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Washington State magazine

Cover story

Out of the Past, a Perennial Future for Eastern Washington

Shakespeare, Alhadeff, and Lewis and Clark

SUMMER 2004
VOLUME 3, NUMBER 3

Washington State magazine

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features

Cover: Perennial wheat is not a new idea. But its development on top of increasing input costs and environmental concerns could help secure agriculture's future in eastern Washington. See story, page 33. *Photograph by Robert Hubner*

DON SEABROOK

panoramas

tracking the cougars

ROBERT HUBNER

LAURENCE CHEN

WashingtonState magazine

VOLUME 3, NUMBER 3, SUMMER 2004

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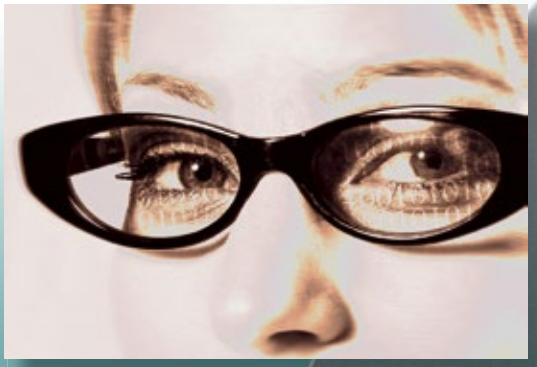
Spectacular.



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There's power—and money—in the heat generated by the millions of electronic devices in use today.

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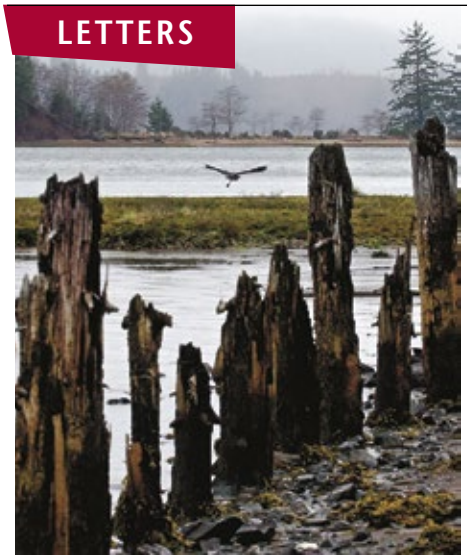


Willapa Bay

The article on Willapa Bay and the problem with the invading *Spartina* was very well done. I was, however, distressed to observe the omission of some key people . . . .

Kathleen Sayce '78, Master of Science, Botany. A longtime native of the bay, and daughter of researcher Clyde Sayce, Kathleen produced the first original public report on *Spartina* in Willapa Bay for the refuge, published in 1988, and was the first to publicly champion her concern about the fast-spreading *Spartina* in the bay. She has lived next to the bay all her life and is one of its strongest proponents.

James E. Durfey, CAHNRS, '73 Forestry, '87 Ag. Ed., '89 Master's (Adult Education), currently senior instructor, Agricultural Technology and Management.

As your article briefly noted, *Spartina* is not the only foe faced by the bay and the oyster growers. Jim began working several years ago with the oyster growers in their struggle against the burrowing shrimp. He is currently working with them to use different farming methods to develop an eco-friendly alternative to the chemical carbaryl.

Steve Harbell is chair of extension in Grays Harbor and Pacific counties and is an area marine resources extension agent, providing technical assistance and educational programs for the commercial fishing, aquaculture, and seafood-processing industries. Marine education, seafood utilization and safety, and marine exotic species management are also included in his program. Steve has a B.S. degree in fisheries from the University of California, Davis, and an M.S. in fisheries from the University of Washington. He is WSU's on-site specialist and has been a strong leader in the Willapa Bay study and research. For details, visit http://graysharbor.wsu.edu/WaterQual/index.html.

Judith Durfey, Principal Assistant
Office of Business Affairs, WSU

A Wasp by Any Other Name

As a grad student at WSU, I had the unique experience of working with the late Dr. Roger Akre, a recognized world expert on yellow jackets. One of Dr. Akre's pet peeves was people calling yellow jackets, which are wasps, bees. He was quick to correct anyone making that mistake. I worked with Roger for over eight years. To this day, I have a visceral response when yellow jackets are called bees. In memory of my old mentor I have to point out the error in Ms. Hilding's article on page 16 of the spring 2004 *WSM*. The article is about WASP traps, not BEE traps.

Gregory S. Paulson '90 Ph.D.
Associate Professor and Chair, Dept. of Biology
Shippensburg University
Shippensburg, Pennsylvania

WASL

As both a WSU alumna and a member of the K-12 education community, I was disappointed to read the attack on Washington's highly regarded state assessment by a retired professor in the last issue of *Washington State Magazine*.

More than 10 years ago, Washington citizens launched a major education reform effort, because far too many of our students were continuing to graduate from high school without the reading, writing, and math skills they needed to succeed in the adult world. Since 1993, thousands of teachers, parents, administrators, community and business leaders, legislators, and other concerned citizens have worked together to create statewide standards that specify what students should know and be able to do by the time they graduate from high school and to create the assessment—the Washington Assessment of Student Learning—we now use to help measure whether students are meeting those statewide standards.

The WASL is a nationally regarded assessment. Each assessment question correlates with at least one state learning standard. The test requires students to demonstrate the ability to think and apply knowledge, not just memorize facts. The items on the test better assess thinking and responding skills, because students don't just answer multiple-choice questions—they also answer short-answer and extended-response questions. Independent studies completed by researchers at Princeton, Stanford, and elsewhere have praised the test's structure and rigor. National assessment experts have confirmed the WASL's reliability and validity—it's measuring what it's supposed to be measuring.

Students don't get their test booklets back with their WASL scores, because many of the questions on each year's assessments will be used again in the future. But teachers and administrators receive a wealth of feedback from these assessments that allows them to pinpoint students' strengths and weaknesses at the individual or classroom level and district-wide. About one-third of the test items are publicly released each year, along with detailed information about how those items are scored, so anyone who is interested can learn more about the kinds of skills students are asked to demonstrate. In addition to releasing test items, the Office of Superintendent of Public Instruction provides schools with data that show how their students performed on each released item compared to other schools in their district and statewide. Check these test questions out at

http://www.k12.wa.us/assessment/WASL/testquestions.aspx. The item analysis data can be found at http://www.k12.wa.us/Item Analysis/default.aspx.

The WASL is a challenging assessment. It needs to be. It directly measures students' progress toward our state learning goals—goals that have been set to prepare our children for the realities of the complex and competitive 21st-century world they will face. And before the 10th-grade test becomes a graduation requirement in 2008, more support for students will be in place, including the ability to retake all or portions of the test up to four times, a score-appeals process, and an alternative assessment for students who need another option to show they've met state learning goals.

We have much more work to do to help our students attain the fundamental skills they need as adults, no matter what their career path. We have particular challenges in closing the achievement gap that exists between wealthy and poor students and among ethnic groups. But we are not doing our children any favors by burying our heads in the sand and continuing to graduate students who cannot figure percentages, interpret the meaning of what they read, or clearly explain their thoughts in writing. The WASL is not the only means of measuring those skills, but it is one excellent, needed tool.

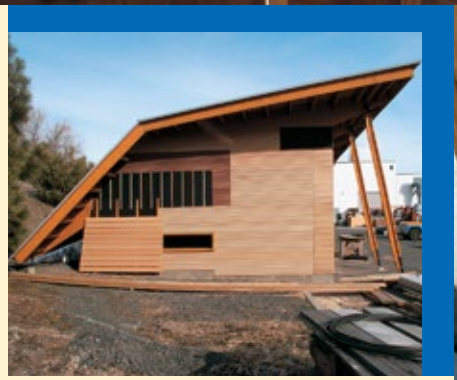
Shirley Skidmore '84 Comm., '89 M.A. Comm., '02 English
Director of Communications
Washington Superintendent of Public Instruction
Olympia, Washington

Musing on Muse

Upon hearing of Ray Muse's death, it was with great sadness that I realized there would only be one Ray Muse in this world. Then I realized how absolutely marvelous it was that I had had the opportunity to have known and been taught by Ray Muse.

Vann Snyder
The Snyder Company
Boston, Massachusetts
ASWSU Vice President 1978-79

Wave of THE



FUTURE

by Nella Letizia • photography by Robert Barnstone

HANDS-ON TRAINING doesn't get better than this. After six months of construction, Washington State University assistant professor of architecture Robert Barnstone and 10 architectural design students recently completed what is essentially

the world's first wood-plastic building.

The project is a demonstration for the U.S Navy to show that wood-plastic products can be used wherever wood comes into contact with the elements, Barnstone says. The result is a structure at WSU's Wood Materials and Engineering Laboratory (WMEL) that represents the ultimate in "reuse and recycle," built entirely by undergraduate students from the architecture and engineering programs. The overall project engaged students, professionals, and professors, who guided graduate students in tackling problems in structural engineering, code compliance, materials engineering, and design. The building will be used for storage and materials testing. Students' labor was paid through a grant from the Navy.

Barnstone and his third-year architecture students utilized many materials invented at the WMEL, such as laminated veneer lumber, I-joists, and oriented strand board.

The composite lumber alone is a major advance in construction. It's made of wood-pulp waste rather than old-growth timber, Barnstone says. "This is basically a building made of waste

products. It's about industry gearing up to use its own waste products and turn them into viable and profitable components for the marketplace."

When combined with plastic, the wood waste can be extruded to practically any length necessary. "In this case, we extruded a few boards that are 35 feet in length and placed them on the south façade," he says. "It is just not possible to have natural lumber with these lengths today."

Because of the lumber's flexibility, the team experimented with different configurations in structural portal-arch box-beam designs, similar to Frank Lloyd Wright's Usonian home of the 1930s. The WSU building features boxed beams made into whatever shapes Barnstone and the students wanted. Indeed, the structure twists up and down, bulges in and out—it almost seems to breathe.

"The whole thing is a big wave coming across the parking lot," Barnstone says.

The builders installed three sets of exposure racks for future materials testing. The products on the test racks can be easily disassembled so new materials can be evaluated every couple of years.

Finally, to protect the wood-composite materials from the sun's ultraviolet light, Barnstone's team worked with paint colors and photo inhibitors that can alleviate degradation.

Like any other grand experiment, the building presented a few snags that tested the team's adaptability. The structure rests on plastic piers, attached to I-joists by carriage bolts. The bolts split the first set of piers, after a third of the framing was completed. The team had to jack up the building to replace the split piers with new ones that were not as brittle. Thankfully, foreman David Curran, a fifth-year architecture and construction management major from Quincy, Washington, has eight years of construction experience. He's familiar with construction delays and its snail's pace.

"People don't realize the tedious process construction is," Curran says. ■

A SENSE OF PLACE

Gardening on the Palouse

by Tonie Fitzgerald

THE AREA KNOWN to practically every Washingtonian as "the Palouse" is one of six large grassland communities in North America. The Palouse stretches from just south of Spokane to the Snake River valley, near Moscow and Pullman. Today, it is a fertile farmland, covered in wheat and other grain crops. But prior to the 1870s and the arrival of "New-World" settlers, these rolling hills were blanketed in perennial bunchgrasses and forbs, which had dominated the landscape for five million years. Those native plants are now found only in tiny pockets around old cemeteries, along creeks, and in other unplowable places.

Some gardeners in the area are joining forces with other plains dwellers of our nation in creating what have come to be called prairie gardens. Prairie gardens comprise the grasses and wildflowers that flourish in open, sunny spaces. Think of

A remnant of native Palouse prairie on Smoot Hill, north of the Pullman campus, suggests many possibilities for a prairie garden.

ROBERT HUBNER

meadows with tall grasses waving back and forth in gentle breezes. Think of plants with nodding, bonnet-shaped flowers gracing the landscape with drifts of blues, purples, pinks, yellows, and reds. (Think television commercials for allergy medicines!) Prairie gardens recall the land as it looked prior to the advent of our modern landscapes of large-scale agriculture, suburbia, and urban sprawl. They also provide refuge for the diminishing number of plants that once dominated our grassland communities.

Actually, there are three types of plant communities in the Palouse: grassland, butte, and riparian. Gardeners may choose from among the plants that naturally occur in these communities to plan a garden area with more structural diversity than is found in a typical prairie garden.

A grassland plant community is dominated by perennial bunchgrasses interspersed with wildflowers that thrive in open, sunny areas, such as lawns. Gardeners can replace their lawns, or portions of them, with native perennial bunchgrasses and flowers to create a prairie garden.

Idaho fescue, bluebunch wheatgrass, blue-eyed grass, biscuitroot, arrowleaf balsamroot, shooting stars, brodeas, kittentails, and prairie smoke are all native to the Palouse.

The butte plant communities occupy the peaks and ridges that rise above the Palouse, such as Steptoe and Kamiak buttes. The south-facing slopes are sunnier than the north sides and dry out sooner in the spring. They support shrubs such as hawthorn, serviceberry, mock orange, and wild roses, as well as lupine, arrowleaf balsamroot, and paintbrush. The ridgetops are the driest sites on the Palouse and are populated by ponderosa pines, snowberry shrubs, glacier lilies, spring beauties, yellow bells, and Clarkia flowers. The north slopes remain cooler and wetter longer into the spring. Here you see Douglas fir, larch, and pine trees as well as the shade-loving trillium flowers, fairy bells, Solomon's seal, and calypso orchids.

The third type of plant community in the Palouse is the riparian community, which runs along the creeks and drainages. These water sources support thickets of trees, hawthorn shrubs, and wild roses where deer, coyote, and birds find shelter and food.

Creating a Palouse Prairie Garden

IF YOU WANT to reclaim a bit of the original Palouse prairie on your own property, replete with songbirds and butterflies, you can access a growing body of information on creating prairie gardens. A true grassland prairie garden of grasses and wildflowers needs to be in an open area in full sun. Start with clean, weed-free soil and seed it with a custom mix of native grasses and/or wildflowers available at any of the local seed companies listed here.

Do not use generic "wildflower" mixes. They contain quick-growing species that become invasive, such as California poppies, or even weeds. Your prairie garden will soon be taken over by these nonnative types.

