ('75 Psych.) have been married for 30 years and have two sons.

Paul B. Jackson ('75 Comm.) is station manager for KBTC-TV, the Tacoma-based public television station.

Gary Schulz ('76 Ag. Educ.) is chairman and manager of the International Agri-Center in Tulare, California.

After 25 years service, **Kim Zangar** ('77 Crim. Just.) retired in June 2003 as a captain with the Washington State Patrol, the highest-ranking female officer to spend a career with the WSP.

Kay M. Ferguson ('78 Spanish) reports that her job as a press and public affairs officer with the British embassy in Seattle was terminated January 31, 2003, as the result of budget cuts. While searching for new employment, she volunteers her freelance writing services, under the trade name of Island Girl Creations, to various organizations.

Tim Healy ('78 Speech & Hearing Sci., '82 Speech & Hearing Sci.) is in his seventh year as head women's basketball coach at St. Martin's College in Lacey. He previously compiled a 100-37 record as head boys' basketball coach at Olympia High School. Before accepting his current position, he was a speech-language pathologist in the public schools for 13 years. He and his wife, **Cathy Davis Healy** ('79 Educ.), live in Olympia.

Hospital dietician **Pam Sleight Parsons** ('78 Nutr.), Santa Rosa, California,

wrote *Voyage of Integrity* (published) and *Quest for Liberty* (in press).

John H. Pierce ('78 Polit. Sci.) is executive vice president, business development, at Seattle-based Script IQ, an innovator in Web-based medication management and physician connectivity. He has spent 15 years in health plan operations.

1980s

Angelo Hill ('80 Gen. St.) was appointed head women's basketball coach at Casper College, Wyoming, last summer. He has 14 years of coaching experience at a New Zealand prep school, professional levels, and at Kelly Walsh High School in Casper.

Cathy Johnson-Delaney ('80 D.V.M.), Seattle, was honored as 2003 Exotic DVM of the Year at the 2003 International Conference on Exotics in Palm Beach, Florida. She is author of the *Exotic Companion Medicine Handbook*, published by the Zoological Education Network.

Duane Brelsford ('81 Humanities), Pullman, is a real estate developer and president of the Pullman Chamber of

Commerce. His latest venture, the Village Centre Cinemas complex, opened in November.

Lorraine M. Brutsche ('81 Child & Family Studies, '90 Ph.D. Educ.), Arlington, is a child and family psychologist at the Everett Clinic.

A play by **John L. Martins III** ('82 Gen. St.) was recently produced at the Crossley Theatre in Hollywood, California, in cooperation with Actors Co-op. Titled *Dietrich*, it was inspired by the true story of German theologian Dietrich Bonhoeffer's attempt to assassinate Adolf Hitler. The schoolteacher in Sierra Vista, Arizona, has been an associate member of the Dramatist Guild of America since 1984.

Peggy Stowe ('82 Marketing), a third-generation owner of Stowe's Shoes and Clothing Store in Burlington, accepted the Skagit County 2003 Business of the Year Award last May.

Kerry Catt ('84 Math.) is the new manager for the Oden, Utah, main branch of Wells Fargo Bank.

Dan Gustafson ('84 Hotel & Rest. Adm.) has been elected president of

Crossing the line

SOQUALMIE singer-songwriter Garr Lange released a new CD last fall. *Crossing the Line*, recorded at Rainstorm Studios, Bellevue, and released by Sentry Records, includes a 12-song mix of the blues, country, and rock.

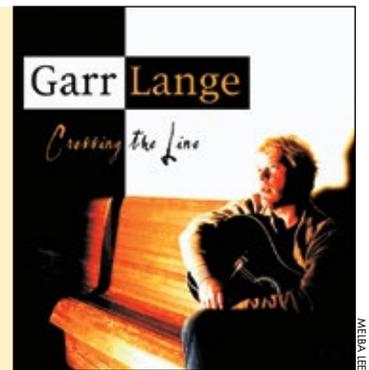
Lange ('79 English) tested his skills for writing music and plays in New York City after graduating from Washington State University. One play, *The Water Table*, was produced by the Renegade Theater Company, Hoboken, New Jersey, in 1989. On the music front, he formed The Big Rig band, Boston musicians with a bent for country-rock/rhythm and blues. He also had a short stay in Nashville during the mid-'90s. In both cities, he was told his style of music didn't fit a "readily identifiable" niche. He returned to Washington, took a new job, and tried to forget about his talent. Over time he and others began to notice that music was changing—that it was moving toward a place where he had been all along. So he stepped back into the business.

Lange has "that rare ability to . . . deliver a song that mines the emotional landscape as well as anyone," writes one reviewer.

Lange admits there's a "country twang" to his sound, but adds, "I don't write [and sing] just love songs. I tell stories from an emotional point of view."

He's written more than 100 songs and several plays. To read more and hear selections from *Crossing the Line*, see www.garrlange.com.

—Pat Caraher



Navajo reservation veterinarian aids scrapie test at WSU

AS A VETERINARIAN for the Navajo Nation, Dr. Scott Bender's practice spans more than 18 million acres in the Four Corners region of Arizona, New Mexico, Colorado, and Utah.

His enormous workload includes treating everything from sheep, horses, cattle, goats, dogs, and cats to elk and cougars. Periodically, he even gets to clean the teeth of a 19-year-old bear at the Navajo Nation Zoo and Botanical Park, Window Rock, Arizona, the only tribal-run zoo in the United States.

"There are 250,000 people who live on the reservation and only four vets to cover them," he says. "It can be a little daunting at times."

That's an understatement, considering that Bender ('95 D.V.M.), Dr. Joseph Bahe ('87 D.V.M.)—a Navajo tribal member—and two other veterinarians are divided among four clinics in the Navajo veterinary program, and make do on an annual budget of only \$148,000.

"We have to work with what we have," Bender says. "If it isn't there, we can't use it." His clinic at Chinle, Arizona, lacks an X-ray machine. "We provide the best service we can, but if you are impatient, you are not going to like us."

With such sparse resources, he is forced to find alternative ways to deal with problems in his own practice, and as a wildlife and zoo-animal veterinarian.

One of his innovations brought him back to Washington State University last year to help researchers improve a test for scrapie. The fatal disease affects the brain and central nervous system in sheep. It is similar to mad cow disease in cattle and chronic wasting disease in deer and elk.

Researchers at the U.S. Department of Agriculture and WSU College of Veterinary Medicine recently developed a test that involves sampling the inner eyelid of sheep to detect the disease. Until this method was discovered, the only way to test for

scrapie was to examine the brain of an animal after it died or use a genetic test to find those sheep most at risk.

Now, through research on the Pullman campus, the eyelid test allows producers and veterinarians to detect scrapie before animals display symptoms of the disease.

Unfortunately, sheep do not have a lot of lymphoid tissue under the eyelids, and it can be difficult to reach, explained Janet Alverson, USDA lead scientist on the scrapie project at WSU.

This is where Bender's findings are important.

After a miserable day of examining sheep during a windstorm on the reservation in 2002, he found through the irritation of dust and manure in his own eyes that histamines can make the eyelid tissue inflamed—and also make it easier to get a sample.

"I thought, 'If I'm taking an antihistamine for this, and the sheep looked the same, would histamines make the tissue stand out?'" he says. After testing his theory with histamine eyedrops, he found out that, "sure enough, they did."

On hearing of his development, WSU researchers flew Bender to Pullman last winter to show the scrapie investigators how to use the technique.

"The eyedrops make sampling the tissue so much easier. We are hoping to incorporate it in the standard practice for the test," Alverson says. The finding is being included in WSU's research. Information on the technique will be published soon.

But that is not the extent of Bender's work. He has also developed a vaccine for pigeon fever on the reservation, a disease that causes abscesses in horses. He has found ways to deal with several outbreaks of distemper and type-C botulism as well, and tackles rabies, whirling disease, and chronic wasting disease that affect the wild and domestic animals he and his colleagues treat.

The veterinarian also put together an emergency response plan for foot-and-mouth disease following an outbreak in Great Britain, and consulted for other tribes about it, including the Yakama and Umatilla.

In other projects, Bender monitors animals for West Nile virus, conducts DNA testing on desert bighorn sheep, and places microchips in horses and wildlife because, he notes, "Rustling still occasionally occurs in that area." "The great part about being a wildlife veterinarian is that I can go hunting 12 months out of the year," he says. "And when I am done, the animal gets to run off."

—*Emmy Sunleaf Widman*

Emmy Sunleaf Widman ('02 Ag. Econ.) has been a frequent contributor to Washington State Magazine.

CLASS NOTES *continued*

the St. Louis Area Hotel Association. A Marriott employee for 19 years, he is overseeing a \$17 million renovation at the Marriott Pavilion Hotel.

Shan Kelley ('85 Agri., '91 Educ., '91 M.S. Voc. Tech. Educ.) married Cheri Luttermoser July 28, 2002. They live in Olympia. He teaches in the North Thurston School District.

Matt Tucker ('85 Ag. Econ., '87 M.A. Bus. Adm.) was promoted to senior vice president at Banner Bank in Walla Walla.

R. Chris Longston ('86 Comp. Sci.) has been a truck systems manager for Paccar/DAF Trucks for 16 years. He is on a two-year assignment in the Netherlands for Paccar.

As president of The Hotel Group in Seattle, **Douglas Dreher** ('87 Hotel & Rest. Adm.) is responsible for the oversight of all managed and owned properties, new hotel development, acquisitions, and strategic planning.

Jane Hoffman ('87 Music) was promoted to chief petty officer while serving with the U.S. Navy Band, Commander-in-Chief, Allied Forces Southern Europe, Naples, Italy.

Brian J. McCluskey ('87 D.V.M.) is an analytical epidemiologist with the USDA's Veterinary Services in Littleton, Colorado.

Daniel Roark ('87 Chem. Engr.), Spokane, is the co-owner of MatriCal, a manufacturer of products used in drug discovery by pharmaceutical companies.

Sydne Richelle Phelps ('89 Nursing) is vice president of the Washington State Nurses Association unit at Virginia Mason Medical Center in Seattle. She works in otolaryngology, head and neck surgery, and is a cancer patient case manager.

Marine Corps major **Jeff Tontini** ('89 Hist., '89 Educ.) is an operations duty officer for the HMX-1, the unit that operates the presidential helicopter *Marine One*.

1990s

Donna Johnson McGinnis ('90 Comm.) was promoted to senior associate at The Rome Group in St. Louis, Missouri. The consulting firm services public and private nonprofit and philanthropic organizations.

Erick Everson ('91 Political Sci.) married Holly Gossard July 5, 2002. He is the president of Travel Tek in Boulder, Colorado.

Stephen Duffy ('93 Crim. Just.) and his sister, Kerry Duffy, own City Dock Coffee and four other coffee shops in Severna Park, Maryland. The Greater Severna Park Chamber of Commerce

Scott Bender ('95 D.V.M.), left, demonstrates the technique he developed for testing for scrapie in sheep to research microbiologist Janet Alverson, research technician Duane Chandler, and visiting Russian scientist Oleg Verkhovsky.



In search of the perfect stringed instrument

BILL MCCAW was always interested in music. But he waited until he was about 50 before he began thinking about playing the guitar. When a search of music stores failed to turn up a guitar that could accommodate his broad fingers, he decided to make his own instrument. Since then he's made 17 acoustic guitars, and now is taking on a new challenge—building a cello.

"You're not going to make a perfect instrument the first time," he says. "You just go ahead, and when you string it up, you'll be enthralled with the sound."

Some guitar makers work with an apprentice to master the craft. Some read how-to books, or get pointers from others.

McCaw read and asked and struck out on his own. But he didn't have time to pursue the craft until around 1980. Family, school, and work left little time for music.

McCaw earned two degrees at Washington State University ('51 Dairy Sci., '52 M.S. Dairy Sci.). There he met his future wife, Sarita Veatch ('53 Speech/Comm.), daughter of William Veatch, long-time WSU debate coach. They were married in August 1952, before McCaw began a three-year Navy hitch.

"I went back to farm with Dad after the service," says McCaw. "While I was in college, Dad was raising thoroughbred Hereford bulls and had a dairy cow operation of 25-30. We expanded the cow herd up to 150 and finally up to 315."

At the same time, the family circle grew to include four children and six grandchildren. Nearly four years ago, the McCaws sold their interest in the farm at Lowden and moved into a spacious home in Walla Walla. To no one's surprise, McCaw built a large shop next to the house so he could continue crafting guitars and other instruments. Sarita retired in 2002 after teaching speech for 34 years. McCaw still adds his rich tenor voice to performances of the Walla Walla Choral Society he once managed.

When he found time to make his first guitar from leftover locust boards from the A-frame dwelling he built, he took the boards to a pine mill in nearby College Place to be cut into strips for the body of the guitar. He used cedar for the top.

"Most of our posts came from Idaho then and were heavier," McCaw says. "This first one has a gorgeous sound. Generally, my guitars are made partly of locust. It's light colored and very stable."

McCaw has only two of his 17 guitars left, his first and his last. He gave away one made of redwood and has sold most of the others. He traded one for stained-glass windows for his home. Another belongs to a New York City jazz musician. His guitars sell



Bill McCaw

LARENCE CHEN

from around \$200 to \$1,000, and each one takes him 50 to 60 hours to build. He's made a banjo and a dulcimer as well.

Sitting with guitar in hand in his living room, his head fringed with an unruly crown of curly locks, McCaw plucks the strings to demonstrate the rich quality of the tones. He usually uses a light wood for the soundboard, with a contrasting darker body and a lighter-colored neck. He frequently goes to a lumberyard in California or Seattle for materials. And he always applies a tung oil finish.

Using a work board, he cuts out the back in two pieces and installs a decorative, black walnut vertical stripe where he joined the two pieces. Next steps are to carve out the front side of the guitar and the sound hole, and glue on the neck. Wood used for the sides helps form the guitar "box," and inlaid bordering, or purfling, provides the ornamental finishing touches.

One of the final steps is the stringing. McCaw winds the first three strings with steel wire and the last three with nylon. The gold-plated brass tuners were made in Germany. He says installing the rosewood fret board, which regulates the strings, is the "most tedious" job of all. To get it all together, with the help of glue and braces and other tools, including a hot iron and water—and a large dose of patience and caring—the box had become a fine instrument.

"This is pretty nice," McCaw says, critiquing his work as he plucked the taut strings of the guitar with his powerful fingers. "But it could be better."

—Nadine Munns Gerkey

Nadine Munns Gerkey ('49 Soc., '51 Educ.) was the first woman news reporter hired by the Walla Walla Union-Bulletin in the early '50s. She retired from the paper in 1998, but still enjoys freelance writing.

Bill McCaw can be reached at wmmccaw@bmi.net.

named them 2002 Small Businesspeople of the Year.

Vincent G. June ('93 M.B.A., '96 Ph.D. Bus. Adm.), Fort Myers, Florida, is dean of student affairs at Florida Gulf Coast University.

Tim Leavitt ('94 Civil Engr., '97 M.S. Env. Engr.), an environmental engineer for PBS Engineering and Environmental in Vancouver, serves on the local city council.

Brett Nelson ('94 Engl.) founded ChopperCam, Inc., a one-man company that operates a small fleet of ground-controlled, miniature helicopters with film, video, and still photog-

raphy equipment on board. He is contracted to capture images for motion picture production, commercial production, government agencies, research institutions, and small business. He builds the helicopters in his Spokane garage. Clients include DreamWorks SKG, Discovery Channel, ESPN, NASA, and Nissan.

Robert J. Nock ('94 Mech. Engr.) is general manager of the Ampco Northwest toilet partition facility. He has 10 years of experience in manufacturing and the thermal insulation industry. Ampco Products, Inc. headquarters are in Miami.

Gloria Villalobos ('94 Phys. Sci.) is the director at Novins Planetarium in Lakewood, New Jersey. She is featured in the book, *Women of Space: Cool Careers on the Final Frontier*, which came out last summer.

Jihong Zhao ('94 Political Sci.) is an associate professor at the University of Nebraska-Omaha.

Tamara Taylor ('95 Political Sci.) has been promoted to the adult felony division of the Benton County Prosecuting Attorney's Office in Kennewick.

Jay Jordan ('96 Engl., '96 Teach. Cert.) teaches English in the Spokane School District.

Jason Fiman ('97 Crim. Just.) and **Alice Thomas Fiman** ('97 Polit. Sci.), Olympia, report the birth of a son, Alexander Thomas, May 29, 2002. Jason is a juvenile correctional counselor. Alice is a public information officer for the Washington State Legislature.

Navy LTJG **Juan R. Garcia** ('97 Microbiol.) has returned to San Diego after six months in the Mediterranean and Arabian seas aboard the USS *Peleliu*.

Daniel Gibbons ('97 Bus. Adm.) joined Paine, Hablen, Coffin, Brooke, & Miller LLP as an associate, focusing on bankruptcy and business law.

CLASS NOTES *continued*

Jeff Newgard ('97 M.B.A.) is vice president of commercial banking in the Tri-Cities office of the Baker Boyer Bank.

Tua Vang ('98 Political Sci.) received a commission after completing the Navy Officer Candidate School in Pensacola, Florida.

Brooke Smith Cox ('99 Ani. Sci., '02 D.V.M.) is a veterinarian at the Moses Lake Veterinary Clinic.

Brian Gates ('99 Ph.D. Pharm.) is clinical assistant professor of pharmacother-

apy at WSU Spokane. Last June, he received the Pharmacist Mutual Distinguished Young Pharmacist of the Year Award.

Tanisha Harris ('99 Social Sci.), multicultural director at Heritage High School, received Vancouver's 2002 General George C. Marshall Leadership Award for her community dedication and work as an advocate for minority students.

Andrew Owen ('99 Arch.) is an associate designer at Digby Bridges, Marsh &

Associates PA. He and his wife, Dawne, live in Lake Worth, Florida.

Natalee Rosinski ('99 Vet. Sci., '01 D.V.M.) and **Ryan Andrews** ('01 Land. Arch.) were married September 1, 2002. Natalee is a veterinarian at Companion Animal Hospital in Aberdeen. They live in Westport, where Ryan is a city planner.

2000s

Jessica Biel ('00 Comm.) is marketing coordinator for PRR in Seattle.