If areas on your property mimic the microclimates found on hillsides, such as north sides of buildings or south-facing walls, don't be afraid to try some of the native trees and shrubs from the butte plant community. The varied heights, forms, and textures will add interest for you and the birds who miss the plants of a bygone era. ■

A WSU/Spokane County extension agent in horticulture, Tonie Fitzgerald is author of Gardening in the Inland Northwest *(Washingtron State University 2001).*

PALOUSE-AREA SEED COMPANIES

Grassland West
Clarkston, Washington
509-758-9100
www.grasslandwest.com

Sun Mountain Native Seed
Spokane, Washington
509-835-4967
www.sunmountainseeds.com

Rainier Seeds
Davenport, Washington
509-725-1235
www.rainierseeds.com

Plants of the Wild
Tekoa, Washington
509-284-2848
www.plantsofthewild.com

Also, see WSU's Ownbey Herbarium Web site:
www.wsu.edu:8080/%7Ewsherb/edpages/nativeplant/intro.html

BILL WAGNER

Pamela Smith Hill

STORIES ABOUT GROWING UP

PAMELA SMITH HILL isn't one to forget her roots.

Born and raised in Missouri, Smith Hill set one of her novels, *A Voice from the Border*, in the Show-Me State and another, *Ghost Horses*, in South Dakota, where she lived and worked for nearly a decade.

And her early training as a newspaper reporter—long ago in Springfield, Missouri—is part of the reason for her success today as a writer of award-winning books and short stories for young women and girls, she says. "As a reporter, I had the chance to listen to people, to the way they talk, and to observe details of their own worlds and their settings."

Smith Hill is director of the Professional Writing Program at Washington State University Vancouver, where she has worked with scores of students since joining the faculty as an instructor in 1996.

Her students run the gamut from those seeking careers in communications to those interested simply in improving their writing. But to all of them, Smith Hill stresses the value of writing crisp, clean copy, accurate and precise in detail and description, such as this excerpt from her third novel, *The Last Grail Keeper*: "I moved so close I could feel the heat from the fire, smell the old man's sweat. Then he turned sharply and spoke toward the corner where the fire cast no glow, just beyond the box of sparkles."

Smith Hill says strong detail, particularly that which bolsters the historical authenticity

of a piece, is key to successful writing. Whether she is crafting a story set in the Dark Ages, the Civil War, or 1969, Smith Hill anchors her readers with a resilient connection to a specific time.

"I have to get as close to the past as I can, even when writing fantasy. It is important for me to know what kind of fabric, for instance, the women used when they wore mourning gowns during the Civil War."

Such detail, Smith Hill says, helps make fiction seem real. "Getting as close to the reality helps me break down the barriers for my readers."

Smith Hill's appreciation for history is central to her literary success as well. In 2002, she was recognized for a Web history of South Dakota she coauthored, which has become required reading for fourth-graders in that state.

You and your children can read Pamela Smith Hill's "Where the Lilacs Grow" (included in the anthology, *On Her Way*) on our Web site: washington-state-magazine.wsu.edu.

Her books have been chosen for an Oregon Book Award, as a Junior Library Guild selection, and as a finalist for a Mark Twain Award. *Voice of Youth Advocates*, a library journal devoted to young-adult literature, picked *The Last Grail Keeper* for its selection of "Best Science Fiction, Fantasy, and Horror 2002," along with titles by Ursula K. Le Guin, J.K. Rowling, Garth Nix, and David Almond. Smith Hill's fourth novel, nearing completion, is a fantasy set in the Dark Ages.

Enrollment in the Professional Writing Program has grown from about a dozen students when Smith Hill became director in 1997 to 90-100 students this year. Study options include a variety of technical, creative, magazine, and professional writing and editing courses; multimedia authoring; and internships.

That an instructor teaches as well as writes is not novel. But Smith Hill brings a deep passion to the combination: "A handful of professors transformed the way I thought about the world. In part, I believe I teach to give back in some small way."

Smith Hill has another, more practical motivation, too. "I teach writing because writing is such an important part of living, and whether it be for a profession or simply to be able to write on the job, I want to instill in my students the same passion for communicating."

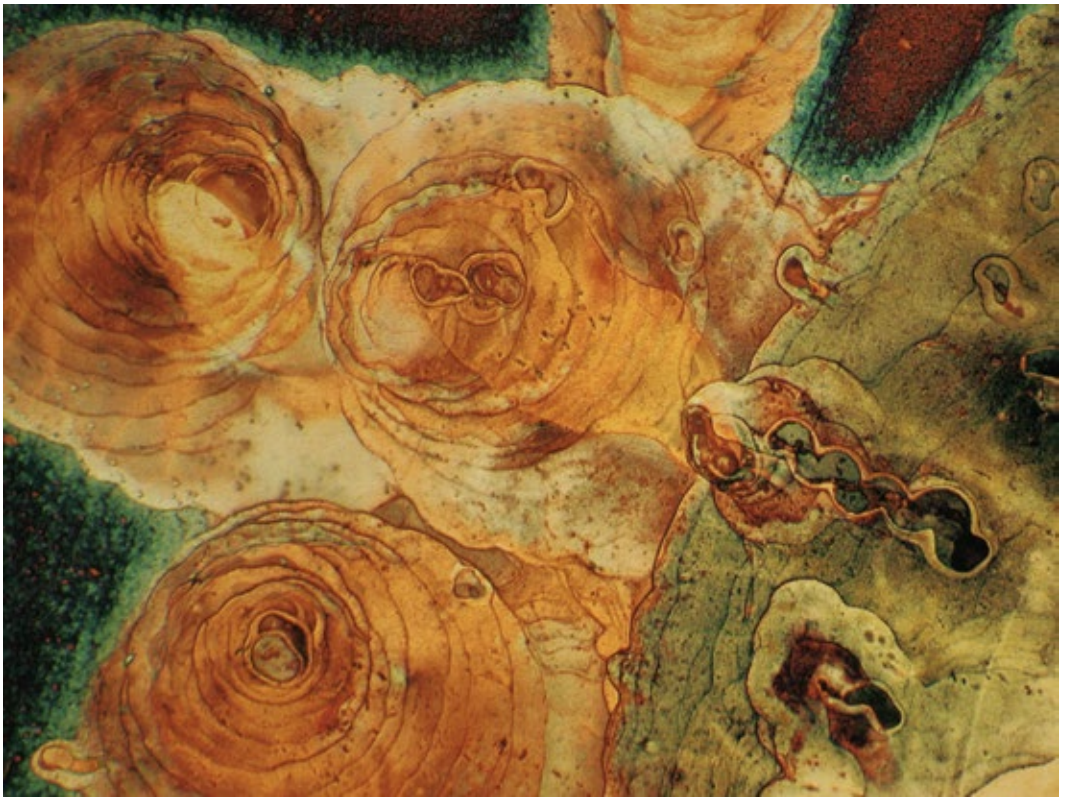
Smith Hill says she likes to write for preteen and teenaged girls, because those are formative years in young women's lives, times when they might be most receptive to the writer's call for independent thought and self-empowerment.

"When we are that age, we make important decisions about our lives," Smith Hill says. "When you write for adults, those readers can be touched by a book, but rarely are they changed by what you write."

On Her Way, an anthology for young girls recently released by Dutton Children's Books, includes Smith Hill's "Where the Lilacs Grow," a story about growing up in southern Missouri farm country. ■

—Dee Anne Fincken

A WINNER: Small-World Photomicrography



This photograph of a thin copper film surface by former Washington State University materials science student Megan Cordill won 16th place in Nikon's 29th annual Small World Competition. The photograph is part of a touring exhibit. See www.microscopyu.com.

The previous year, Cordill placed both first and third in the Cornell University Microscopy Image Competition. See www.mse.cornell.edu/imagescontest/Winners2002.html. Cordill received her bachelor's and master's degrees at WSU in 2002 and 2003, and is now working toward her Ph.D. in materials science and engineering at the University of Minnesota.

BE NICE

GRACe examines the many aspects of gender.

DAVID WHEELER ILLUSTRATION

GENDER IS THE FOCUS of a new Washington State University-based research group comprising 66 faculty members from all WSU campuses, departments, and disciplines.

"Gender research has been a marginalized field," says Amy Mazur, associate professor of political science and cofounder of the interdisciplinary group, GRACe (Gendering Research Across the Campuses). "Part of gender research is doing the research and then getting people to listen to it."

That's what led to GRACe holding its first annual symposium in February. Founded in 2002 by Mazur and Noel Sturgeon, associate professor and director of Women's Studies, the group designed the symposium to showcase gender research being conducted by faculty and graduate students at WSU and in the region and to promote future research collaborations across disciplines.

The following are highlights of the research shared at the first annual GRACe symposium:

Allyson Wolf, graduate student in American Studies, focuses on female-reform leaders in the 1800s and how they adopted certain styles of dress and clothes to convey their message of reform. For instance, Frances Wright (1795-1852), a proponent of equal rights and birth control for women, was called "unsexed" and "man-ish" (*sic*) by the press for her style of dress. Mary Walker (1832-1919), a physician who was at once the only woman and the sole civilian to receive the Medal of Honor during the Civil War, adopted male attire to fit into a predominantly male-oriented field, but kept her long, black ringlets of hair.

Wolf explains that 19th-century women were careful to strike a balance between femininity and masculinity in order to further their causes. "Women could not be too masculine in order to remain engaging and make progress as a public speaker," she says.

Pam Bettis, assistant professor, Teaching and Learning, presented on "The Nebulous Space of Niceness."

Bettis's preliminary research focuses on what it means to be "nice" as women and girls. She surveyed adolescent girls in junior high to learn how they define nice and characterize their peers. Bettis found girls categorized other girls as either "sluts" (appearing to be promiscuous, showing an excess of femininity, typically associated with lower-class socioeconomic status); "snobs" (displaying exclusivity, appearing not to want to socialize with anyone, associated with white, middle- or upper-class socioeconomic status); or "nice" (the ideal). Her research reveals a girlhood ideal of "niceness" held in high esteem in American culture. Nice girls are inclusive and strike the right balance of being attractive, but not flaunting it. Bettis's research touches on the concept of "new girlhood," in which girls are increasingly expected to be strong, assertive, athletic, smart, but still nice.

Kelly Ward, assistant professor, Educational Leadership and Counseling Psychology, focuses on the issues that arise for women who contemplate starting a family at a time when they are working to achieve tenure at institutions of higher learning.

"The tenure clock and biological clock tick simultaneously," Ward says. This leads to women at universities, public and private institutions, and community colleges being preoccupied with thoughts of when is the appropriate time to have babies.

The prestige of the university, or its pursuit of prestige related to its focus on research, played direct roles in female faculty's decisions to start a family. Women faculty members found a greater tension between work and mothering at institutions with high expectations of research and/or direct involvement in faculty and student life (small, liberal-arts colleges). Ward says female faculty at community colleges, where the focus is more on teaching, were most content and thought they were good places to combine work and family.

GRACe is funded by the Office of Research, the College of Liberal Arts, the Graduate School, the Thomas S. Foley Institute for Public Policy and Public Service, and the departments of Women's Studies and Political Science. For more information on GRACe, go to libarts. wsu.edu/grace/. ■

—Megan Guido

A Quick Test for A KILLER

THE BACTERIUM *Listeria monocytogenes* isn't the household name its distant cousin *E. coli* is, but it should be, at least to some segments of the population. While *L. monocytogenes* is responsible for less than 1/100th of 1 percent (2,500 out of an estimated 76,000,000 cases annually) of foodborne illness in the United States, it's responsible for a whopping 28 percent (500) of the annual deaths. Those who have the most serious problems with *L. monocytogenes* infections are the elderly, newborns, or people with suppressed immune systems. The bacteria also may cause serious problems for the unborn child of a pregnant woman who becomes infected.

A potentially fatal foodborne disease, human listeriosis is often associated with the consumption of contaminated dairy products, raw and cooked poultry, and raw meats.

Monica Borucki, research geneticist, USDA-Agricultural Research Service, and adjunct assistant professor, Veterinary and Comparative Anatomy, Pharmacology, and Physiology, came to Washington State University three years ago to start a research program on *L. monocytogenes*.

While many species of *Listeria* are widespread in the environment, only *L. monocytogenes*, and only some of its serotypes, appear to cause human epidemics and serious illness, she says.

Serotypes are rather like apple varieties. If the genus *Listeria* is thought of as fruit, and the species *L. monocytogenes* is thought of as apples, then *L. monocytogenes* serotypes are like Granny Smith, red delicious, and other apple varieties. Individuals within a serotype also vary and are called strains, just as red delicious may vary from orchard to orchard.

Borucki's current focus is on developing a fast, reproducible test that will distinguish between various *L. monocytogenes* strains and provide genetic information on how the strains differ. Current tests, which may take several days to run, distinguish between strains, but provide no information on how they differ. Borucki and colleague Douglas Call, assistant professor, VCAPP, are developing a microarray that will do both.

A typical microarray is composed of hundreds to thousands of DNA or gene fragments that are attached to a small glass slide. The microarrays that Borucki and Call are developing have fragments from several different serotypes and strains of *L. monocytogenes*. When DNA from *L. monocytogenes* samples are tested on the array, it's possible to identify gene or DNA fragments that differ between them.

Once they have a microarray that will differentiate between the various *L. monocytogenes* serotypes and strains, Borucki and Call hope to identify which genes are associated with serious epidemics and illness. Probes for those genes then will be developed so that bacteria samples from public health or food industry laboratories can be rapidly and accurately screened.

At this time, it can be expensive anytime *L. monocytogenes* is identified, in terms of both human health and product recalls, says Borucki. Public health officials want all food thought to be contaminated with *L. monocytogenes* recalled because of the potentially high mortality associated with some strains. With rapid testing that could determine whether the genes that cause serious illness are present in a sample, recalls would not be necessary except when those genes are present.

In food processing plants, it will be possible to determine what areas, conditions, or types of foods are the source for dangerous serotypes. Once it's known where the bacteria get into food, it will be easy to concentrate prevention and cleanup in those areas.