Tina E. Kirkpatrick ('00 Comm.), Redmond, made it a goal to follow her dreams after graduating from WSU. She has visited some exciting places and recently was offered her first role in a musical. She is a cocktail waitress at Rock Bottom Brewery in Bellevue.

Julie Ann Langhans ('00 D.V.M.) wrote last summer from Long Beach, California, that she was engaged to be married November 23, 2003 in Maui—to **John R. Musella** ('98 Comm.). The two met when she was moving to southern California.

Happy in Hollywood, actor Larkin Campbell loves what he's doing

IT'S A DARK DRAMA, set in a desert. The lead character, Zack, runs into some bad guys, and he's in real trouble. The name of the movie, an independent production, is short and catchy: *Nowhere*.

But the actor playing Zack, Larkin Campbell, hopes the movie goes somewhere. He not only played the lead, he also produced the flick.

"We've sent it out, but it hasn't been accepted in any of the festivals yet," he says. "We'll have to wait and see."

Among other projects he's working on is *Squatch*, an adventure film about two guys chasing the mythical Bigfoot.

Last year he was a costar on the NBC comedy *Scrubs*, and had a part in the drama, *American Dreams* (NBC). He's appeared in early episodes last fall of *Joan of Arcadia* (CBS) and *Las Vegas* (NBC), both one-hour dramas. The latter stars James Caan in a behind-the-

scenes security operation in the gambling capital.

The road leading to Hollywood and the world of make-believe may have been paved by Campbell's acting in plays as long as he can remember. His experience as a communications major at Washington State University helped groom him for the task ahead: breaking into the professional acting scene.

The record indicates that hard work, as well as talent, have guided Campbell on his quest for stardom.

In 1967, he moved with his family from Eugene, Oregon, to Estes Park, Colorado. There he began acting in little plays in grade school. One of his most memorable roles in high school was that of Trapper John in *M*A*S*H*. He took theater classes and auditioned for every play that came along. Supporting vocal roles in *Oklahoma* and *Li'l Abner* added to his repertoire.

While pursuing his degree at WSU ('91 Comm.), he was a broadcaster and late-night disc jockey at KUGR, a college radio station. He starred in Arthur Kopit's play, *End of the World*, and acted in several Little Theater productions in Moscow, Idaho.

"I loved all my broadcasting classes," he says.

He credits Glenn Johnson, his broadcasting teacher, and Brent Nice, his acting teacher, for "getting me going." Johnson remembers his former student as a talented writer, and encouraged him to pursue that avenue in addition to acting and producing.

Campbell graduated after completing a four-month intern-

ship on television's *Entertainment Tonight*. Offered a job at *ET*, he stayed two years and was promoted to production assistant. Later he met his wife, Maria, during a year he worked at the *Supermarket Sweep* show. They now have year-old twin sons.

Campbell worked for Roseanne Arnold of the TV show *Roseanne*, taking care of personal errands, her children, and home. He was fired when the star and her husband, Tom Arnold, divorced.

"It was bad at the time, but it turned out to be one of the best things that ever happened to me," Campbell says in retrospect. He had time off to refocus, and decided to concentrate more on acting.

"The only way I knew I wouldn't have a chance was if I didn't try," he says. "The longer you are at it, the more people you meet. It's still a 'who you know' business."

Satisfied with his progress, he doesn't get caught up with wondering where he stands with others his age—36—in the business.

His goal, he says, "has always been to have this [acting] be the only thing I need to do, so I can take care of my family and not drive everyone crazy."

He's been successful enough that he hasn't had to do anything outside the industry, where his wife also works.

"Without her support and encouragement," he says, "I would be pumping gas outside of Las Vegas."

For the past seven years, he's been a production assistant for other movies and for television shows, as well as a stand-in for several superstars, including Mel Gibson during the shooting of *Lethal Weapon IV*. Campbell also played in a handful of LA stage productions.

"I enjoyed my time at WSU. I'm proud to say I went there," he says. "I love what I'm doing now. I've been so lucky."

—Nadine Mumms Gerkey

Larkin Campbell, left, was a stand-in for William H. Macy in the 1999 movie, *Mystery Men*.



Joshua Negley ('01 Intl. Bus.) was commissioned as a naval officer after completing OCS at Naval Aviation Schools Command in Pensacola, Florida.

After completing an internship at KHQ-TV in Spokane, **Jina Yun** ('01 Comm., '02 Political Sci.), Tacoma, became local news anchor for a 24-hour Korean-American television station in Federal Way.

Kathleen Brumbaugh ('02 Engr. Mgmt.) married Loren Johnson August 17, 2002. They live in Bothell. Both work for Boeing.

Andy Cockle ('02 Agri. Educ.) married Ronda Pulse. They live in Olympia. Andy teaches at Mount Rainier High School in Des Moines.

Michelle Yates Mandis ('02 M.S. Env. Engr.) was a presenter at the American Chemical Society's Northwest regional meeting last June. She represented Portage Environmental and her client, the Groundwater Protection Program, Fluor Hanford.

Clayton Stout ('02 Crim. Just.) graduated from the U.S. Coast Guard Training Center in Cape May, New Jersey, in February 2003.

IN MEMORIAM

1920s

Clarence Sprague ('27 Elect. Engr.), 98, April 18, 2003, Stanwood. Spent his professional career with Pacific Northwest Bell Co. in Seattle. Moved to Stanwood area in 1979.

George Edwin Rodman ('28 Elect. Engr.), 98, April 8, 2003, Wheaton, Illinois. Supervisor of education and training for Commonwealth Edison for many years. Later worked for Harza Engineering doing project site evaluations overseas.

1930s

Anne Harder Wyatt ('31 Fine Arts), 95, June 26, 2003. Helped with the family farm, Rothrock Cattle Ranch, for several years, while also attending the Nespelem Art Colony for three summers, 1937-39. Alpha Gamma Delta sorority.

Max P. Williams ('32 Arch. Engr.), 93, March 29, 2003. Served in the U.S. Navy during WWII. Self-employed architect.

Velma Scott Camp ('33 Econ.), 92, June 25, 2003, LaCrosse. Homemaker. Married Walter Camp in 1934. Lived in LaCrosse until her husband's death in 1978, then moved to Spokane and returned to LaCrosse 17 years later. Kappa Kappa Gamma sorority.

James Chester "Chet" Gordon ('33 Gen. St.) September 28, 2003, Colorado Springs, Colorado. Member of the

WSU alumni president has a grasp on things

"The alumni agenda is ambitious, but achievable. . . I look forward to the challenge."

—Lorie Dankers

AFTER GRADUATING from Washington State University in 1989, Lorie Dankers headed for the other Washington without a job. Networking with Cougar alumni there, she quickly found work. As a producer for Newslink, a Washington, D.C.-based television news bureau, she covered the U.S. decision to invade Panama, Mayor Marion Barry's arrest on drug charges, and the Supreme Court's addressing of "right to die" issues. She also reported on the New York and New Jersey congressional delegations.

The broadcast communication major had been a top student in the Honors Program and Phi Beta Kappa. However, she says she was unprepared for the "pace and level of discussion about issues, ideas, and politics" she initially encountered in the capitol. The learning curve was steep.

"I don't think you ever fully grasp everything that is going on around you," she says of the experience, "but you begin to understand the players, the processes, and what the intended outcome is."

Later, as a TV producer for the Senate Republican Conference, she helped senators tell their story. Her final seven years in Washington, D.C., were spent working in public affairs for the U.S. secretary of transportation.

As alumni director for the Greater Washington, D.C. district, 1992-98, she rallied Capitol City Cougars to travel to WSU football games in Pittsburgh, Philadelphia, Knoxville, Ann Arbor, and Columbus. She arranged a walking tour for alumni of historic Annapolis, hosted a spring gathering of alums at the National Arboretum, and arranged a visit to the Hillwood Museum, former home of Marjorie Merriweather Post, heiress to the Post cereal empire. "Christmas in April" also proved popular among alumni. Each April for four years, 15 to 20 alumni teamed with local Gettysburg College grads to refurbish and renovate a house in an impoverished neighborhood in the nation's capital.

"At the end of the day, we had a true sense of satisfaction," she says.

As 2003-04 president of the WSU Alumni Association, she's been busy.

Last October she returned to Pullman to represent the association at a regents meeting, attend an event hosted by the WSU Libraries Council, and sit for an interview with *Washington State Magazine*.

She shares that she and her husband, Jeff John-



Lorie Dankers

son ('87 Comm.), and daughter, Bridget, now nearly 4, moved to Bellevue in 1999. "We enjoyed our time in Washington, D.C., but our heart was always in the Pacific Northwest," she says. She's employed in the Seattle office of the National Highway Traffic Safety Administration.

Dankers grew up in the Poulsbo area, but chose WSU over the University of Washington. She played piccolo in the WSU Marching Band, completed a summer internship with the WSU Foundation, was a peer advisor for 10 freshmen in the communication department, and gave campus tours. In 1989, she drove ABC sportscaster and 1954 alumnus Keith Jackson, his wife, Turi, and his mother-in-law around campus in her Celica.

"I was so honored to show him firsthand what was happening in the school of communication and to use him as a role model," she says, her eyes widening. When she purchased a ceramic floor tile with her name on it in support of the Lewis Alumni Centre, she was given the choice of where she wanted it placed in the building. Next to Jackson's would be fine, she said. The tiles are set side by side in the west entryway.