"Right now, if it's *Listeria* of any kind, they clean it up," says Borucki. ■

—Mary Aegerter

A VISION THING: Diagnostic tools and a vaccine for paratuberculosis

BILL DAVIS, professor of veterinary microbiology and pathology at Washington State University, exhibited true vision in the 1970s, when he recognized the potential for veterinary science of monoclonal antibody technology.

Antibodies are proteins produced by cells of the immune system. They help neutralize pathogens and produce immunity. Most pathogens stimulate their hosts to produce a population of diverse antibodies. Monoclonal antibodies, on the other hand, are populations of identical antibodies and are created in the laboratory. A given monoclonal antibody might be specific for an individual cell type, its state of activation, the strain of a pathogen, such as the 0157:H7 component of the infamous *E. coli 0157:H7*, or any one of a number of other cellular characteristics. As a result, it's a

NEW DIGS FOR PLANT SCIENTISTS

The corner of Stadium Way and Wilson Road (across the street from French Ad) is looking more downtown with the ongoing construction of the Plant Biosciences Building. Campus leaders have high hopes for the research potential the $239-million, 93,000-square-foot building represents. And this is just Phase 1 of a planned biotechnology research and education complex clustered around Johnson Hall. The new building will house 30 research laboratories on the top three floors and four teaching labs on the ground floor. About one-third of those labs will go to USDA Agricultural Research Service scientists.

highly specific reagent with a wide variety of uses.

Davis learned how to make monoclonal antibodies during a sabbatical with immunologists in Australia and Germany, after which he returned to WSU. Since then he has produced more than 1,000 monoclonal antibodies that are available for research into how the immune system functions against infectious agents in food and animals, especially cattle.

Davis's research focus has been the study of the immune response to paratuberculosis, including the development of diagnostic tools and a vaccine for the disease. A persistent disease of cattle that affects the gastrointestinal tract, paratuberculosis is a major problem in the United States and abroad. Good diagnostic tests will help, because infected animals shed the pathogen that causes the disease before they appear sick.

Davis also would like to learn how the immune system is subverted or suppressed so that the disease can progress and the bacteria persist in cattle for the animal's lifetime.

SHELLY HANKS

Bill Davis has dedicated 25 years to developing monoclonal antibodies necessary for certain animal studies.

"It's taken 25 years to develop the monoclonal antibodies necessary to do these studies," says Davis.

Developing a vaccine can also be a difficult undertaking. Monoclonal antibodies can be used to determine the molecular and cellular events that occur during the testing of candidate vaccines by allowing researchers to monitor the immune response to those vaccines.

Monoclonal antibodies have been used to characterize the human immune response to tuberculosis. Because the data from these studies show that the human tuberculosis and bovine paratuberculosis diseases closely parallel each other, the cattle disease should be a good model system for the human. Information gained during the development of a vaccine against paratuberculosis should help in the development of a vaccine for human tuberculosis.

"It's a future we'd like to see," he says. ■

—Mary Aegerter

SHELLY HANKS

◆ A COMMON READER ◆

GEORGE BEDRIAN

WINTER WAS HARD

Music in response to tragedy

by Bill Morelock

AMONG THE VARIOUS responses reported by citizens in the days after September 11, 2001, mine initially fell in the category of walking catatonia. Numb to feeling, I experienced little or no emotional catharsis. The event was either too big, or unbelievable, or too much a product of the various media packaging the events. One symptom of toiling in a broadcast medium is becoming hyperaware of all media's power to lift or depress. Perhaps skepticism stood in the way of authentic experience. I didn't know, except that it was troubling.

The bare facts of public tragedies are cold as hammer blows. Loss of life, destruction of property, the bewildering senselessness of accidents, the stark implications of crimes.

Media disseminate these facts. They also rend clothing, gnash teeth. They "bring us together" in that they provide us with a common, though highly crafted, experience. But does this experience have anything to do with complex human responses, or is it a Pavlovian bell? We grieve on demand, but do we feel anything?

I spent the week doing my job, selecting and presenting classical music on a public radio station in the rural college town of Northfield, Minnesota. Currently, it was to match the prevailing mood with music. But what did that mean?

Since I hadn't grappled with the event very effectively, my first, rather disengaged solution was to offer up a series of dirge-like compositions and stay out of the way. Pieces in the same utilitarian category as Samuel Barber's Adagio for Strings. I stayed away from most songs; the varied lyrical content always threatened the odd phrase that might be tastelessly out of place. The selection was appropriate, safe, and though the meaning was clear, communicating the bleakness we all felt, it was at the same time perfectly meaningless.

My colleagues and I plugged along as best we could. And by Friday the 14th, I'd loosened up enough to speculate with Stephen Davis, another announcer, about whether even a stout, muscular performance by the Welsh baritone Bryn Terfel could overcome the sentimental and possibly mawkish effect of Rodgers & Hammerstein's "You'll Never Walk Alone," from *Carousel*. And just then, as I mentioned to Stephen how proud I was of the way we'd all responded with great care that week, my reserve burst like a faulty dam. Apparently, it wasn't until I perceived a tangent between the event (still mythical in scale) and the value of what I could do in response on the radio (manageable in scale), that I could cry.

As a classical-music station, we're equipped with the most potent emotive arsenal in the world. And from September 11 on, we brought it to bear on public events demanding awareness, presence, and handcrafted broadcast/musical artifacts. October 7, the offensive in Afghanistan. December 7 (Pearl Harbor Remembrance Day) was elevated from cursory mention. Memorial Day, D-Day, the Fourth of July. These anniversaries came along with their historical meanings freshly painted; we read them aloud and set them to music. Before long we'd swung round to the first anniversary of the World Trade Center attacks. There were dangers, of course, in operating at such a determined emotional pitch. Maudlin tones, fatuousness, hideous bromides yawned like great chasms, ready to swallow us up. Yet informing these occasions, always, was the lesson learned from the response to September 11—when you're required to note regretfully or grieve publicly about an event, the authenticity of the expression exists in direct proportion to how connected it is to the people and the tasks you have immediately, and more importantly, unmediatedly, at hand.

Then there was October 25, 2002. For many who knew what the senior senator from Minnesota stood for, it felt like a death of hope. That day Paul Wellstone's small plane went down in a northern Minnesota forest, killing the senator, his wife and daughter, two campaign aides, and the pilot.

I heard about the crash about two hours before I was to go on the air. My first thought was to make an acknowledgement, play appropriate music, and move on. This was, after all, a political figure, beloved *and* polarizing, at the end of a close, bitter campaign against the Republican candidate, Norm Coleman. Shouldn't I avoid eulogies, and put personal admiration aside?

But almost immediately, we began to receive e-mails and phone calls, messages to the effect that, we hope we can rely on you to give us music to get us through the day, just like you did after September 11. This changed everything. I was no newsman, pledged to feign detachment. My responsibility lay elsewhere. Just before 3:00 p.m. I dove into some old spoken-word albums, looking for possibilities in Shakespeare. On an album of various speeches, I dropped the needle (sic!) at random, and heard John Gielgud say,

That time of year thou may'st in me behold
When yellow leaves, or none, or few, do hang
Upon those boughs which shake against the cold,
Bare [ruin'd] choirs, where late the sweet birds sang. . . .

From a Shakespeare sonnet we went directly to the mournful, elegiac Adagio from Edward Elgar's Cello Concerto. And then, deploying that emotive arsenal, selections from Leonard Bernstein's *Chichester Psalms*; the luminous Aria from Ottorino Respighi's *Ancient Airs and Dances Suite No. 2*; the aching Chaconne from Bach's unaccompanied Violin Partita No. 2.

The participation continued: "Don't forget, Senator Wellstone was Jewish," read one e-mail. I hadn't, and Ernest Bloch's *Schelomo, a Hebraic Rhapsody for Cello*, as well as a traditional Kaddish, were part of the afternoon. A professor at St. Olaf College who'd worked on the Wellstone campaigns wrote, "I don't know when you selected your playlist today, but I want to thank you for it. It's beautiful music for tears, and I needed to cry." It began to feel less like radio than a kind of communion: or were they, potentially, synonymous? Maurice Durufle's motet "Ubi caritas et amor, Deus ibi est" ("Where charity and love are, there is God"). Aulis Sallinen's *Winter Was Hard*, skewing the tense from past to anticipatory. And the tender Menuet from Ravel's *Le Tombeau de Couperin*, a collection of six piano pieces dedicated to friends who died in the Great War.

Something rare was happening. Instead of a presenter of stuff, I, too, was one who grieved, with a vigorous means to do so. As comfort and a certain confidence grew, the possible dynamic range of emotions widened. So, both the supremely comforting middle movement *and* heroic finale to Beethoven's *Emperor* Concerto stood as benediction *and* celebration. That one slides without pause into the other seemed plausible rationale for the observation that, even in the midst of mourning for the sudden loss of an energetic public man, there was a place for Beethoven at his most soaring.

Was the programming itself as good as the idea of it? I don't know, but I savor the moments. I believe some meaning, and some breathing space, was available for someone to have and hold. But like all broadcasting, the moments were ephemeral, gone the second Gielgud recited, ". . . on the ashes of his youth doth lie," and the clock ticked on. Therefore, another musical artifact was appropriate on that October day, and every day, whose words hint at the differences between what we long for and what inundates us; between knowledge and news: in the finale to Bernstein's musical treatment of Voltaire's perfect satire, its chaotic world quiets, and Candide sings, "We're neither pure, nor wise, nor good. We do the best we know." ■

Bill Morelock '77 is a writer and broadcaster. He hosts* Drivetime Classics *on WCAL-FM, Northfield, Minnesota.

You can hear the music that Morelock discusses at our Web site, www.washington-state-magazine.wsu.edu.

Students to build a complete SOLAR HOME

A GROUP of students from the School of Architecture and Construction Management at Washington State University will compete in the U.S. Department of Energy's Solar Decathlon. Over the next two years, the students will design and construct a small, energy-independent home as their entry.

Sponsored by the National Renewable Energy Laboratory, the competition gives students two years to plan and build a 500- to 800-square-foot house that receives all of its energy needs from the sun. The competition aims to increase public awareness of solar energy and inspire innovative solutions in ecological design. As part of the competition, students have to provide a home with all the modern conveniences, including heating and air conditioning, refrigeration, hot water, lighting, appliances, and communications. The homes are judged on their energy production, efficiency, and design. The event is called a decathlon because the homes are judged in 10 separate areas.

The homes will be transported to Washington, D.C., during the summer of 2005 for display and judging on the Washington Mall. Last year's display drew an average of 25,000 visitors per day. Of the 20 participating teams from throughout the world, WSU's is the only competitor from the Northwest.

"Our students are always interested in building real projects," says Matthew Taylor, assistant professor of architecture, who will oversee the project.

The biggest challenge, says Taylor, will be gathering support, money, and materials for the project. The group plans to use state-of-the-art, wood-plastic composite materials from the Wood Materials and Engineering Laboratory. They also hope to enlist support from alumni in the building and construction industries. Transporting the building across the country also promises to be a challenge, says Taylor.

In September, three students will attend a three-day seminar to learn about the project. Taylor is also teaching a course on ecological design this fall that will incorporate discussion of solar-home design and the decathlon project. ■

—Tina Hilding

MUNIR VIRANI / THE PEREGRINE FUND

AN ENVIRONMENTAL MYSTERY is solved, but answer points to larger concerns

VULTURES IN INDIA and Pakistan play a vital environmental role by quickly removing dead livestock, inactivating pathogens, and probably controlling the spread of livestock disease. Vultures are also essential to the "sky burials" practiced by Zoroastrian sects. So the sudden and precipitous decline in vulture population caused great consternation throughout the subcontinent.

Over the past decade, the population of the Oriental white-backed vulture has declined by more than 95 percent. Other vulture species have experienced similar catastrophic declines. When Washington State University veterinary diagnostician Lindsay Oaks arrived in Pakistan in 2000 to investigate the mysterious deaths, he selected for study three colonies of perhaps 1,000 breeding pairs each. As of this year, says Oaks, two of those colonies are completely extinct. The other one has declined by 65-70 percent.

Oaks and colleagues from the Peregrine Fund and other agencies initially suspected a viral disease. But once they had eliminated viral and other microbial causes and known toxins, they turned their attention to veterinary pharmaceuticals. They hypothesized that veterinary drugs administered to livestock before they died might be the cause of the observed renal disease in the scavengers.

Following an exhaustive investigation, Oaks narrowed the suspects to diclofenac, a nonsteroidal anti-inflammatory drug widely used in India and Pakistan to treat lameness and fever in cattle—conditions humans treat with ibuprofen, which belongs to the same class of anti-inflammatories.

Diclofenac is sold in the United States as a human pharmaceutical under the name Voltaren, says WSU pharmaceutical scientist Neal Davies, an expert on it and similar pharmaceuticals. "It's very effective and comparatively safe."

It is also easily made and "cheap as chips," says Davies.

Oaks and his coinvestigators found that the drug is ubiquitous in Pakistan and India. "Everybody uses it routinely," he says.

Once Oaks and his team focused on diclofenac, they confirmed their suspicion through analyses of tissues from the dead birds and by feeding diclofenac-treated carcasses to captive, non-releasable vultures. The effort involved not only international conservation groups, but also a group of graduate students from a Bahauddin Zakariya University, who gathered much of the data. Oaks and his colleagues published their findings in the 12 February 2004 issue of *Nature*.

Although their findings are conclusive, the reason for vultures' sen-

sitivity to the drug remains a mystery. Crows and kites feed on the same carcasses, for example, with no apparent effect.

Other birds may be resistant to the drug, says Oaks. Or it could be that because they are primary scavengers, vultures get the choice bits, the liver and kidney where the drug concentrates. However, says Oaks, "We do know that the vultures will die eating muscle alone."

Understanding the reason, says Davies, would require a pharmacokinetic examination. Pharmacokinetics, which is Davies's field, is the effect of the body on the drug, rather than the pharmaceutical effect on the body.

"Animals have preferential toxicity," he says. For example, Tylenol, though widely used by humans, will kill a dog. Although diclofenac's effects have been widely studied in mammals, Davies knows of no such work in birds.

The vulture case is particularly notable in that it is the first to show that a pharmaceutical is responsible for a serious environmnental problem. Scientists have long worried about the effect of pharmaceuticals and other personal-care products in the environment. A 2002 study by the U.S. Geological Survey found traces of many such products in the American water supply. Other work, says Oaks, has shown that Prozac affects the development of frogs and that a commonly used veterinary wormer kills dung beetles.

Davies observes that the distinction between pharmaceuticals and other synthetic chemicals is primarily semantic. After all, he says, pesticides are really a pharmaceutical for bugs. The actual effect of pesticides in the environment, such as DDT on the bald eagle, has long been known. "History is just repeating itself," he says.

Frank Loge, Civil and Environmental Engineering, points out that effects of endocrine disruptors have been documented in fish. Loge studies the health effects of engineered natural systems, such as recycled drinking water. A good thing to point out, he says, is that many drugs in the environment do not exhibit an acute health end point, such as the death of the vultures. Many of the drugs exhibit a chronic effect. Such low-level chronic exposure to drugs in the environment is very difficult to detect. A striking example is exposure to PBDE, or polybrominated diphenyl ether, used as a flame retardant.

The compound is significant, because it is used in almost all plastic combustible devices, such as computers. Researchers have found it just about everywhere they've looked, including Antarctic seals and human breast milk. The compound has been documented to suppress the immune system of animals.

Regardless of such distinctions, says Oaks, the concern that pharmaceuticals released into the environment can have dire effects is no longer just theoretical.

Without dramatic intervention, Oaks and others fear that the remaining vultures may be in their last breeding season. He attended a meeting in Katmandu earlier this year to develop a strategy that involves controlling the drug, education, and capturing birds to hold for safekeeping until the environment is safe for them again. ■

—Tim Steury

WELDON WILSON

Racial profiling in Washington—policy and perception

THE LIKELIHOOD of being stopped by the Washington State Patrol on state roads and highways is not affected by a driver's race or ethnicity, according to Washington State University researchers who analyzed two million WSP contacts between May 2000 and October 2002.

The WSU report was issued last summer by political scientists Nicholas Lovrich and Mitchell Pickerill, criminal justice professors Michael Gaffney and Michael R. Smith, and sociologist Clay Mosher. Unlike studies in other states, the report indicates no evidence of biased policing in the rate of driver stops.

Washington is one of at least 14 states that have passed legislation to help eliminate "the illegal use of race or ethnicity as a factor" in detaining individuals. Nevertheless, it's clear, Mosher says, that many citizens believe racial profiling is taking place—that minorities are subject to a disproportionate number of stops by WSP officers, despite evidence to the contrary.

This gap between the actual conduct of the WSP and how citizens perceive WSP's actions must be addressed, he says. He believes WSU's report will serve as a foundation for such a task. Left unattended, the issue could undermine the public trust in the WSP.

Unlike previous analyses of racial profiling, which split subject populations into broad White and nonWhite categories, the WSU study categorized the population into Whites, Blacks, Native Americans, Asians, and Hispanics. In addition, many analyses have looked at entire cities or states, a practice that can serve to conceal important contextual differences in law enforcement across small geographic areas. By contrast, where traffic-stop data permitted, the WSU researchers presented analyses from WSP's 40 autonomous patrol areas. ■

—Pat Caraher

WSP TRAFFIC STOPS MAY 2000 – OCTOBER 2002

RACE/ ETHNICITY	PERCENT OF THE STATE'S POPULATION	WSP CONTACTS, SELF-INITIATED
Whites	81.8	83.9
Blacks	3.2	3.7
Native Americans	1.6	0.7
Asians	5.5	3.2
Hispanics	7.5	6.5
Other	0.4	2.0

Population percentages are based on the 2000 Washington census.

SEASONS|SPORTS

SPORTS|SEASONS

WSU HALL OF FAME adds 5 who excelled

CAROL GORDON

On February 21, the day of her induction into Washington State University's Athletic Hall of Fame, Carol Gordon offered a silent prayer. That evening she shared her petition with 180 guests at the induction banquet in the Compton Union Building.

"Please let me speak before George [Raveling]," the longtime WSU professor, coach, and administrator said. Her comment drew a rousing ovation from the audience, including Raveling himself. The charismatic Cougar basketball coach from 1972-83 would speak later. Olympic gold medallist Julius Korir; Linda Williams Sheridan, Spokane prep coaching legend; and football All-America Mike Utley were the other honorees.

Gordon championed women's athletics at the state and national levels. She served as president of both the Washington Association for Health, Physical Education, and Recreation and the Association of Intercollegiate Athletics for Women. During her 21 years as chair of the Department of Physical Education for Women, 1962-83, she also coached women's field-hockey and tennis teams, 1962-66. Her teaching specialty was psychology of sport.

"I was hired to teach," she said. Coaching and administrative duties were on top of that. "I always was convinced of the importance of activity—both athletics and dance—and that it should be an important part of life."

Gordon played high-school basketball in New Hampshire, mainly "curtain-raisers" for boys' games, and graduated from Oberlin College, where opportunities for women to participate in sports were limited. She was 1968 WSU Faculty Woman of the Year, and received a Lifetime Achievement Award from the National Association of Collegiate Women Athletic Administrators in 1998.

Carol Gordon

JULIUS KORIR

WSU track and field coach Rick Sloan praised Julius Korir for his "tremendous range—half-mile to over six miles in cross-country." The durable Kenyan won the Pac-10 3000-meter steeplechase three times. He had two firsts and a third in the 5000-meter race. He also claimed NCAA titles in the 5000 (1984) and steeple (1985), after finishing runner-up in the steeple twice.

Korir won his country's only gold medal in the 1984 Olympics in Los Angeles. His steeplechase time (8:11.80) ranked him second on the WSU, Pac-10, and collegiate list behind countryman and former Cougar great Henry Rono.

Julius Korir

"Athletes like Julius come along very rarely," Sloan said of Korir, who was honored in absentia.

GEORGE RAVELING

As WSU's third-winningest basketball coach (167-136), George Raveling brought tremendous energy to work and excitement to Friel Court. The Pac-8 Conference's first black coach in a major sport said he didn't come to WSU in 1972 as "a crusader, but to restructure the basketball program."

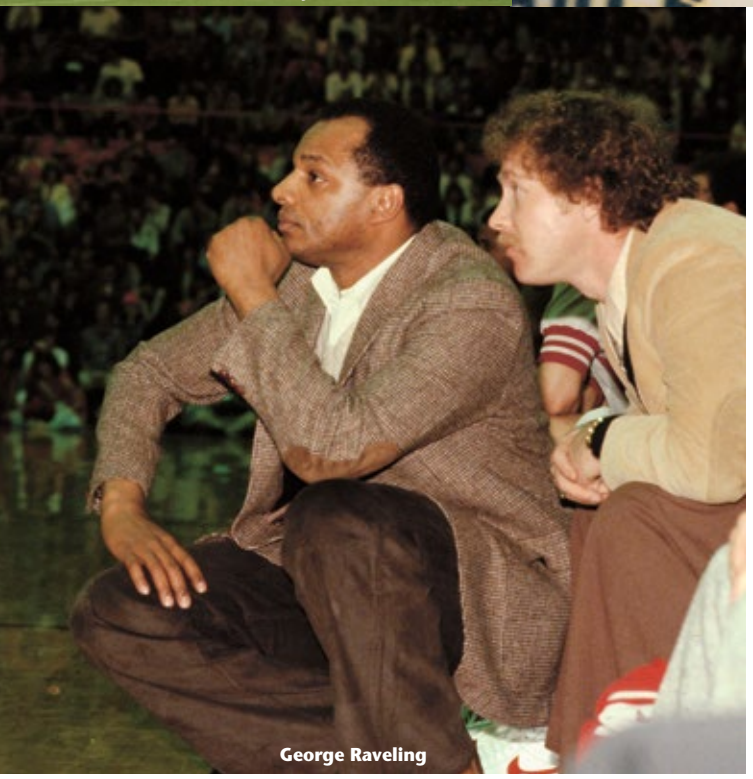
WSU's 1980 appearance in the

Mike Utley

"I spent my life doing something that was my passion—coaching." ***—Linda Sheridan***

COLIN MULVANY, SPOKESMAN-REVIEW

Linda Sheridan



George Raveling

NCAA tournament was its first in 39 years. The Cougars finished 22-6 that year and 23-7 in 1983, when they again qualified. His teams posted seven winning seasons. Craig Ehlo, a 14-year NBA veteran, said Raveling "did a better job of preparing a team for a game than any coach I ever played for."

Raveling expressed his gratitude to Glenn Terrell, who was then president, for giving him an opportunity to coach at WSU and for standing by him, win or lose.

"I can honestly say the 11 greatest years I spent in intercollegiate athletics were right here at Washington State," he said. "In honoring me, you honor all the players who played for me."

LINDA SHERIDAN

A teacher and coach at Spokane's Shadle Park High for 24 years, Linda Sheridan ('69 Phys. Ed.) led her volleyball and basketball teams (482-99 and 367-123, respectively) to a total of 849 victories between 1974 and 1998. Along the way there were five state titles in volleyball ('84, '85, '87, '88, '93) and two in basketball ('88, '89).

"I've been so, so fortunate," Sheridan said. "I spent my life doing something that was my passion—coaching. An opportunity to change lives."

She said she understood early the tremendous responsibility the title "coach" carries. "Kids look up to you. I never wanted to let them down. If you expect them to follow you, you have to lead first."

Sheridan wanted her students to have a positive experience. She believed sports should be fun, that sports were a great venue for teaching and learning the components that lead to success in life, relationships, jobs, and parenting.

MIKE UTLEY

After being selected as a third-round NFL draft pick by the Detroit Lions in 1989, Mike Utley became a rookie starter as a 6-6, 305-pound offensive guard. At WSU he started 42 of 45 games, was named to six All-America first teams, and played in three All-Star games. He thanked his teachers, teammates, coaches, and administrators for "four wonderful years at WSU." He played two years for Jim Walden, two for Dennis Erickson.

"Whatever you leave on the field you will be proud of. What you take home, you will always regret," he remembers Erickson saying. The advice paid off in a 34-30 upset of first-place UCLA in 1988. The Cougars trailed at intermission, but responded to Erickson's halftime challenge, "Go out and play. You'll remember this win the rest of your life."

In a November 1991 Lions' game, Utley would sustain a life-changing injury to his spinal cord. Since then, he helped create the Mike Utley Foundation to fund research on spinal cord injuries. "I'm selfish," he told the audience. "I want to get out of this [wheel]chair. Someday, they will find a cure."

His positive attitude and infectious smile remain an inspiration to others. "Every day I look in the mirror and I like myself," he said. ■

—Pat Caraher

2004 COUGAR FOOTBALL

2003 HOLIDAY BOWL **CHAMPIONS**

2002 PACIFIC-10 **CHAMPIONS**

2001 SUN BOWL **CHAMPIONS**

2004 VISITORS

COLORADO in Seattle
September 11

Washington State will be looking to remain perfect in its home away from home, Seattle's Seahawk Stadium, against a revenge-minded Colorado squad.

The Cougars stormed Folsom Field last season and came away with a 47-26 win over the Buffaloes, but CU returns an accurate quarterback in Joel Klatt and leading rusher Brian Calhoun. Klatt completed 65 percent of his passes in 2003 for 2,614 yards and 21 touchdowns, while Calhoun ran for 810 yards as a sophomore.

WSU has outscored opponents 56-7 in its two previous trips to the Sodo District.

OREGON
October 9

Martin Stadium will be the battleground for a budding Northwest rivalry. Oregon will come to the Palouse still boiling over a 55-16 loss to Washington State last year in Eugene.

The Cougars have won two in a row over the Ducks, who return a dangerous pass-and-catch combination in junior quarterback Kellen Clemens and junior wide receiver Demetrius Williams. All-America candidate Haloti Ngata is back to anchor a physical defensive front.

WSU will be looking to retake the overall series lead against UO. Both teams have won 37 games, while seven have ended in a tie.

USC
October 30 *(Dad's Day)*

The last time a defending national champion entered Martin Stadium, Drew Bledsoe led Washington State to a blowout victory over Washington in the 1992 "Snow Bowl". To repeat the feat, the Cougars will have to take down a USC team that many are projecting to be in the Orange Bowl for next year's BCS national title game.

The Trojans feature a Heisman Trophy candidate in quarterback Matt Leinart, who threw for 3,556 yards and 38 touchdowns as a sophomore. Middle linebacker Lofa Tatupu is the leading returner on defense after turning in 98 tackles, including 11.5 behind the line, in 2003.

IDAHO
September 18
(Future Cougar Day)

New Idaho head coach Nick Holt hopes to turn the tables on Washington State's recent run of dominance in the Cougar-Vandal border battle.

WSU has knocked out UI three straight seasons by a combined score of 110-21, but Holt and linebacker Mike Anderson have something else in mind for 2004. Anderson, a Lewiston, Idaho, product, racked up 104 tackles last season, including six behind the line of scrimmage.

STANFORD
October 16 *(Homecoming)*

Homecoming has meant a Washington State victory each of the past two seasons with wins against USC and Arizona, but Stanford hopes to take the role of spoiler in this mid-October matchup at Martin Stadium.

The Cardinal linebacking unit of seniors Jared Newberry and David Bergeron and junior Michael Craven will be among the Pac-10's best. The trio combined for 162 tackles, including 19 behind the line, in 2003.

WASHINGTON
November 20 *(Apple Cup)*

Washington State and Washington renew their bitter gridiron rivalry for the 97th time in the annual Apple Cup. The Cougars hope to use Martin Stadium's 12th-man advantage to erase the memories of past Husky victories.

As the Cougars look to turn the tide of this series in their favor, they will battle against a formidable opponent in the Huskies, who will be led by stand out wide receiver Charles Frederick (59 catches, 831 yards, 5 touchdowns).

1-800-GO-COUGS ■ wsucougars.com

COUGARS RELOAD

Bill Doba, entering his second season as Washington State's head coach, already has experience helping new stars emerge. A year ago, the Cougars lost all-time leading passer Jason Gesser, Outland Trophy winner Rien Long, and the No. 11 overall pick in the NFL Draft Marcus Trufant. Despite being picked seventh in the Pac-10's preseason poll, the result was a 10-3 overall record capped by a 28-20 win over Texas in the Holiday Bowl.