As Alumni Association president, she is committed to enhancing alumni programs, expanding membership, and facilitating additional opportunities for alumni to engage in meaningful activities in support of WSU.

"We will continue the good work underway, including sponsorship of alumni events nationwide, hosting reunions, awarding scholarships, and providing service to the University community. We also will begin to expand our programs and serve as a catalyst for alumni involvement," she says.

"The alumni agenda is ambitious, but achievable. It will take hard work, alumni participation, and time. I look forward to the challenge."

—Pat Caraher

ROBERT HUNNER

Scientists and researchers honored by WSU

WASHINGTON STATE UNIVERSITY created the Alumni Achievement Award in 1969 to honor alumni who have provided significant service and contributions to their profession, community, and/or WSU. In recent months, three individuals have been recognized.

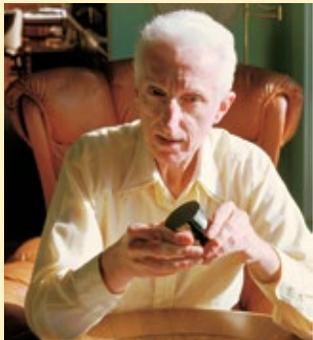
RICHARD H. PEHL

While completing his doctorate in 1963 at the University of California, Berkeley, Richard H. Pehl was the last graduate student to use the famous 60-inch cyclotron. His research group was undertaking the initial effort to develop radiation detectors fabricated from semiconductors. He was the graduate student responsible for that effort. This work established a base for his career.

Pehl ('58 Chem. Engr., '59 Nuclear Engr.) was honored by WSU August 2, 2003 during the Raymond (Washington) All School Reunion. He maintains residences there and in Berkeley. Beginning in 1965, he was in charge of most of the Lawrence Berkeley Laboratory (LBL) semiconductor detector applications work. This involved applications for gamma and X-ray detectors that have wide use in basic and applied science, as well as in the commercial world. Although the program was founded for nuclear physics research, it soon became involved in such disciplines as nuclear medicine, astrophysics, planetary science, environmental science, and high-energy physics.

Pehl continues to consult on various projects in nuclear medicine, nuclear physics, and space science since taking early retirement from LBL in 1994, where he remains a guest scientist. He also is senior partner of PHDs, a research and development company in Raymond. He and a couple of associates are developing a germanium detector-based gamma camera for medical imaging that could lead to significant advances in cancer and cardiology studies. They have developed and patented a technique to increase the efficiency of the camera by more than 40 percent.

During his career, he worked with eight Nobel Prize winners, and has more than 330 scientific publications.



Richard H. Pehl

PALUA PEHL

DENNIS B. CEARLOCK

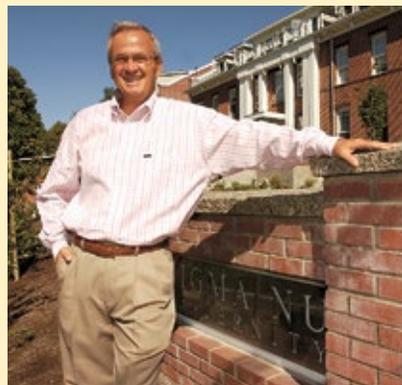
In a professional career spanning nearly 40 years with Battelle, Dennis B. Cearlock has distinguished himself as a civil engineer and research scientist. He is founder of two specialty pharmaceutical companies based in Columbus, Ohio. He is president and CEO of Zivena, Inc., a Battelle subsidiary founded in 2002 that develops and markets oncology drugs. From 1999 to 2002, he was president and CEO of BattellaPharma, Inc., a firm that develops and markets inhaled drug products.

Cearlock ('64 Civil Engr., '65 M.S. Civil Engr.) joined Battelle as a research scientist in water resources in 1965. Later, he directed Battelle Pacific Northwest National Laboratory's government and industrial programs at Richland (1975-83), before becoming director of research. In the early 1990s, he was promoted to corporate senior vice president and general manager at the Battelle Memorial Institute's world headquarters in Columbus, where he led the company's global health and pharmaceutical business.

From 1984 to 1998, he served on WSU's College of Engineering and Architecture Advisory Board. He helped the college start the Center for Design of Analog-Digital Integrated Circuits as an industry/university cooperative research effort. He also played a key role in helping WSU gain Battelle support for scholarships totaling more than \$550,000.

When a February 2000 fire forced the closure of Sigma Nu fraternity at WSU, he was instrumental in a successful fund-raising campaign to renovate the chapter house. He

Dennis B. Cearlock



ROBERT HUBNER

received the Alumni Achievement Award September 20, 2003 at the fraternity. He and his wife, Merrily Crook Cearlock ('82 M. Ed.), live in Dublin, Ohio.

JOHN E. HALVER

John E. Halver, Seattle, one of the world's leading authorities on fish nutrition, received the Alumni Achievement Award October 3, 2003 on the Pullman campus. He earned a bachelor's degree in chemistry, 1944, and a master's degree in organic chemistry, 1948.

For nearly five decades, the University of Washington professor emeritus conducted research on the nutritional requirements of fish for vitamins, amino acids, essential fatty acids, and sources of carbohydrates.

In nominating Halver for the award, R. James Cook, a U.S. Department of Agriculture scientist stationed at WSU, wrote, "His research revealed the 10 indispensable amino acids for fish, identified 12 classes of chemical compounds with potential as carcinogens in fish, and demonstrated that aflatoxin B1 present in some sources of feed is a primary carcinogen for trout hepatoma."

Halver was elected to the National Academy of Sciences in 1978. He spent most of his professional career in the Pacific Northwest with the U.S. Fish and Wildlife Service, Seattle. He joined the USFWS in 1950 as a researcher in the Western Fish Nutrition Laboratory (WFNL). While in this assignment, he completed a doctorate in medical biochemistry at the UW, 1953, and worked with the Salmon Nutrition Laboratory at Cook, Washington, before becoming director of nutrition at the WFNL. In 1978, he became a full-time UW professor of nutrition.

He has traveled to some 40 countries and helped establish international fisheries research and development programs. He is founder of Halver Corporation, an ecosystems management consulting firm on development and management of polycultures that integrate fish with ducks and other animal and plant life.

—Pat Caraher



John E. Halver, left, with R. James Cook, interim dean of the College of Agricultural, Human, and Natural Resource Sciences.

ROBERT HUBNER

IN MEMORIAM *continued*

Washington State House of Representatives for more than a decade. Moved to Alaska in 1956. Following the death of a son, Tim, in an accident, he dedicated the next 14 years to Alaska youth. Founder and president of the Boys Club of Alaska.

John Albert Nelson ('33 Gen. St.), 91, September 21, 2003, Longview. Physician and surgeon for the 18th Army Corps of Engineers in the Shumagin Islands during WWII. Owned a 270-acre tree farm in Castle Rock, 1968-76.

Fae C. Bishop ('36 Home Ec.), 87, July 7, 2002, Beaverton, Oregon. Employed during WWII in the Seattle shipyards. Moved to Coulee City in 1952 and worked for the Bureau of Reclamation in Ephrata. Returned to Seattle in 1960, and worked for the U.S. Navy and National Oceanic and Atmospheric Administration.

Dorris Merle Butherus ('37 Speech & Hearing Sci.), 88, April 2, 2003, Spokane. Speech therapist for the Portland School District for more than 20 years.

Phyllis McComb Carr ('37 Home Ec.), 80, May 2, 2003, Lynnwood. Taught in Coulee City and Oroville, then at Lynnwood Junior High for 15 years.

Beth I. Gilbert ('37 Home Ec.), 89, June 22, 2003, Spokane Valley, pancreatic cancer. Four decades of students passed through her classrooms at Deer Park and Central Valley high schools, and Greenacres and Bowdish junior high schools in the Spokane area before she retired in 1977.

Robert "Bob" Rathjen ('37 Arch. Engr.), 91, April 28, 2003, Bothell, cancer. Licensed as an architect in 1946. Had licenses in four states. Owned an architectural firm in Kirkland, specializing in churches.

Ethel V. Archibald ('38 Bus. Adm.), 89, May 31, 2003, Beaverton, Oregon. Bookkeeper and secretary for Commercial Real Estate.

Dan Winfield Eagle ('39 Bus. Adm.), 89, November 26, 2003, Spokane. Head of national advertising for *The Spokesman-Review* for 38 years. Named Ad Man of the Year by the Spokane Advertising Federation in 1969. One of the founders of the Spokane Interstate Fair. Recipient of the WSU Alumni Achievement Award in 1997.

Barbara S. Schoening ('39 Bus. Adm.), January 28, 2003. Delta Delta Delta sorority.

1940s

Jean Hinton Bennion ('40 Speech & Hearing Sci.), 84, June 16, 2003, Spokane. Homemaker.

Christie Livedalen Carlson O'Connell ('40 Dietetics), 85, September 19, 2003,

Cougar cruise spreads good will on 1,700-mile voyage

TMANY, Washington State University is a landlocked university. But Tom and Barbara Wilson disagree. The Seattle sailors covered 1,700 nautical miles last summer aboard their 53-foot boat powered by twin 700-horsepower Caterpillar engines. The Wilsons started their "Cougar Country Cruise" in Shelton and ended it at Clarkston, before returning home to Seattle. En route they visited WSU Vancouver and WSU Tri-Cities via the Columbia River, and came within 25 miles of the Pullman campus at Wawawai Landing on the Snake River.