The cast of returning talent offensively may suggest a more ground-oriented attack in 2004. Physical, slashing senior running back Chris Bruhn will run behind mammoth tackles Calvin Armstrong and Sam Lightbody. Sophomore Josh Swogger and junior Chris Hurd will have plenty of options in the passing game, however. Tight ends Troy Bienemann and Cody Boyd and sophomore receiver Chris Jordan combined for 75 catches, 844 yards, and five touchdowns in 2003 and will be called on for more next season.

Defensively, the headline returnee is All-America candidate Will Derting. The junior linebacker racked up 86 tackles, 12.5 tackles for loss, and 7.5 sacks, earning first team All-Pac-10 honors. Derting will likely make the move from outside to middle linebacker in 2004. He will be joined by cornerback Karl Paymah as the lone returning starters. Paymah possesses prototype size and speed and should emerge as one the conference's top pass defenders.

A host of experienced backups will vie for a spot on defensive coordinator Robb Akey's "11 Hats To The Ball" defense. Up front, defensive ends Adam Braidwood and Mkristo Bruce give the Cougars an upgrade in size and strength, while veteran Steve Cook provides a bullish presence in the middle. Senior Pat Bennett, the hero of last season's win over Arizona State, and sophomores Scott Davis and Steve Dildine will all play alongside Derting at the linebacker spots.

In the secondary, Paymah will be joined by juniors Alex Teems and Omowale Dada, and sophomore Don Turner on the corner. Hamza Abdullah and Jeremy Bohannon, both seniors, will look to step into the safety roles vacated by Erik Coleman and Virgil Williams.

Junior punter Kyle Basler, a Ray Guy Award semifinalist as a sophomore, also returns to join a recruiting class that is considered the best in school history.

All-America candidate Will Derting

2004 SCHEDULE

September	3	New Mexico @ Albuquerque
	11	**COLORADO @ SEATTLE**
	18	**IDAHO**
October	2	Arizona @ Tucson
	9	**OREGON**
	16	**STANFORD**
	23	Oregon State @ Corvallis
	30	**USC**
November	6	UCLA @ Los Angeles
	13	Arizona State @ Tempe
	20	**WASHINGTON**

SEASON TICKET INFORMATION

Reserved Season: $160

With an exciting home schedule, don't get caught without your ticket into Martin Stadium. Purchasing a season ticket is the best way to guarantee you'll see all the action and excitement of Cougar football. Season ticket package does not include the Colorado game.

Faculty/Staff Season: $145

Full-time faculty and staff at WSU can purchase up to two season tickets at this special discounted rate. Payroll deduction over a three-month period is available.

Family Season: $310

A great deal for the family that enjoys cheering on the Cougs together. A family of four (two adults and two youth or one adult and three youth) may sit in the Northwest Dodge Family Fun Zone for the entire season. Extra youth season tickets can be added to the family plan for just **$60**.

Faculty/Staff Family Season: $290

Full-time faculty and staff are eligible to purchase a family season pass at a discounted rate for a family of four (two adults and two youth or one adult and three youth). Extra youth season tickets can be added to the family plan for just **$60**.

WSU vs. Colorado (Seattle): $12-$42

Before June 1, tickets can be purchased at the Cougar Depot or by calling 1-800-GO-COUGS, option 3. After June 1, tickets can be purchased on-line at TicketMaster.com or by phone at 206-628-0888.

Individual Tickets: $29 (UW is $44)

End Zone Ticket Adult: $17; End Zone Ticket Youth: $9

NEWS
from the Washington State University Foundation

Ted Saldin

The Quintessential Teacher

> **"Ted Saldin was not only a master teacher, but also had the knack for inspiring students and broadening their horizons."**
>
> —K. Ramesh '85

Ted Saldin received numerous awards and honors during his 40-year career at Washington State University (1947-87), but his true legacy is best expressed in the superlatives offered by the many alumni he mentored.

"Beginning with an accounting course in 1963, I've benefited from Ted's teaching and mentoring," says Rick Swantz (B.A. '66), a development officer at UC Davis. When applying to graduate schools, Swantz asked for Saldin's help. "He called me one morning . . . at 4 a.m. . . . to help me get my applications in before the deadline, back in the days before faxes and overnight delivery."

"Ted Saldin was not only a master teacher, but also had the knack for inspiring students and broadening their horizons," says K. Ramesh, (M.Acc. '85), professor of accounting and information systems at Michigan State University. "I am certain that my association with Ted has made me a better educator."

"The lasting thing I learned from Ted was how to deal with people. He always treated everyone as an individual, and tried to help them succeed. I wouldn't have made it through school without his support and advocacy," says Michael Johnson (B.A. '75), an independent investor and consultant.

In honor of Ted Saldin's legacy, the College of Business and Economics is raising an endowment of $500,000 to establish the Theodore R. Saldin Distinguished Professorship in Accounting at WSU.

"Professor Saldin is the quintessential example of teaching excellence for the college," declares Dean Len Jessup. "His passion for educating each individual inspired generations of students who walked through the doors of Todd Hall. It is with great pleasure that the college creates the Saldin Distinguished Professorship in order to attract outstanding educators like Ted Saldin."

A North Dakota native, Saldin came to WSU in 1947. He earned a bachelor's degree in tax accounting at the University of Montana in 1942, followed by an industrial administrator degree (1943) and M.B.A. from Harvard (1945), and a law degree from the University of Washington (1953). Ted became a CPA but gave up that credential when he turned 75; he continues today as a member of the Washington State Bar.

WASHINGTON STATE UNIVERSITY FOUNDATION

by Pat Caraher • photography by Don Seabrook

Short Shakespeareans

Sherry Schreck and her young thespians rehearse a scene from Shakespeare's *Midsummer Night's Dream* in Wenatchee's Riverside Playhouse.

IN A SCENE from *A Midsummer Night's Dream,* Demetrius calls for a sword. His request produces instead a yellow rubber chicken tossed from off stage.

"Shakespeare should be fun," says Sherry Chastain Schreck, founding director of the "Short Shakespeareans." Children in the drama troupe are 4 to 15, most of them pre-teenagers. In the 25 years since making their debut, the thespians have become a community treasure in Wenatchee.

A Midsummer Night's Dream is a favorite of the Short Shakes. "The children love it. It is easy for young people to follow and understand," Schreck says.

While the cast of characters has changed over the years, the enthusiasm never wanes. That was obvious in the troupe's final summer performance last August. Approximately 30 youngsters danced about the stage in Wenatchee's packed Riverside Playhouse, spouting a language from another era.

The two-hour production was a showcase for little dukes and queens, jesters, elves, and fairies. Some wore floppy caps, tunics, and tights. Others dressed in satin or velvet gowns, hair done up in braids. Under the stage lights, sequins on their costumes sparkled like their eyes.

SCHRECK'S GOAL is not to make all of them little actors and actresses, but to expose them to the theater, to have children come to love the language of Shakespeare.

The director has built her reputation on her love of children and Shakespeare and her unbridled imagination. She's directed more than 150 plays while teaching in north central Washington middle schools and high schools. For more than two decades, she and her Short Shakes caravanned to Ashland, where they performed and attended plays and workshops at the Oregon Shakespeare Festival. She taught children's Shakespeare in Southern Oregon University's Academy Program for 20 summers, and now heads the theater program at Wenatchee Valley College.

Last August she and the Short Shakespeareans were feted at a gala silver-anniversary celebration in the Wenatchee Convention Center, along with current and former cast members. One wall of the large banquet room was lined with two dozen placards, each featuring cast and candid photos for each year.

Schreck draws on the creative talents of hundreds of people—set builders, costume makers, painters, and promoters. She's witnessed the rapport that has developed among involved families. She knows of no other children's drama troupe in the country that is more developed or counts as many consecutive years as hers.

"Once you get involved with Sherry Schreck and her Short Shakespeareans, you are in it for life," says John Renn, a set designer-builder who has volunteered his time from the beginning.

SCHRECK WAS INSPIRED by her mentors at Washington State University during the 1960s. Janice Miller taught speech, coached the debate team, and directed Readers' Theater. Bruce Anawalt taught Shakespeare for 36 years. Ed Vandivort, Bud Carlson, and Paul Wadleigh helped shape her life in the dramatic arts. Wadleigh founded WSU's Summer Palace Theatre in 1966, and that year cast her in the lead in *East Lynne.*

From Miller and Anawalt, Schreck gained her appreciation of Shakespeare. Long after she graduated from WSU ('68 Speech, '71 M.A. Speech), both mentors continued to follow her career. They attended the gala and the play in August.

A Midsummer Night's Dream opens with the anticipation of a wedding festival in the Palace of Theseus, Athens. But conflict is at the core, too. Hermia refuses to marry Demetrius. She is smitten instead by the gallant young Lysander. The two lovers decide to elope. The ending is raucous. The spirit world infringes upon the mortal world—and wins. All of the seasons are in disorder. Pranks are played on the lovers and the workmen by elves and fairies.

"The children are completely into the spirit of it," Anawalt said after watching the performance. "They create a world that is real to them while they are doing it."

INSTEAD OF LOOKING for the absolutely right way of interpreting scripts, Schreck and the children find what works. "We tap into our own imagination."

She wants the children to "loosen their tent pegs and widen their perspective—to have them open themselves up to new ideas and approaches to acting out the scene."

At the end of one scene in *A Midsummer Night's Dream,* two little fairies give each other "high fives" before exiting the stage with happy smiles. Shakespeare allows the director to make modifications in the staging "to fit the age of the actors," says Schreck.

Short Shakespeareans

"They create a world that is real to them while they are doing it."

Her daughter, Heidi Schreck, one of the original Short Shakes, remembers early performances as "a chance to be silly and have your parents think you were doing something wonderful." Since then, she's gone on to perform in Seattle and New York. Other Short Shakes are in Hollywood, have appeared on television and in movies, and performed with the Shakespearean companies in Ashland and Berkeley.

The creative action of the play, the blocking, hand gestures, and usage of props are things that she really works at, says Sherry Schreck. She remembers struggling to develop a lesson plan to use for *Romeo and Juliet* at Eastmont Junior High in 1978. That summer she attended a workshop at the Oregon Shakespeare Festival and was taken by two elementary students performing a scene from *The Taming of the Shrew.*

"Everything just clicked," she says. "I knew I wanted that experience for my own children." Back home, she worked on scripts, dyed wigs, made headdresses, and then directed Heidi and a few friends in a couple of short scenes. The kids were hooked. So was their director. ■

All that remains

A cartographer's quest to re-create the

LEWIS & CLARK TRAIL

by Ken Olsen • photography by Greg MacGregor

Rapids on the Salmon River, Shoup, Idaho.

When Meriwether Lewis and William Clark stood at the top of Lemhi Pass looking west in August 1805, they realized they had failed to locate the easy water passage from St. Louis to the Pacific Ocean that President Thomas Jefferson had dispatched them to find.

Instead of the easy, half-day portage between the headwaters of the Missouri and Columbia rivers that legend presumed, the captains of discovery and their team spent weeks struggling across the Bitterroot Mountains along the Idaho-Montana border, nearly starving before they finally stumbled into the Nez Perce Indians and the Pacific Northwest's ample salmon runs.

Industry and ingenuity overcame these mountainous obstacles, creating a technological Northwest Passage of railroads, automobile roads, logging roads, and water roads—with a system of dams and navigation locks—that brought significant commerce and change to this vast territory in little more than a century.

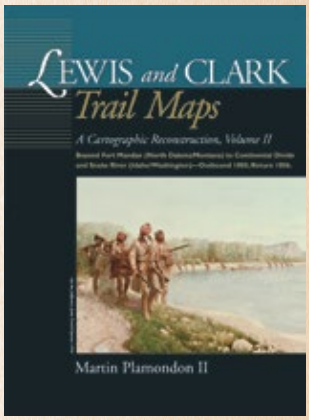
These changes are significant as America sets out to rediscover Lewis and Clark on the 200th anniversary of their historic expedition. Nearly two-thirds of the Lewis and Clark Trail is under man-made reservoirs, says author and historian Martin Plamondon II. Another one-quarter is buried under subdivisions, streets, parks, banks, and other modern amenities in places like Kansas City, Fort Leavenworth, and Council Bluffs. Almost none of the original landscape is intact. No one appreciates this contrast like Plamondon.

His effort to retrace the expedition's 7,400-mile journey has been so thorough and painstaking it has required 30 years. In some respects, Plamondon's exploration has been as arduous as that of the Corps of Discovery. He hates camping. He suffers from a trio of congenital heart defects that make it impossible for him to hold a regular job, breathing problems from on-the-job exposure to anhydrous ammonia, and digestive difficulties that have robbed his frame of 100 pounds in the last year.

Yet, Plamondon has reconstructed the intrepid explorers' routes, down to the last river bend, tortuous portage, and mountain trail, creating 530 hand-drawn maps that document the expedition in a way that will never be matched. The result, published by Washington State University Press, includes selected modern landmarks—to make it easier for readers to relate to the maps—and selected quotes from the expedition journals, all of which add up to a three-volume historical atlas and travelogue that also is backdrop for showing how dramatically the hand of man has transformed what seemed an endless wilderness to Lewis and Clark.

"No one has attempted this on a trail-wide scale," says David Nicandri, executive director of the Washington State Historical Society. "You needed to be a cartographer, an astute analyst of the Lewis and Clark journals, and have a considerable amount

Martin Plamondon's *Lewis and Clark Trail Maps* (Washington State University Press) is a three-volume historical atlas and travelogue, including selected modern landmarks to make it easier for readers to understand the maps.



of endurance. Martin is the sole qualifier."

A NOVEL APPROACH

Plamondon, once chief cartographer for Clark County, Washington, set out to write a *Roots*-scale novel about each of the Native American tribes in the West—not redraw the landscape.

How can people appreciate the route Lewis and Clark followed considering the significant differences in the landscape today?