Tom Wilson's goal as 2003-04 commodore of the 300-member Cougar Yacht Club is to put on a CYC event in all of the state's 26 "waterfront counties." Along the way, the couple hosted open houses aboard the *Toba*, had potlucks on docks, and dinners at nearby restaurants.

They met "hundreds of wonderful Cougars from all over the state," Wilson says, and signed up 100 new CYC members. The five o'clock receptions varied in size—from six at Starbuck to as many as 40 in Portland, Walla Walla, and the Tri-Cities.

Spokane. First dietitian at Gonzaga University. Joined the U.S. Army Air Corps in 1943 and was stationed in Alaska. Took over parents' farm in Rockford in 1963.

Doris Johnsen Garner ('40 Educ.), 86, June 12, 2003, Spokane Valley. Taught business at Lindberg High School in Valleyford and advised the school newspaper and yearbook staffs. Began teaching at Central Valley High School in 1962. Retired in 1977.

Gordon L. Maurice ('40 Chem.), 84, April 9, 2003, Portland, Oregon. Graduated from the University of Oregon Medical School. Served in the U.S. Army Air Corps during WWII. Cardiologist, medical researcher, and director of the Earl Chiles Research Institute, which he launched in 1965. (See story in *Washington State Magazine*, spring 2002, page 43.)

Russell L. Braden ('42 Econ.), 82, April 4, 2003, Beaverton, Oregon. Served in the U.S. Army during WWII. Taught business at the University of Portland and later was an investment manager for Bill Gregory and Associates.

Georgia Coleman McKinney ('42 Educ.), 86, March 25, 2003, Corvallis,

Oregon. Taught at Powder River and Ontario in Oregon, and Omak and Palouse in Washington. Taught at the University of Florida, 1956-57. Later worked at the University of Wisconsin, Stevens Point.

Robert A. Cleland ('43 Chem. Engr.), 82, April 30, 2003, Tacoma. Army officer in WWII with an amphibious truck company. Participated in the D-Day invasion of Leyte and Okinawa. News director for KELA-AM radio in Centralia. Moved to KTNT-TV in Tacoma as news director. Technical writer for Boeing, 1966-88. Theta Chi fraternity.

Carol P. Jamison ('46 Gen. St.), 78, June 20, 2003, Portland. Owned Jamison's Fashion Artisans in Portland, 1948-72.

Frances L. Smith ('46 Home Ec.), 92, April 11, 2003, Cheney. Taught in Naselle and later in Hoquiam. Ran Smith Jewelers in Cheney for 30 years.

H. Wayne Kirby ('47 Gen. St.), 77, April 20, 2003, Seattle. Ran a division of Lucky Stores when Big Bear was bought out. Promoted to vice president of the San Francisco Bay area and southern California Big Bear stores.



Barbara and Tom Wilson pull in at one of their ports of call.

The exciting thing about the Cougar Cruise, Wilson says, was that it was "a way for the University to expand its connection with alumni, parents, and communities." He attended WSU in the mid-'60s.

The itinerary was planned in January. One concern was navigating the eight locks en route—four dams on the Columbia, four on the Snake. The Wilsons were on the water 12 hours a day along the Washington coast, and one to four hours daily on the rivers. "There was always something to do, Cougars to do it with, and new geography to see," says Wilson, president of Emerald Marketing, a manufacturer's rep firm. Barbara, a retired clinical psychologist, kept the cruise log. For more information, contact Wilson at 206- 784-6297 or tomwilson@aol.com.

—Pat Caraher

Lenore Russell ('47 Arch.), 79, April 5, 2003, Edmonds. Draftsman for Boeing during WWII. Later a real estate agent. Retired in 1990. Founding president of the WSU chapter of the Delta Gamma sorority.

Ednell Snell ('47 Home Ec., '53 M.S. Home Ec., '65 Ed.D.), 82, October 14, 2003, Ellensburg, pneumonia. Longtime University of New Mexico professor of home economics. Received New Mexico's Home Economist of the Year Award. Returned to the Kittitas Valley in 2001.

Don Axworthy ('48 Gen. St.), 81, May 1, 2003, Bozeman, Montana. Became co-owner of Welder's Supply in Seattle in the mid-1960s. Former president of the National Welding Society of America.

1950s

R. Tom Baker ('50 Math.), 74, July 8, 2003, Bainbridge Island, interstitial pulmonary fibrosis. Army officer during the Korean conflict. Worked in the oil fields in Venezuela, 1955-59. Partner with MBA Consulting Engineers, Anchorage, Alaska, 1959-96.

Janet H. Barnes ('50 Bact.), 74, June 24, 2003, Anchorage, cancer. Flight attendant from Seattle to Salt Lake City for United Airlines, 1952-54. Amway/

IN MEMORIAM *continued*

Quixar distributor for past 20 years. Also worked for Anchorage School District Library Resources and was a corporate secretary of Alaska Signs and Barricades.

Army Lt. Col. (ret.) **Wesley B. Brown** ('50 Geology), 75, of Olympia, September 27, 2003, Seattle. Received commission through WSU's ROTC program. Returned in 1957 for three years as an ROTC instructor. Spent 20-year career in the Army. Had assignments in Okinawa, Berlin, Korea, and Vietnam. Retired in 1971 in Olympia. Alpha Gamma Rho fraternity.

Stanley Daniel Cameron ('50 Hist., '51 English, '53 M.A. English), 74, October 28, 2003, San Antonio, Texas. Pursued doctoral studies in English at the University of New Mexico. Joined the English faculty at East Central State University in Ada, Oklahoma, where he remained until he retired in 1991.

Sylvan Rae Ruud ('50 Psych.), 77, May 23, 2003, Arcadia, California. Volunteer and board member of the Colorado Humane Society.

Lt. Col. **Harold "Art" Hunter** ('51 Bus. Adm.), 76, June 11, 2003, Orting. Served in the U.S. Air Force 21 years. An accountant during the Korean conflict and a pilot during the Vietnam War.

Richard Hemmerling ('52 Hort.), 77, June 8, 2003, Portland. Horticulturist in Portland for the Oregon Department of Agriculture for 31 years.

Richard John Smith ('52 Bus. Adm.), 72, June 4, 2003, Spokane. Served in the U.S. Air Force in France and Germany for three years, flying the F-86F fighter jet. Retired from the Air Force as a SAC wing commander in 1976. Piloted the Boeing 707 commercially to Central America, the Mediterranean, and the Middle East as chief pilot for Saudi royalty. Assumed responsibility for the corporate aviation department of Bell South Co.

Ralph Nichol Smith ('53 D.V.M.), 81, May 24, 2003, Hemet, California, cancer. Veterinarian for 50 years.

David Guettinger ('54 Agri., '62 M.S. Soils, '65 Ph.D. Soils), 71, October 2, 2003, Seattle, complications during heart surgery. WSU Extension soil scientist. Worked for Cominco American in Spokane for 23 years. Retired in 1992. Volunteer with the Service Corps of Retired Executives for 10 years.

Roy Joseph McDonald ('54 Bact. & Public Health), 82, October 22, 2003, Colfax. Pioneer in the nursing home industry. Served with the Navy in WWII in the Battle of Bougainville and Guadalcanal. Received the Purple Heart after being wounded in the invasion of Guam. Received the American Nursing Home Administrator of the Year Award in 1967 and 1969, and the American Nursing Home Better Life Award in 1968. Coordinated the repatriation of more than 100 Cuban refugees in 1961 and 350 refugees from Vietnam, Cambodia, and Laos since 1971.

Lois Freese Beaudry ('55 Bus. Adm.), July 15, 2003, Everett. Entered the retailing field, raised four children, retired as a special education teacher in Mountlake Terrace. President of Delta Zeta sorority. One of WSU's outstanding seniors in 1955.

Tom Brutzman ('55 Bus. Adm.), 69, of Kennewick, October 21, 2003, Seattle. Complications after knee surgery. President of Brutzman's, Inc., office solutions in Kennewick. Served on WSU Tri-Cities advisory council for 10 years. Member of WSU Concert Choir and Theta Chi fraternity.

Gerald "Jerry" Kraft ('56 M.S. Entom.), 75, August 16, 2003, Yachats, Oregon. Taught entomology and zoology at Western Washington University for 36 years. Founded the Institute of Freshwater Studies. Chaired the biology department. WWU chief premedical advisor for 20 years.

George Walter Porter ('57 Animal Sci.), 76, April 5, 2003, Midway, North Carolina. Served in the U.S. Navy during WWII. Chief appraiser for the USDA's Farm Home Administration in Washington, D.C.

Richard J. "Dick" Pace ('58 Wildlife Biol.), 70, November 6, 2003, Snohomish. Founded Universal Seafoods, now UniSea, in 1974. Firm president and CEO until he retired in 1998. Served on many governmental committees. Chaired Campaign WSU for the College of Agriculture and Home Economics. Memorial gifts can be made to the Fish-

ermen's Memorial or the WSU Department of Intercollegiate Athletics.