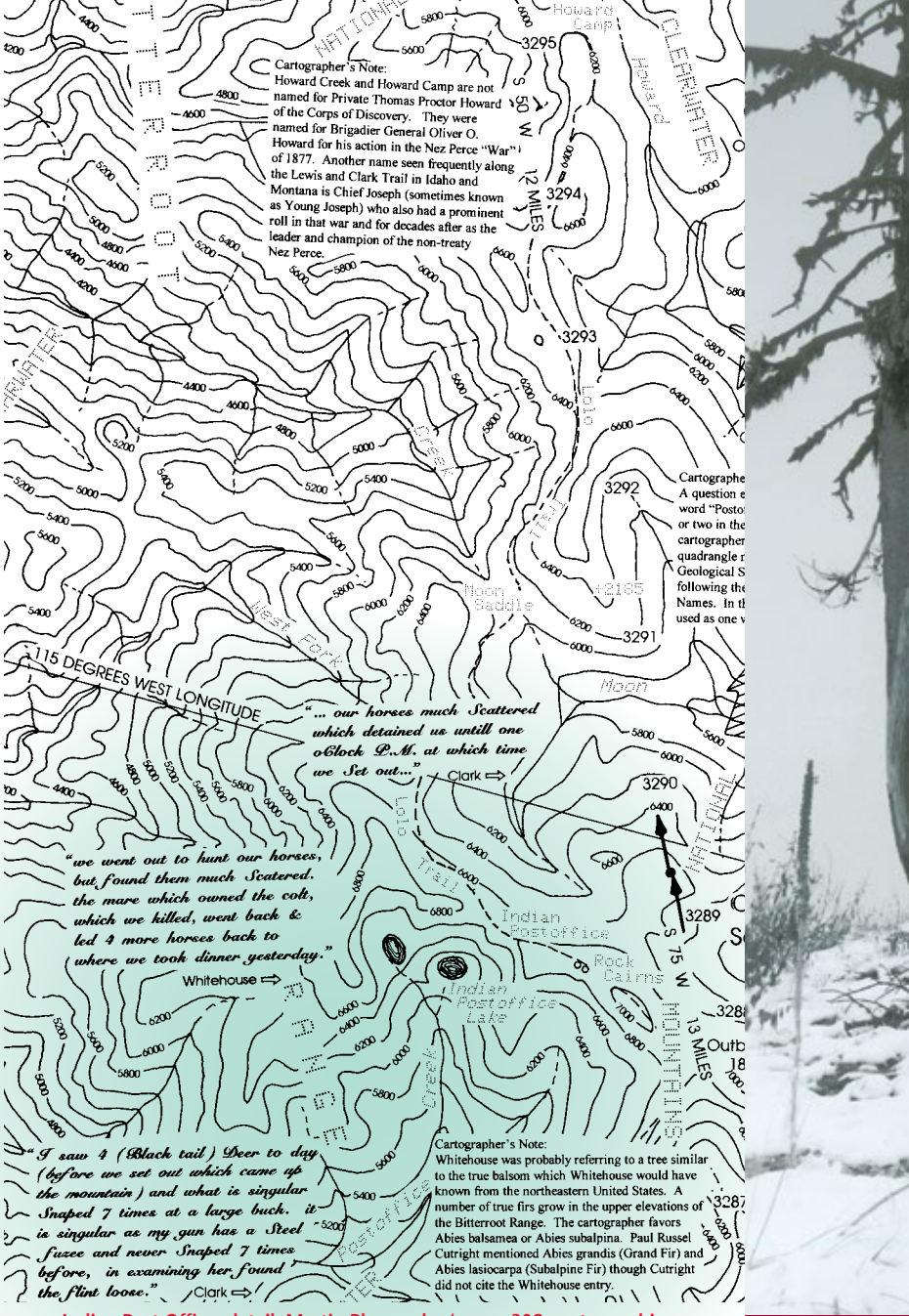
"I always liked history," says Plamondon, who lives in a book-packed house in Vancouver, Washington, not far from where he was born 58 years ago. "I always liked American Indians. I wanted to write the truth about them, to set straight the misperceptions that whites have perpetuated for years."

When a rainstorm ruined plans to take his daughters to the beach 30 years ago, he took them to Fort Clatsop, Oregon—where the expedition wintered in 1805—as a consolation prize. There his insatiable attraction to books drew him to an eight-volume set of the expedition's journals. Suddenly, writing a book about Lewis and Clark seemed the perfect way to introduce his planned series on the tribes.

Plamondon figured it would take three and a half years to write his Lewis and Clark book. It took 27. He felt it necessary to learn about casting rifle balls, skinning buffalo with stone knives, starting fires with flint and steel, and other frontier skills for the sake of authenticity. And it sent him chasing another obsession. Maps.

As he researched his epic, as-yet-unpublished Lewis and Clark novel, questions kept arising about where things happened. Simple enough. Except that he soon found people didn't agree on where things happened.

The only solution for a man of Plamondon's talents and training: draw your own maps. And he had other incentives. His expertise in all things related to the expedition landed him on the governors' Lewis and Clark commissions in both Washington and Oregon. That work added impetus to nagging questions: How can people appreciate the route Lewis and Clark followed considering the significant differences in the landscape today? How can one preserve it such a historic trail considering all of the changes?



Indian Post Office, detail, Martin Plamondon's map 302, cartographic reconstruction of explorations of Lewis and Clark.

Because of all of the modern differences in the landscape, anyone who set out with Lewis and Clark's original map today "in many cases would be confounded," says Nicandri of the state historical society. "This is particularly true for the Snake and Columbia river segments [on Washington's southern border] because this is the most dramatically changed landscape of the Lewis and Clark Trail, with the possible exception of the lower Missouri."

ENDLESS MOUNTAINS

"From this mountain I could observe high ruged mountains in every direction as far as I could see . . . began to Snow about 3 hours before Day and continued all day . . . I have been wet and as cold in every part as I ever was in my life, indeed I was at one time fearfull my feet would freeze in the

Indian Post Office on Lolo Trail, Bitterroot Mountains, Idaho.

thin Mockirsons which I wore,

after a Short Delay in the middle of the Day, I took one man and proceeded on as fast as I could about 6 miles to a Small branch passing to the right, halted and built fires for the party agains[t] their arrival which was at Dusk, verry cold and much fatigued," —William Clark, September 15-16, 1805, Bitterroot Mountains, present-day Idaho[1]

By the time the Lewis and Clark expedition crossed into Idaho the fall of 1805, they had left the United States and were traveling in foreign territory. That fact seems to have occupied little of their attention. The expedition, whose food stocks primarily consisted of dried beans-and-vegetable soup, barely survived slogging and sliding across steep, timber-choked slopes of the Bitterroots in the relentless deluge of early-fall snowstorms.

Today, maps show U.S. Highway 12 snaking along part of the explorers' trail. Yet, this region contains the stretch of their route that has changed the least.

"From the front step at Monticello, across America to the Pacific Ocean, there remains one small piece of the Lewis and Clark Trail still as wild today as it was then—the land between Lolo Pass, Montana, and Weippe Meadows in northern Idaho," says John Osborn, senior physician at the Spokane Veterans Medical Center and a passionate student of the explorers, who convinced the Sierra Club to undertake a national campaign to protect remnants of Lewis and Clark's route, including sites in Idaho and Washington.

"This last section of the wilderness trail is a place of beauty, abundant in fish and wildlife, and a priceless heir-

[1] Bernard DeVoto, ed., *The Journals of Lewis and Clark* (New York: Houghton Mifflin Co., 1953), 239, 240.

Nearly two-thirds of the Lewis and Clark Trail is under man-made reservoirs . . . . Another one-quarter is buried under subdivisions, streets, parks, banks, and other modern amenities.

loom of our American heritage," Osborn says. "From Indian Post Office, it is still possible to scan these rugged Bitterroot forests and not see a single clearcut."

Indeed, the landscape is so compelling that writer Bernard DeVoto edited his *Journals of Lewis and Clark* in a cedar grove alongside the Lochsa River in 1953. His ashes were spread here two years later. Today, the towering cathedral of trees is memorialized as the DeVoto Grove.

Yet, even this rare landscape is changed. For example, fur trappers followed Lewis and Clark by just 10 years and within a generation effectively eliminated several fur-bearing animals, WSU history professor Paul Hirt says. Aggressive efforts to eliminate large carnivores such as wolves and grizzly bears also changed the mix of wildlife species. A century of fire suppression has changed the way the forests look and, to a certain extent, the kinds of trees growing there. There are paved roads, well-marked trails, maps, and global positioning systems, all to guide the modern traveler through this area.

A CRUDE BEGINNING

William Clark was a gifted and under-appreciated frontier surveyor who surveyed most of Kentucky and Tennessee, Plamondon says. And legend has it that he delivered a survey of the lands the Corps of Discovery traversed that was accurate to within a matter of miles.

The latter claim is folklore.

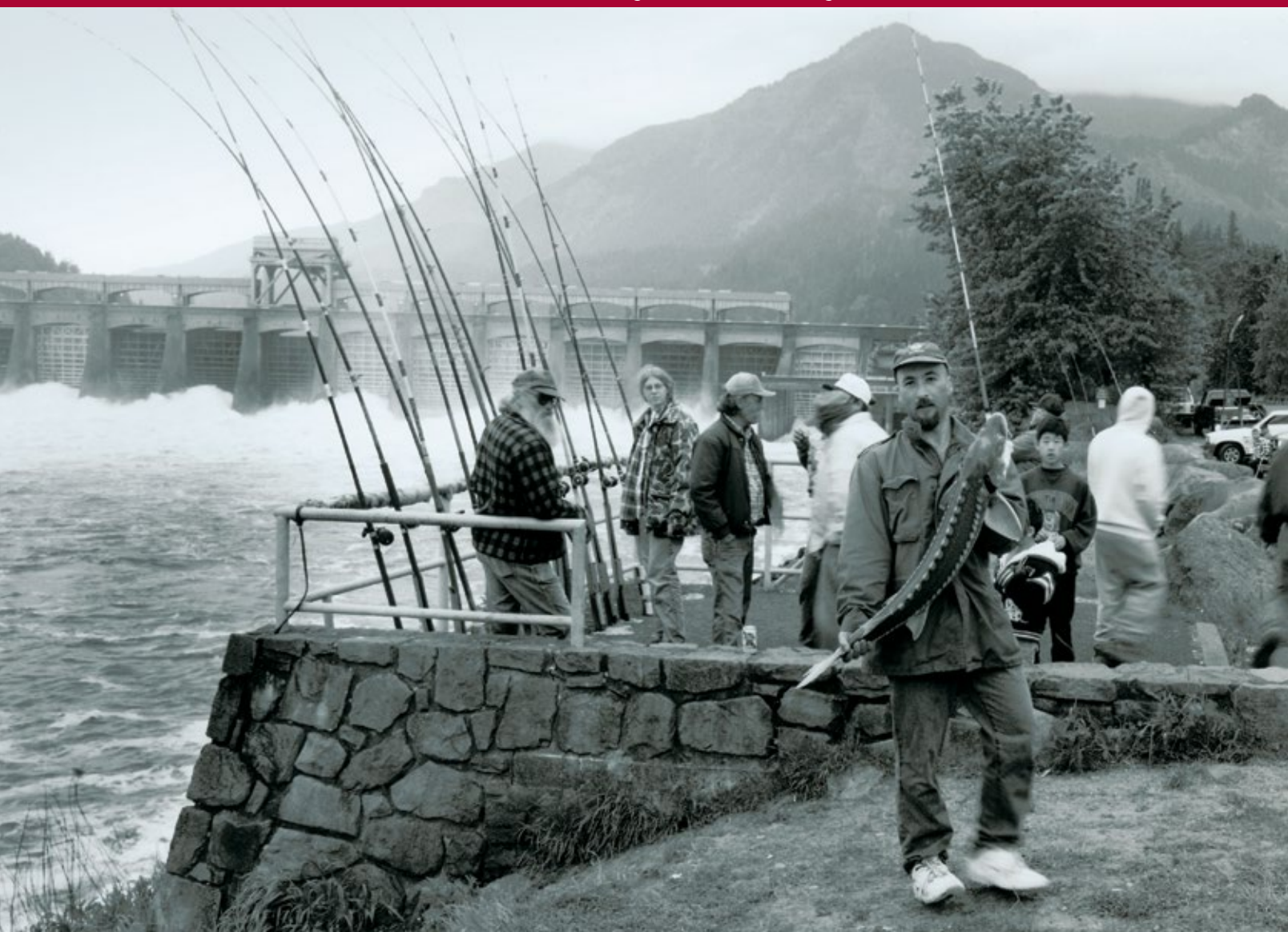
Lewis and Clark hit the trail with only the most basic surveying tools: a sextant and octant for use in calculating longitude and latitude and several large compasses. They would have had to clear thousands of miles of trees, brush, and other obstacles in order to have clear lines to take sightings and accurately measure distances, Plamondon explains. Instead they often ended up using their best guess—also known as dead reckoning.

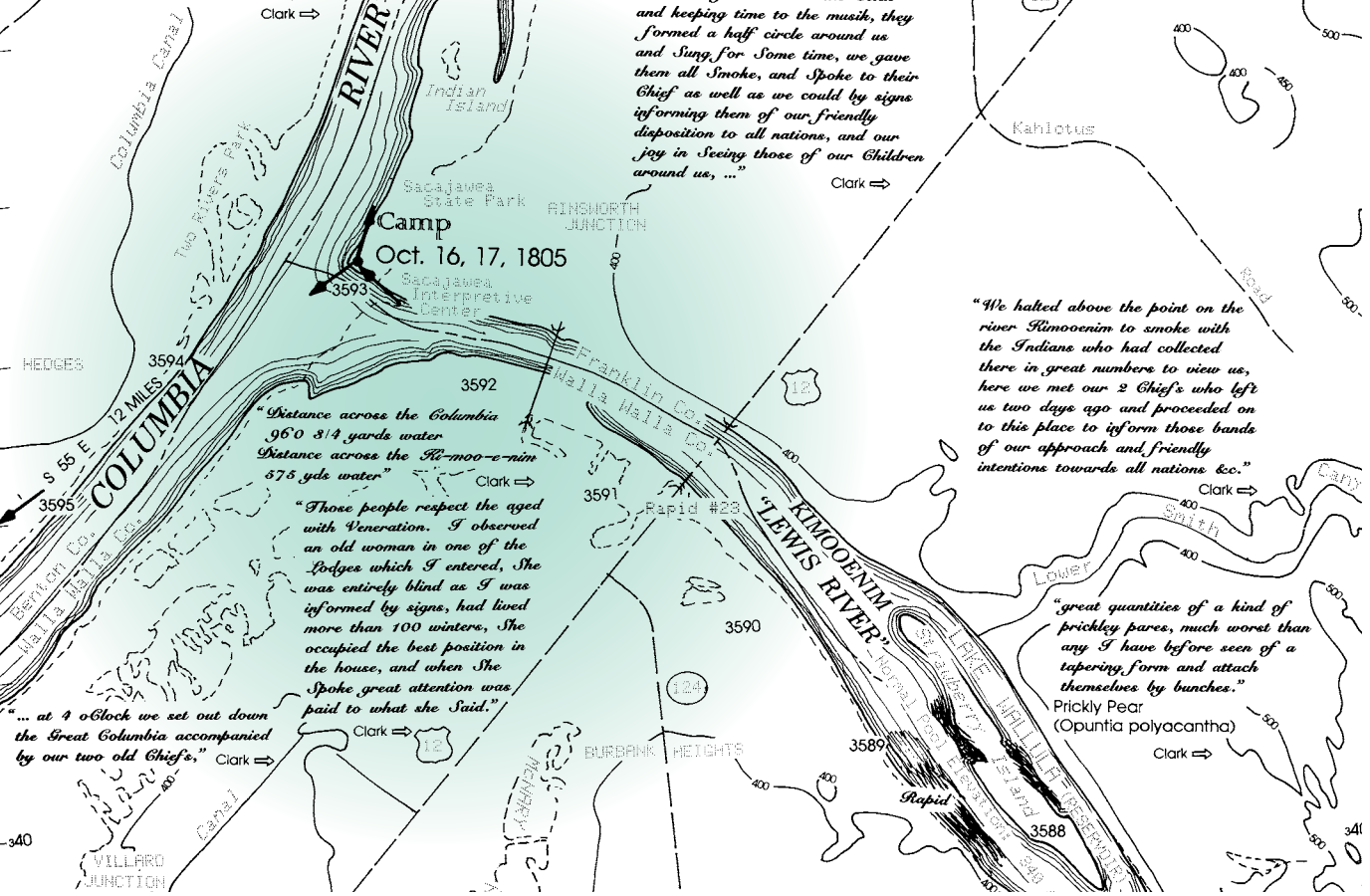
"They didn't have the man power, and they didn't have the money to do it right," he says. So if you take Clark's survey literally, it's way off.

"If you draw out his traverse, you damn near end up in Hawaii," Plamondon says. "He was 1,116 miles too long."

Plamondon collected every bit of Clark's data he could find, along with

Man with a sturgeon, Bonneville Dam, Oregon.





Columbia River, detail, Martin Plamondon's map 332, cartographic reconstruction of explorations of Lewis and Clark.

aerial photos, river navigation maps, atlases, roadside geology books, and other sources. He surveyed parts of the trail himself and recalculated Clark's survey to correct for errors. He laid a rotating line of U.S. Geological Survey maps the length of his garage and, section by section, remapped the route of the Corps of Discovery, adding contour lines, rivers, some highways, and other modern landmarks. All of it by hand.

How many miles of line has he drawn?

"I wonder," he responds.

His 530 maps required a total of 506,880 inches of borders alone, the equivalent of eight miles.

The result is so highly regarded that the Lewis and Clark Trail Heritage Foundation, headquartered in Great Falls, Montana, wants his original 18-inch-by-24-inch maps. For now, they will be housed at WSU for greater ease in printing Plamondon's atlases.

Scholars will clamor to study Plamondon's larger maps, because they will have greater detail, says Nicandri. "This is where the long-term dividend for the work will be secured."

SALMON NATION

"The number of dead Salmon on the Shores & floating in the river is incredible to say—and at this Season they have only to collect the fish Split them open and dry them on their Scaffolds . . . ." —*William Clark, October 17, 1805, Columbia River*[2]

"I counted 107 stacks of dried pounded fish in different places on those rocks which must have contained 10.000 lb of neet fish," —William Clark, October 24, 1805, at Celilo Falls on the Columbia River[3]

Because of his painstaking work, Plamondon came to know the landscape of Lewis and Clark as well as any of the historians, adventurers, authors, and scribes to retrace the explorers' tracks—as well as what's different today. Plamondon ticks off the changes in the last two centuries, the most significant in his eyes being the string of dams that played a huge role in all but erasing Snake and Columbia river salmon—the same fish that saved the expedition when it stumbled out of the Bitterroot Mountains in the fall of 1805.

[2] DeVoto, 252.
[3] DeVoto, 265.

Lewis and Clark discovered 122 animals new to science, none more plentiful than salmon. Waters that flowed "swifter than any horse could run," in the words of an expedition member, were home to the largest chinook, coho, and sockeye runs in the world. Fish were counted in the millions. Today, the wild stocks of this Northwest icon struggle to survive.

WSU wildlife researcher Charles T. Robbins agrees that the loss of salmon carries the greatest consequences of any change in the region since the Corps of Discovery forged west. "Salmon were the basis of an enormous food web," Robbins says. "Just look at the threatened species that would have fed on salmon carcasses, eggs, and the food web supplied by their nutrients—bull trout, sturgeon, cutthroats, grizzly bears—and less-threatened species like mink, otter, and black bears. Any animal population that fed on salmon paid a huge price."

The ramifications spread to the forests of the Pacific Northwest. Work done by Robbins and his doctoral students show how salmon and grizzlies delivered key nutrients to the old-growth forests that

Cape Disappointment, mouth of the Columbia River, Washington.

once lined the streams and rivers along the Lewis and Clark Trail. Spawning salmon returned to the streams of their birth loaded with nitrogen, phosphorus, and other nutrients. Grizzlies consumed huge quantities of the fish, converted the nitrogen to the form most readily useable by the trees, and distributed the fertilizer as they relieved themselves in the forest. Each salmon-fed bear spread the equivalent of 500 pounds of high-nitrogen fertilizer. Because of the demise of salmon and the eradication of grizzlies, the inland forests of Lewis and Clark no longer receive this nutrition.

There are other seemingly invisible changes. Reservoirs drowned Native American villages such as Pna, on the lower Snake River, and famous fishing sites such as Celilo Falls. Lewis and Clark buried another part of the culture by renaming rivers, creeks, mountains, and Native American sacred sites.

"I think it's worth considering those pieces of precontact culture that have perished and those that have survived Lewis and Clark's mapping and naming effort," says Charles Hudson, spokesman for the Columbia River Inter-Tribal Fish Commission in Portland.

Part of the renaming was convenience, says WSU's Hirt, who began teaching a course titled "Lewis and Clark among the Indians of the Northwest" three years ago.

Among other things, the explorers weren't skilled in languages. "It was difficult for them to sit and talk with Native American tribes and say, 'What do you call this mountain?'" Hirt says. "It's easier to name it in English. And the people they were writing their memoirs for spoke English."

Part of the renaming was a matter of conquest and colonization.

"One result of the renaming was psychological—to verify this was part of America and did not belong to the Native Americans," Hirt says. "Secondly, it helped obscure the fact that this was an inhabited landscape when subsequent generations [of European settlers] arrived. It obscured the reality of conquest."

Given this backdrop, how would the explorers view the landscape of today?

"My first thought is they probably wouldn't care, with the mentality we had back then," Plamondon says. "I don't think there's any place in the journals where they talk of any place that could be preserved. They talk of where the plow could go or how a tree could be cut."

But "if they were looking at it with the mentality of today, they would be as hurt by it as I am." ■

Ken Olsen is a journalist with the* Vancouver Columbian. *He spent this past year as an Alicia Patterson Journalism Fellow, examining the hidden world of public land swaps.

***Contemporary photographs of the Lewis and Clark Trail are by Greg MacGregor from his book,* Lewis and Clark Revisited: A Photographer's Trail.**

***See page 55 for a book review of* Hike Lewis and Clark's Idaho.**

FULL CIRCLE

by Tim Steury

GEORGE BEDIRIAN

Perennial wheat could fulfill a tradition and transform a landscape.

NO MATTER WHAT you have on the stereo or how preoccupied you are with your week at work or with the upcoming football game or whatever else might pull you back to Pullman for the weekend, as you drive through eastern Washington, you can't help but be absorbed by those endless stretches of fields, those fields that just go on forever. Sometimes they're covered with snow and nearly featureless, a monotonous infinity broken only by a distant cluster of buildings or a spectral windmill left behind by another time. Sometimes they're bright spring and startlingly green. Sometimes they're absolutely bare, denied even the Russian thistle or bunchgrass tough enough to make it here where rainfall can be as little as eight inches a year, every little green thing rod-weeded or herbicide-sprayed in order to preserve as much precious moisture as possible so that a crop of wheat can be teased from the arid soil next year. And sometimes those fields are all in motion, the relentless

Perennial wheat at WSU's Spillman farm.

MARGARET A. GOLINICK

"I've been trying to talk someone into developing perennial

prevailing wind out of the southwest lifting the fine particles of soil loose from the surface, blowing them, by the thousands of tons, in a billowing, murky cloud, eastward to wherever the wind drops them.

Steve Jones and Tim Murray want to change all this.

Jones is the winter wheat breeder at Washington State University, Murray a plant pathologist. Together with a small team of postdoctoral and graduate student researchers, and a growing number of farmers who understand that their wild vision might just be possible, Jones and Murray want to make that immense area of eastern Washington—or at least a good chunk of it—less prone to blow, less often bare, even more, if you will, unchanging.

The way they'll do this is to convince a plant that is content to die after it sets seed in late summer that it actually wants to live.

Unlike many of its wild-grass relatives, wheat is an annual. It must be replanted every year. Somewhere along its coevolutionary journey with agricultural *Homo sapiens*, probably earlier rather than later, wheat—or more correctly, its selectors—decided that making grain was more efficient if it became an annual.

That genetic history is not clear, says retired U.S. Department of Agriculture wheat breeder Bob Allan, who started working at WSU in the 1950s with legendary breeder Orville Vogel. Wheat derives from three separate genomes, none of which shows any perennial tendency.

Early farmers probably selected wheat ancestors for annual-growth habits, recognizing that the best wheat, like the best weed, as Allan points out, is an annual. Put everything into your seed to regrow next year, with no need to put energy into the relatively uncertain roots. At least that has been the conventional wisdom for the past 10,000 years or so.

Indeed, annual plants do have certain advantages over perennials. Among them, says Murray, is that the plant's death provides a natural deterrent to insect pests. Annual wheat dies in July or August, leaving nothing green in the sunbaked fields to harbor insect pests.

SO WHY TAKE a plant that works perfectly well and make it perennial?

"I've been trying to talk someone into developing perennial wheat since the 1960s," says Jim Moore, a Kahlotus farmer and former head of the Washington Wheat Commission.

"Vogel told me they couldn't get enough yield out of it. I don't care about that. I want something to hold my soil in place." The dry, powdery soil of the Columbia Basin, composed of volcanic ash and glacial silt, blows easily. The fine soil particles are not simply annoying, but a possible health risk, exacerbated by the fact that Spokane's population is directly downwind from the dryland wheat-growing region. Various means have addressed the dust problem, the most effective to date being minimum tillage. Planting directly in a previous year's stubble without tilling is an excellent conservation practice, but it still requires annual planting and a substantial investment in specialized planting equipment—and a lot of herbicides.

But perennial wheat's attractions are not limited to holding the soil in place. Somewhat surprisingly, in an unrelated interview last fall, pharmacy dean Bill Fassett told me that he thought peren-

A *partial pantheon* OF WASHINGTON WHEAT GENETICISTS

Soon after **William Spillman** arrived at Washington State Agricultural College in 1894, he realized that eastern Washington was one of the best areas in the world for growing wheat. However, the varieties available to farmers were not suited to Washington's growing conditions. He started an ambitious breeding program to develop better hybrid varieties. Scientists of the time believed hybridization was entirely random. Even though Gregor Mendel had discovered the principles of heredity in 1865, his work was unknown to the scientific world. In the course of his breeding program, Spillman noticed a predictability after the second generation of what types would appear. He had, as had three European geneticists, independently rediscovered Mendel's laws of inheritance. Also, by 1911, Spillman's varieties were grown on a half million acres.

Edward Gaines took a leave from his position at Washington State College to earn his doctorate in genetics from Harvard in 1921. The first WSC faculty member to be granted a paid sabbatical, he visited England, Sweden, and Russia in 1930 to collect wheat lines that had resistance to rusts and smuts, persistent problems in eastern Washington. Gaines concentrated on perfecting field-testing techniques and varietal comparisons. He recognized that varieties should be selected and tested where they eventually would be grown. Interestingly, he was criticized for two varieties he developed. They were so successful that they produced large grain surpluses for several years.

After **Orville Vogel** received his doctorate from WSC in 1939, with Gaines as his major professor, he soon began to take charge of the wheat-breeding program. Although his early work concentrated on shattering and smut, he eventually realized the need for a shorter, stiffer wheat plant to support the increased weight of the heads of new varieties bolstered by commercial fertilizers. After years of breeding, with the help of Masami (Dick) Nagamitsu at the Lind Research Station, Vogel released the semidwarfing and stripe rust-resistant "Gaines" variety. This semidwarfing characteristic established the foundation upon which Norman Borlaug produced the "Green Revolution."

A friend of Gaines and Vogel, botanist **Hannah Aase** was recognized worldwide for her work in cytogenetics. She published widely on the heredity of cereal grains. A gifted writer as well

wheat since the 1960s." —*Jim Moore*

nial wheat was the most important research being conducted on campus. The largest new health threat that looms over the medical community is global climate change, says Fassett. Carbon dioxide is a major contributor to the increased greenhouse effect and resulting global warming. And soil tillage is a major contributor to the release of carbon into the atmosphere.