Don Aaron Williams ('58 Police Sci.), 72, July 19, 2003, Benton City. Moved to Salem, Oregon, in 1970. Director of training for the Bureau of Indian Affairs in Portland. Retired in 1978.

1960s

Ken Spain ('63 Const. Mgmt.), 63, April 19, 2003, Vancouver, brain tumor. For 34 years, he worked for the City of Vancouver, B.C., and then for the Vancouver Board of Parks and Recreation as manager of operational systems.

Bjorn Erik Grobstok ('64 Bus. Adm.), 62, September 29, 2003, heart attack. He and his brother, Per ('58 Bus. Adm.), owned Royal Scandinavian Bathrooms. Bjorn wrote his M.B.A. special project paper on Norway as an export market in 1965. He moved to Oslo after college, and started an import business with Per.

Carolyn Schlien Quantrille ('65 Bus. Adm.), 60, June 19, 2003, Spokane. Taught at Washougal High School. Moved to Spokane in 1968 and taught business at Spokane Falls Community College for 31 years. Served as president of the Washington State Business Education Association and was named Washington State Business Educator of the Year.

1970s

Dee Dobbs Harrison ('72 Humanities), 84, September 4, 2003, Centralia. President of the Albion Women's Club, head of the Albion Library, and president

Cougar finds a home in fraternity house

After roughly 45 years, S.J. "Bill" Monro's prized cougar has a new home. The longtime San Francisco restaurateur donated the stuffed animal to the Washington State University chapter of Sigma Nu fraternity.

His wife, Barbara, discovered the specimen among a number of stuffed Northwest animals on auction in San Francisco nearly a half century ago. She purchased the five-foot-long, 300-pound cat as a gift for her husband. It has occupied a prominent spot in the "Cougar Room" of the family home.

"It should be a good conversation piece for the Sigma Nus," he says.

The Monros returned to Pullman in late April with other members of the Class of '43, which celebrated its 60th anniversary along with the "Golden Grads" of the Class of '53.

For years WSU maintained a live cougar in a pen near the northeast corner of Martin Stadium. In the early '70s, Monro and other alumni spearheaded a drive to enlarge the cage. When "Butch VI," last of the live Cougar mascots died in 1978, students voted to discontinue keeping a live cougar. Since that time, human mascots dressed in a cougar uniform have carried on the Cougar tradition.

Monro spent 50 years in the hotel and restaurant business—all in the bay area. He owned the Raphael Hotel, Pam Pam East Restaurant, and Rosebud's English Pub.

In the photo, he and Barbara are pictured in the front row, center. Other Sigma Nu alumni include Doug Wilcox, far right, and next to him, Bob Smawley. They are joined by several current members.



DEAN HARE

—Pat Caraher

of the Guy-Albion Historical Society. Author of the book *Albion School Days 1885-1946: A History and Album of the Albion Schools* in 1989.

Bruce G. Fritch ('76), 48, May 15, 2003, Snohomish. Second-generation owner and operator of Fritch Mill, which was started in 1950. Owned an apple orchard in Manson.

Ruth Harriet Thorne Gray ('78 M.A. Clothing & Textiles), March 14, 2003, Prescott, Arizona, cancer. Lived in Hawaii before moving to Arizona.

1990s

Peter Michael Putnam ('90 Bus. Adm.), 35, October 20, 2003, Twin Lakes, Idaho. Lived and worked in Reno, Nevada, Palm Springs, California, Graham, Washington, and Seattle until the time of his illness in Anchorage, Alaska, where he sold commercial insurance. Sigma Nu fraternity.

2000s

Rafael Mendoza ('00 Fine Arts), of Pullman, October 14, 2003, Sacred Heart Medical Center, Spokane, apparent aneurysm.

Linda Kay McDowell Sillito ('00 Elem. Educ., '00 Teach. Cert.), 53, April 25, 2003, Benton City. Schoolteacher and resident of the Tri-Cities area for the past 26 years.

Faculty and Staff

Isaac Ferguson "Ike" Deeter ('29 Phys. Educ., '32 M.S. Phys. Educ.), 101, November 29, 2003, Pullman. WSU boxing coach, 1931-1959. His 1937 team won WSU's first national championship. After WSU dropped boxing, he continued to teach physical education classes in boxing and fly-fishing until his retirement in 1965. Served in the U.S. Navy for four years during WWII. He was one of the inaugural inductees into WSU's Athletic Hall of Fame in 1978. (See story in *Washington State Magazine*, winter 2002-03, page 50.)

Joyce Guske, 75, June 5, 2003, Moscow, Idaho. WSU accounting assistant for 30 years.

Larry D. Myers, 66, July 20, 2003, Palouse. Purchased the Pullman City Club with a partner in 1968. Renamed it Charlie Brown's Tavern. Started C and L Vending in 1969. Moved to Palouse in 1970 and started the Wooden Nickel Tavern. Worked as a maintenance mechanic for WSU.

Vernon A. Hanson, 71, October 17, 2003, Moscow, Idaho, apparent heart attack. WSU electrician from 1976 until his retirement five years ago.

Marvin W. Kammeyer, 83, October 21, 2003, Hope, Idaho. Served with the Army during WWII and the Korean War. WSU carpenter, 1952-74.

Late history professor, chairman was popular with students, faculty peers

RAYMOND MUSE became a teacher at the urging of his father, a farmer in the Ozarks, who didn't want to see his son spend the rest of his life "looking at the hind end of a team of mules."

During more than three decades at Washington State University, the history professor earned "favorite teacher" status from thousands of students. Faculty peers praised his leadership. His tenure as chairman was the longest in the department (1956-79).

Muse died October 28, 2003, in San Diego, California, after a long illness. He was 88.

His teaching career began at age 18 in a rural one-room school, not far from Marshfield (Missouri) High School, where he was a champion debater. He graduated from Southwest Missouri State University (SMSU) in 1938, and completed his master's degree (1943) and a Ph.D. (1948) at Stanford. His dissertation evaluated the work of William Douglass, a physician and historian in colonial America.

He joined the Army in 1942, and married Alberta Baldrige on Easter Sunday 1944. Muse was a traffic analyst and cryptanalyst in Asia, primarily in Delhi, India, until World War II ended. Then he taught at SMSU before completing his doctorate. He joined the WSU Department of History and Political Science in 1948. By 1956, he had become chair of the newly formed Department of History. By the time he retired, the history department was ranked among the top 15 percent in the United States. The department had seven professors and offered courses in U.S., Latin American, European, and Asian history when he was named

chair. By 1979, it had grown to 22 faculty members and two lecturers.

"Ray had a national reputation among colleagues who knew him as a 'consummate' department chair, thanks to his ability to know all the buttons to press when he needed a new desk, a promotion for a department member, tenure, or whatever," said longtime colleague Ed Bennett.

Muse played a major role in the establishment of the WSU Faculty Senate and the creation of the Asian studies and American studies programs.

"Ray's strong suit was the ability to cast a rosy glow on the direst conditions or the gloomiest prospects and make a person or an entire department feel good about themselves," offered David Stratton, Muse's successor as chair. "He was a 'human engineer.'"

Muse's sense of humor was legendary. Not only did it appear in relations with colleagues, but it also enlivened his classes.

C.J. "James" Quann, WSU registrar emeritus, was enrolled in Muse's American history class in the spring of 1951. It was a period when President Truman was being widely criticized. Quann remember Muse predicting, "You students mark my words. In due time, history will prove that Truman was one of the best presidents this country has ever had."

Muse loved teaching, particularly the introductory U.S. history course.

"That's where the freshmen were—and potential historians," said Muse.

"There will always be a place [job] for top history graduates . . . It's quite appropriate for historians to go into communications, journalism, government service, and many other places where they should have been going all the time but didn't, because they loved to teach. And that would include me."

Muse was a fervent supporter of civil liberties and free speech, demonstrated best perhaps by his testimony in the landmark John Goldmark libel trial in 1964.

The eighth floor of Orton Hall, a student residence, and the history department office in Wilson Hall are named for Muse.

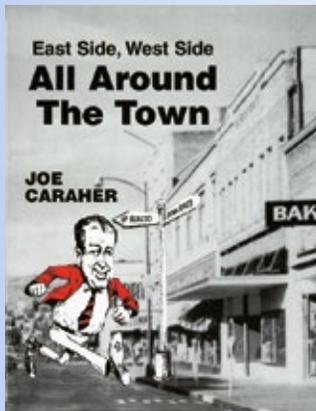
Alberta, Muse's wife of 24 years, died in 1968. In August 1969, he married Marianne Johnson, widow of Verner L. Johnson of Pullman. Muse's survivors include his widow and stepsons, Dean L. Johnson ('65 English), Annapolis, Maryland; Owen V. Johnson ('68 History), Bloomington, Indiana; and Kyle R. Jansson, Monmouth, Oregon. Memorial gifts can be made to the Raymond Muse Scholarship Fund, WSU Department of History, PO Box 644030, Pullman, Washington 9916-4030.

—Pat Caraher

Raymond Muse



BOOKS, etc.



East Side, West Side, All Around The Town

By Joe Caraher '35
Pajokirk Publishers, Naples, Florida, 2003

Best job of 'em all: Newspaper columnist," writes Joe Caraher ('35 Education) in the introduction to *East Side, West Side, All Around The Town*, a collection of some 1,000 columns he has written for Northwest newspapers over the past half century.

If you've bumped into Joe anywhere since he left Washington State College, it's better than even money your name appears in his book. Caraher seldom forgets a name or a face, never forgets a good story.

Joe graduated with a five-year degree in education. He landed a job as sports editor and general assignment reporter with *The Bellingham Evening News* shortly afterward. Earning \$18 a week, he was in hog heaven. He had a real newspaper job; was playing baseball at \$5 a game with the semipro Model Movers; picked up another \$7 ("for a little puff in *The News*") from the local chiroprapist who was promoting weekly wrestling matches in town; bought his first car; and got married November 11, 1935, to Marcella Dunnigan, a black-haired beauty he'd "spotted one Sunday at the 9 o'clock Mass."

It was too good to last. The *Evening News* went belly-up after an ill-considered strike, and Joe didn't get back into the newspaper business until the 1950s—four or five short-term jobs, a six-year hitch as an officer in the U.S. Army Air Corps during World War II, and three children later. Old friend Walt Irvine asked Joe to join him as an owner of *The Eastside Journal*, a weekly newspaper in Kirkland, and that's where this book—and Caraher's column-writing—really takes off.

Joe named the column "East Side, Best Side, All Around the Town," when he introduced it to *Journal* readers on the east side of Lake Washington. When he moved to

Kalispell, Montana, as editor-publisher of *The Daily InterLake* for the Scripps League Newspapers in 1960, he made it "East Side, West Side," and kept it that way, when he went on to the top job with *The Herald & News* in Klamath Falls, Oregon, in 1963. That's the way it has stayed for 43 years now—and counting. Officially retired, Joe still writes a Sunday column for the *H & N*.

There are so many great stories in Caraher's book: laughers and tearjerkers; historical stuff, including lots of World War II yarns with a personal twist; family memories that any reader will relate to his/her own life, and column after column of just wonderfully warm, folksy writing. You'll know many of the people Joe writes about, and you'll feel as if you've known a lot more after you've read about them. Caraher writes with great empathy. "Touch," they call it in the trade. One of Joe's prized possessions is a letter from the late, great *San Francisco Chronicle* columnist, Herb Caen. The envelope is addressed to "Joe Caraher, A Real Columnist."

If you're looking for famous—or at least well-known—names, *East Side, West Side, All Around The Town* is a mother lode. Joe writes of Col. Ross Greening and *Thirty Seconds Over Tokyo*, and Marine Gen. John Kinney, two old WSC classmates, who became genuine heroes in WW II. He has some good stuff on Bill Mauldin (*Up Front with Mauldin*), the most famous battlefront cartoonist of the war, and Andy Rooney (yes, he of *60 Minutes*). Caraher met both of them during his two years in Italy with the 12th Air Force. (You'll laugh out loud at Joe's exchange with Rooney on Edward R. Murrow.) And if you are of an age to remember the *Timeout for Tiede* columns in *The Daily Evergreen*, Joe's lines on their author, Tom Tiede '59, whom he hired on at *The Daily InterLake* as a cub fresh out of college, are, shall we say, memorable! Tiede went on to win the Ernie Pyle Award as a war correspondent in Vietnam.

Did I tell you Joe does some cartooning in his book? His best effort is from his "Memories of Rome, '44-'81." Two guys are standing in front of a ticket kiosk outside the Colosseum. One guy is wearing a suit and has on a derby; the second guy is attired in a Roman toga, has one of those Laurence Olivier-Julius Caesar haircuts, and is wearing strap sandals. A billboard reads:

LIONS AT HOME

vs. Saints, Oct. I

vs. Tigers, Oct. VIII

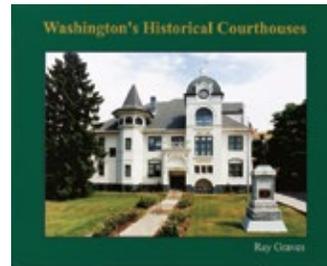
vs. Cougars, Oct. XX.

The guy in the derby says to the ticket-seller: "Signorina . . . two on the XX yard line, please!"

Joe adds a postscript: "After first visiting the Colosseum, it was easy to see the Saints didn't have any homefield advantage."

For more information, contact the Student Book Corporation, 509-332-2537.

—Richard B. Fry, former manager of the WSU News Service and author of *The Crimson and the Gray: 100 Years with the WSU Cougars*



Washington's Historical Courthouses

By Ray Graves '50
Elfin Cove Press, Bellevue, Washington, 2002

In *Washington's Historical Courthouses*, Ray Graves ('50 Political Sci.) has compiled a wonderful pictorial survey of the proud cultural and architectural heritage of the state. It contains beautiful photographs by Erick Erickson, a thoughtful introduction by Chief Justice Gerry Alexander, and a very interesting discussion of the historic development of each of the state's 39 county seats and the architectural qualities of each courthouse built before 1930.

The book makes an important contribution to the history of the state's cultural development, and it establishes a very useful typology of this prominent building type. It is amazing to review the variety and creativity of design in these courthouses and to imagine the supportive and proud communities that built them.

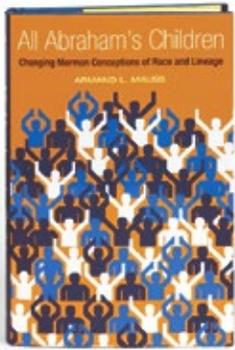
Both the author, a practicing attorney with some 50 years of experience in many of these buildings, and Alexander convey a passion for these fine buildings and express regret that some—represented in the book by historical photographs—have been destroyed. In the case of the latter, it would have been thought provoking to supplement the historical photos with contemporary images of the buildings that replaced them. In a few counties that I am familiar with, the replacements are not of the same quality as their predecessors. These contrasts raise serious questions as to why county leaders decided to destroy the more elegant reminders of their past and build such modest replacements.

We must think twice, and maybe more than twice, when confronted by the need to destroy our historic resources. As J. Smigielski warns, "A city without historic buildings is like a [person] without a memory."

In this respect, it's good to note that many of the courthouses depicted in this book are still in use today. Many communities are trying to save these irreplaceable resources, and design professionals are finding ways to reanimate these important historic buildings. By lovingly gathering images of the structures between the covers of a single book, Ray Graves has done a great deal to advance these efforts.

For more information, see www.mcgavick.graves.com/washington.htm.

—Tom Bartuska, professor, School of Architecture and Construction Management, Washington State University



**All Abraham's Children:
Changing Conceptions of Race
and Lineage**

By Armand L. Mauss
University of Illinois Press, Champaign, Illinois, 2003

This thoroughly documented study of race and identity within the Church of Jesus Christ of Latter-Day Saints unravels various ways Mormons have constructed and negotiated their identity throughout history. Armand Mauss, professor emeritus of sociology at Washington State University, makes the intriguing argument that Mormonism provides a unique case in which religious prejudice or particularism actually undermines secular prejudice. While Mormon relations with other races have not been without difficulty, documentation provided here demonstrates that in specific cases, Mormons hold less prejudicial attitudes than other white Americans.

This is due, according to Mauss, to a theology linking Mormon lineage with other ethnic groups. Believing Native people of the Americas to be the "Lamanites" of the *Book of Mormon*, a group sharing their divinely chosen lineage, Mormons treated Native Americans with unique respect from the mid-19th century. Israelites, too, occupy a special place in this lineage, and Mormons have for the most part abandoned their few and largely unsuccessful historical attempts to proselytize Jews. Mormon relations with Blacks have improved in recent years, after a long span from Brigham Young's presidency until the Mormon proclamation of inclusion in 1978, when many Mormons believed Blacks were of a cursed lineage.

Utilizing a wealth of data, including decades of his own survey work among Mormons, Mauss demonstrates that the construction of Mormon identity has shifted as a direct result of encounters with these others—away from a superior status based upon lineage to an emphasis on a universal appeal to all to embrace their shared heritage as children of Abraham.

While it may be that a universal call for all people to come to Christ signals a partial repudiation of racism, the reader may question whether a religion holding the missionary belief that people of all races will eventually revoke their own beliefs to embrace the universal appeal of Mormonism, can ever truly escape ethnocentrism.

Yet, this impressive work offers a provocative and challenging contribution to Mormon histo-

riography, as Mauss provides evidence that not only has the missionary activity of Mormons changed the world, but the world has changed Mormonism.

For more information, see www.press.uillinois.edu/s03/mauss.html.

—Gail J. Stearns, director, *The Common Ministry* at WSU, and adjunct professor in WSU's Honors College and Department of Women's Studies

**Acoustic
Jazz Quartet:
Organic**

Orion Records,
2002



It becomes clearer the longer you listen to *Organic* that the title of this CD indicates the playing style that the Acoustic Jazz Quartet allows to grow in the middle of its straight-ahead jazz sounds.

Most of the numbers begin simply—almost conventionally—with the percussion and bass coming in light and crisp. Drummer Dean Koba blithely keeps his strokes quick and precise, filling out the ensemble with a skittering, crystalline backdrop. Bassist Zac Matthews ('92 Music) is spry, placing most of his notes on top of the

beat, which propels the music even as it gives everyone room. And when he takes the lead, as he does on "Jumpin' Out," one of *Organic's* 10 substantial tracks, Matthews's flurries of notes merge seamlessly with Koba's drumming, making the whole thing sound like carefully controlled free jazz.

David Sills lets his saxophone provide most of the album's melodic drive, even when he blurs his melodies into long, unending lines. Jamie Findlay's guitar playing wanders capriciously over the entire range of his instruments, punctuated with acid-bright chords. On "Song of the Century," he plucks fistfuls of notes, but lays wisely back on the following number, "Darkness Upon the Earth," allowing his graceful melodies to unfurl from the song's misty texture.

The mood of *Organic* seems to be one of constant, relaxed play back and forth between old-school-style bop and broader, more abstract, and splashy sounds. By laying down a firm, almost square ground, each soloist is given room in which to play, stepping into the spaces between the beats and making room for the individual musical lines to take root and blossom.

For more information, including sound clips, see www.AcousticJazzQuartet.com.

—Marty Demarest

Marty Demarest is a writer living in Spokane.

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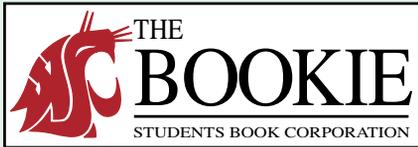
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Transforming the Future

WSU Launches Initiative in Entrepreneurship and Innovation

By Robert C. Bates, Provost and Academic Vice President,
Washington State University

Imagine Washington State University graduates pursuing careers in education, the arts, as veterinarians, pharmacists, scientists and mathematicians, as architects and community planners—armed not only with in-depth knowledge of their respective fields, but also the skills and vision to change their discipline in ways previously unimagined. These leaders think creatively, collaborate with others in value-adding ways, and bring ideas to life, taking their place as innovators in their schools, organizations, businesses, and communities. Their “world-class, face-to-face” education at WSU has uniquely prepared them to carry the ethic of hands-on excellence with them throughout their careers, affecting the lives of others across the state and nation.

Thanks to the leadership of entrepreneur C. Gus Grant

While broadening her students' knowledge, Professor Kim Kidwell (right), Crop and Soil Sciences, also seeks to help them develop critical reasoning skills.



(’41 B.S.) and his wife, Betty, Washington State graduates will soon have the opportunity to begin their careers with a skill set that distinguishes them from other college graduates. The WSU Initiative in Entrepreneurship and Innovation seeks to expand entrepreneurship education beyond its traditional place in the business curriculum, with the goal of infusing the principles of successful innovation across the University.

The Grants and their longtime friends, Bettie (’56 B.A.) and Don (’56 B.S.) Steiger and Jack Dillon (’41 B.S.), know the challenges of entrepreneurship firsthand. Gus Grant has founded or been a key player in the startup of more than 25 companies. His successful career includes familiar names like Sprint and Teledyne Waterpik. Jack Dillon served as an agent of change over the course of a distinguished career in the Navy, retiring as a rear admiral, and with Bechtel. Don

Steiger’s leadership skills were honed in a successful career with the U.S. Army. Bettie Steiger is recognized as a futurist for leading-edge concepts, having spent her career in the fast-moving technology sector.

The Grant team, working with University leaders, has spent the past two years developing a shared vision for a revolutionary departure from traditional entrepreneurship education. In doing so, they have shaped a transformation that will position WSU as an international leader in entrepreneurship and innovation. Entrepreneurs have been responsible for 67 percent of inventions and 95 percent of radical innovations since World War II. Entrepreneurship is a vital economic engine, creating jobs, new products, and concepts that change people’s lives.

Yet, some studies show that more than 90 percent of new businesses fail. As Gus Grant likes to point out, if the success rate of new businesses merely doubled, the impact on the national and international economy would be phenomenal. Grant's belief that this success rate may be achieved through an educational approach that equips college graduates with the knowledge and skills necessary to behave entrepreneurially throughout their careers has been embraced by the WSU community. In addition to President Rawlins and myself, College of Business and Economics dean Len Jessup and College of Engineering and Architecture dean Anjan Bose, along with other senior administrators and faculty leaders, have come together in support of this effort, reflecting this initiative's cross-disciplinary nature. The University and the WSU Foundation will be aggressively seeking investment from a variety of sources to fully implement the initiative.

As WSU seeks to build strategically on traditional areas of strength, the Initiative in Entrepreneurship and Innovation will be constructed on the foundation of WSU's business entrepreneurship program, which is already ranked in the top 25 in the nation by *Entrepreneur* magazine. The initiative, which will require a joint-venture funding model, seeks to create the infrastructure and impetus for the broad entrepreneurial thinking that allows students to capitalize on their ideas in a fast-paced, technology-driven global economy and that enables them to become social innovators.

Private support from individuals, foundations, and corporations will be required for this transformation. The College of Business and Economics will become the College of Busi-



Professor Joe Valacich, Management Information Systems, chats with students in an electronic classroom in the College of Business and Economics. The new \$500,000, 48-station facility offers the opportunity to work with the latest hardware and software, as well as networking technologies.

ness and Entrepreneurship. We envision a University unit to serve as a nexus between the re-engineered college and all other disciplines on campus. The unit will function as a collaborative incubator for high-potential students who want to become the innovators of tomorrow. Program elements include recruitment of high-ability students and world-class faculty experts, involvement of prominent entrepreneurs in all levels of implementation, a cross-disciplinary curriculum, and partnerships with business and industry, leading to real-world experiences for student and faculty participants. All of these elements speak directly to two of WSU's core strategic goals—providing the best undergraduate education at a research university and world-class research.

a THOUSAND WORDS *Photograph by Robert Hubner*



HOLIDAY BOWL, DECEMBER 30, 2003.

For more Holiday Bowl photos, see <http://bowlgame.wsu.edu/holiday-03-gallery-pages/index.html> and <http://wsucougars.ocsn.com/sports/m-footbl/spec-rel/123003aaa.html>.

Lightys Recognized for Lifetime Achievement



Phillip and June Lighty

Over many years, Phillip '40 and June Lighty have selflessly given of themselves to make Washington State University "World Class. Face to Face." In recognition of their support, the WSU Foundation formally recognized the Lightys' lifetime of achievement during

the Foundation's 24th Annual Recognition Gala in October 2003.

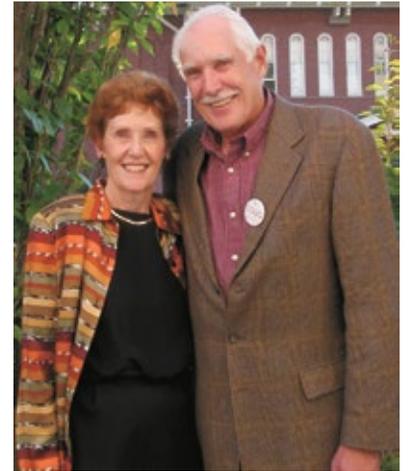
For more than 50 years, the Lightys' gifts, caring, and warm regard for Washington State have touched a number of areas across the University—from Phil's beloved Pi Kappa Alpha fraternity to Athletics, and from the Alumni Association to Veterinary Medicine and the Annual Fund. The Lightys also carry the distinction of having established the largest pool of endowed scholarships at WSU, assisting more than 100 students with their educational expenses.

In addition to being WSU Laureates and Legacy Associates, the Lightys are also loyal volunteers and Honorary Life Trustees. They are recipients of WSU's Alumni Achievement Award, Outstanding Service Award, and Weldon B. Gibson Distinguished Volunteer Award. June, a graduate of Stanford University, is an honorary WSU alumna.

Kimble Collection a Northwest Treasure

With the support of WSU alumni Wallis '68 and Marilyn '64 Kimble, the WSU Libraries are working to preserve the valuable but deteriorating Pacific Northwest Newspaper Clippings Collection by creating the Wallis and Marilyn Kimble Northwest History Database, a sophisticated, searchable online resource. Students are working to digitize the collection's 300,000 newspaper articles and have completed 20,000 to date.

They are also adding primary source materials pertaining to the settlement of the Northwest, such as government reports, laws, maps, and photos, and links to other pertinent sites as the database evolves. The collection provides an



Wallis and Marilyn Kimble

in-depth, firsthand look at the issues and events important to the Northwest from the 1890s to 1940s, a period of rapid growth and development in the region.

McFadden Lends His Support

Former WSU faculty member Bruce McFadden recently created a \$25,000 gift annuity to benefit the McFadden/Yount Scholarship in Chemistry and Biochemistry. The scholarship will provide one or more awards for students majoring in biochemistry/biophysics and chemistry.

McFadden and Prof. Ralph Yount were instrumental in creating the biochemistry degree program, and then department, at WSU in the late 1960s.



Duane Kaiser '48

"I came to WSC in 1941 because another Cougar explained to me the unwritten code of the hills:

Cougars always help Cougars.

Throughout my life I've found this to be true, and it's what I've always tried to do."

—Duane Kaiser '48

What's Your Legacy?

Helping other Cougars is Duane Kaiser's legacy. The scholarships he established at WSU, funded with annual gifts and Charitable Gift Annuities, enable generations of students to earn a world-class education from Washington State University.

For more information on creating your legacy, contact the Gift Planning Office at 800-448-2978.