Conversely, a permanent, or at least semipermanent plant cover, such as perennial wheat, greatly contributes to sequestering carbon in the soil. As oceans and forests are gigantic "sinks" of carbon, so is farmland planted in non-annual crops. A perennial wheat crop could greatly contribute to the sequestration of carbon in eastern Washington soils, and land owners could sell carbon credits in what can only be a growth industry.

Perennial buffers next to streams or on highly erodible land not only filter water, but are also attractive to birds and other wildlife, which is a reason the state Department of Ecology has provided Jones and Murray with funding.

But from an economic point of view, there's an even more fundamental attraction.

"If you look at planting costs annually," says Ritzville farmer (and state legislator) Mark Schoesler, "planting once instead of four times starts looking really good."

Earlier hopes for perennial wheat generally dimmed, because in addition to lower yields, there was little economic incentive regarding input. Fuel, fertilizer, and labor were all cheap. But now, input costs have greatly increased. Fertilizer costs have tripled over the last few years, says Allan. Diesel fuel costs $1.37 a gallon and is unlikely to fall in price. Fuel costs for a single tillage of a 2,000-acre field can run to several thousand dollars, and a new tractor can set you back a couple hundred grand.

The problem with commodities is the price is set by the world market. Too much wheat results in low prices. The only way to increase profit is to cut costs.

"There's two things educated people have taught me," says Schoesler, who has experimental plots of perennial wheat on his land. "You can be the low-cost producer, or you can sell quality. I don't know that you can do both." Some large producers have chosen the quality niche. For example, Karl Kupers of Harrington (*Washington State Magazine,* fall 2003) produces specialty grains and bypasses commodity brokers to produce his own flour. On the world commodity market, though, efficiency is everything. Anything that can add to economy of scale, anything that can squeeze another penny of profit out of a bushel of wheat, helps Washington stay afloat.

PERENNIAL WHEAT is not a new idea. Russian scientists worked on perennial wheat early in the 20th century. Unfortunately, the resulting germplasm was lost during the Soviet era. "It's a shame all this stuff has been lost," says Jones. "Multiple lifetimes of work is just gone."

Breeders at University of California at Davis did extensive work on perennial wheat in the 1950s and 1960s, and some of their breeding material made its way to Pullman. Allan remembers perennial strains included in wheat trials at Washington State College in the 1950s. Though it's unclear whether she had perennial wheat in mind, Washington State College botanist Hannah Aase worked with many of the same crosses between wheat and its wild relatives in the 1930s as Jones and Murray.

Aase was known internationally for her work, says Jones. Aase's work seems to have been directed purely at understanding wheat's ancestry. Unfortunately, all of the genetic material that resulted from her pioneering work has been lost. And more sadly, even though Aase was a major figure in WSU's scientific tradition,

ROBERT HUBNER

Jim Moore (left) farms 10,000 acres near Kahlotus, a region that averages nine inches of rainfall a year. He and Steve Jones examine a plot of perennial wheat on his land. Even though much of the difference is seasonal, the perennial wheat grown at Spillman Farm in Pullman (facing page) illustrates how difficult a challenge perennial wheat faces in the drier region. Still, Moore is patient and persistent. "I want something to hold my soil in place," he says.

as geneticist, in one of her articles, she wrote, "Weed gardens around the world are scrutinized ever more closely for any wild and little-known cereal or grass that might contribute in some small way toward a better understanding of how nature builds her species and also, possibly, toward the development of economically desirable forms."

Hired by Vogel in 1957, **Robert Allan** continues to work closely with both the USDA Agricultural Research Service and WSU on wheat-breeding projects. Allan developed the variety Madsen, the most widely planted wheat in the state during the 1990s.

Jones and Murray believe that the difference between annual and perennial wheat

few on campus remember the significance of her work.

But Schoesler remembers researcher Dick Nagamitsu, with the Lind Research Station, talking about the problems faced by perennial wheat in the 1950s. One of the main problems that Nagamitsu dwelt on, says Schoesler, was how difficult it was to thresh.

Technology, harvesting and otherwise, has changed dramatically over the last 50 years. So have a number of other factors, leading Schoesler and others to think the time is finally ripe for perennial wheat.

Graduate student Alysia Greco is studying the cost in yield to perennial wheats. She is also looking at how the plant partitions its energy during senescence. Her work seems to be undermining classical assumptions about the difference between annuals and perennials.

SHELLY HANKS

When scientists abandoned the idea in the 1960s, the yields simply couldn't compete, considering the low input costs, says Jones. But now, in the dry parts of eastern Washington, yields wouldn't need to be even 50 percent of conventional varieties, as fields are planted only every other year to conserve moisture. Then figure in the potential savings in inputs, primarily tillage, as well as the value of erosion control, and perennial wheat starts to seem pretty attractive nowadays.

Murray points to actual value placed on erosion control. Although payments vary by area—and, some say, legislator—land in the federally supported Conservation Reserve Program averages around $55 an acre. The CRP pays farmers to put highly erodible land into permanent grass cover, which cannot be harvested.

"If you get 20 bushels an acre and average $3 a bushel, perennial wheat competes pretty favorably," says Murray.

FINALLY, perennial wheat could provide a last-ditch solution to the dilemma faced by dryland wheat farmers. Although production costs have increased dramatically, the price of soft white winter wheat has remained static, dampened by increased production in Australia, Argentina, and other countries with lower input costs. In contrast to the large physical area that these wheat farmers control, their political power has dissipated. Even though the wheat industry contributes an impressive $1.2 billion to the state's economy, the farmers themselves number barely 2,500, a small voice in a diverse state dominated by west-side urban voters. Unfortunately, those urban voters see little in wheat farming for themselves.

"People probably won't go hungry if Washington farmers don't grow wheat," says Jones. "There are plenty of exporting countries that would be happy to fill the void instantly." Most of eastern Washington's wheat is shipped to Asia, where it is used in pastries.

Because of this lack of political clout, farmers have little recourse against political pressure. "They lost on burning. There are huge salmon issues looming," says Jones. "They're just going to continue to have a tough time, because there's not enough of them."

SHELLY HANKS

Postdoctoral researcher Doug Lammer pulls the anthers out of a head of wheatgrass, a perennial wild-wheat relative, thereby emasculating it and preparing it to hybridize with an annual wheat.

Low input, reduced soil erosion, increased wildlife habitat, carbon sequestration—all these factors would raise the environmental image of a beleaguered industry. Maybe, say the dreamers, such a system could lead toward a truly sustainable agriculture. Aesthetically, the region might even more closely resemble the original prairie to the east, if not the shrub-steppe of the dryer areas.

A particularly intriguing part of this vision recalls the argument made by one of WSU's first visionaries, William Spillman. Spillman was recruited by President Enoch Bryan in 1894 to teach agriculture at the fledgling Washington State Agriculture College and School of Science. Spillman stayed in Pullman only eight years. But in that short time he not only taught agriculture, he also coached the football team, traveled the state offering scientific advice to farmers, and independently rediscovered Mendel's laws of genetic inheritance, one of four scientists worldwide to do so.

Not surprisingly, Spillman was recruited away from Pullman by the USDA. But he returned to the Palouse in 1924, where he gave a series of lectures on "Balance Farming for the Inland

may lie in a single gene.

Empire." He warned that a single crop, wheat, could sustain neither the regional economy nor the rich loess soil. Only by diversifying, only by bringing livestock back into the system, he argued, could the area's agriculture endure.

Eighty years later, Schoesler notes a somewhat ironic problem with his stand of perennial wheat. It just won't quit. Following harvest, rather than setting its stock in its seed and dying, his perennial wheat not only didn't die, but started setting heads again.

"Years ago, producers grazed their stubble," he says. "In some parts of the country, they still graze winter wheat. I've told Jones and Murray, let's put sheep on it after we get excessive green-up."

So now imagine not only four million acres of farmland safely anchored with stands of perennial wheat, but herds of cattle and sheep grazing it in the fall and winter, giving you something to watch on your drive through eastern Washington.

But Jones and Murray stress there's still a lot of work to do before that vision can be initiated. One of the most serious problems still facing them is disease. Not only will perennial wheat be susceptible to the same diseases as annual wheat, says Murray, there will be other viral diseases that are generally not that great of a problem with annual wheat. Because of its very nature, perennial wheat, once infected, carries the virus into the next year.

So Jones and Murray are cautious. They know that their wheat will be accepted only when they have all the kinks out.

RESEARCH on perennial wheat has proffered not only promise, but genetically, a big surprise. Conventional wisdom has long held that the factors determining whether a plant is annual or perennial are very complex, influenced in subtle ways by genes spread over a number of the plant's chromosomes.

Faced with this complexity, breeding perennial habits into domestic wheat would seem daunting, if not impossible, due to the fact that the chromosomes of wheat and its wild relatives do not pair.

Even though hybridization is still possible, if chromosomes do not pair, says Jones, two things are likely to occur. One is sterility. The other is that the chromosomes cannot exchange genetic material.

"If you cross normal wheat A with normal wheat B," says Jones, "they combine and recombine chromosomes like most living things do. But in these crosses they don't. So that greatly complicates things."

Complicated as combining the best traits from wheat and its wild relatives is, however, what Jones and Murray have found concerning the genetic stimulus toward perennialism very much contradicts the conventional wisdom.

"We have plants that have only a single chromosome arm, or less, from this wild wheat," says Jones. And these plants decided to live.

Jones and his lab are also interested in the biological cost of a plant's living rather than dying. The classic assumption has been that annuals yield more because they go for broke, putting all their energy into producing seed rather than the plant material necessary to get them through the year. What Jones and his colleagues are finding, however, is that plants, at least wheat and its kin, seem to have plenty of energy to go around. In fact, they have some hybrid lines that are producing the same yield of seed as conventional wheat, yet are still signaling their roots and crowns that they want to live.

SHELLY HANKS

One of the major obstacles confronting plant pathologist Tim Murray and geneticist Steve Jones in their quest for perennial wheat is the time required for field-testing. Work in the greenhouse helps to reduce that time.

"We're getting very close," says Jones, referring to understanding what confers life or death. In fact, he believes it may be determined by a single gene. Such a discovery would have enormous implications for both agriculture and our understanding of plant genetics, and a whole region of Washington might soon be transformed, beginning with a single gene. ■

Listening to

Ken Alhadeff discusses fund-raising ideas in his downtown Seattle office.

Ken Alhadeff's inward journey brings light to the darkness.

His Heart

by Beth Luce • photography by Laurence Chen


Ken Alhadeff

THE PIONEER SQUARE OFFICE from which Ken Alhadeff oversees his Seattle real estate and investment business is filled with memorabilia. A flock of wooden duck decoys amassed by his father. Autographed photographs of famous jockeys. Signatures of Thomas Jefferson and Mamie Eisenhower. A set of Seattle Slew's horseshoes and a racing program from Secretariat's Kentucky Derby victory. Jackie Robinson's rookie baseball card. A plaque dedicated to Alhadeff from Operation Nightwatch, which cares for homeless men, women, and children.

Another facet of Alhadeff's life is equally diverse and legion—the collection of philanthropic interests to which he devotes at least half of his time. Education. Street kids. The Seattle Symphony. Homeless people. Democratic politics. Hearing-impaired children. The Red Cross. The Seattle Aquarium. United Way. Civil rights. The 5th Avenue Theatre. Battered women. The American Jewish Committee. Alcohol and substance abuse programs. Alzheimer's research. He sits on the Washington State University Board of Regents and is an enthusiastic supporter of the Future Teachers of Color scholarship program in WSU's College of Education. The list is long, but there's a theme to it.

"If you name the things that keep a community healthy, he's got his finger in a bunch of those," says Ruthann Howell, president and CEO of Family Services of King County.

Alhadeff's honesty in talking about his life, his shortcomings, and his work is well known. At 55, he makes no secret of his own dire mistakes, from which he has developed a searing desire to do and find good in the world. He speaks constantly of "lighting the darkness" and "listening to the heart." He's on a personal crusade for civil justice. A talented public speaker, his rhetoric implores others to honor people of every class and circumstance, leading former Seattle mayor Norm Rice to comment that Alhadeff, who is Jewish, might have a bit of Baptist preacher in him. Influential in politics from the local level to the national, he once considered running for mayor, has been appointed by various governors to state commissions, and counts U.S. presidents among his acquaintances.

Like the things he collects, Alhadeff's story is fascinating to look at, and he's willing to share.

Helping others

BORN INTO A WELL-TO-DO FAMILY that emphasized community responsibility, civil rights, and the arts, Alhadeff learned philanthropy and culture on his mother's knee. "My mother took me to plays and rallies for civil rights. I was always exposed to the importance of helping others," he says.

Alhadeff also grew up breathing in the romance of horse racing at Longacres, the family business. At 14, he began working at the racetrack, mucking out stalls, selling programs, and working in the publicity office.

Although a member of a loving, privileged family, Alhadeff had his share of problems, including a deflated self-image. He saw himself as a fat, unathletic, sensitive, unpopular kid who didn't like school.

As a student at WSU in the late '60s, he questioned authority with zeal. "I was part of a group of folks that marched down the streets of Pullman to President Terrell's house with torches, demanding that the Black Studies Program not be eliminated. It was a war between us and those insensitive, bureaucratic regents," he says, smiling at the irony. "Little did I know that years later, I would be one of those regents."

After earning a general studies degree in 1970, he returned to Seattle and went to work at Longacres, eventually becoming president of the food-and-beverage arm and senior vice president of the business. His brother, Michael, operated the track.

Alhadeff married, had a son—Aaron, now 27—and threw himself into a campaign of community involvement. He was the first white president of the Central Area Boys Club, the youngest member on the Urban League Board of Directors, and a major fund-raiser for Seattle's Children's Hospital. But in the beginning, he admits, his philanthropic motivation was vainglorious. In a 1999 interview for the television program *Northwest Week*, he said, "I was looking for recognition,

Ken Alhadeff speaks at a meeting of teachers in Federal Way, Washington.

to validate myself . . . to show my parents that I had the capability to be a player."

And then Alhadeff took a seriously wrong turn in his life. Medication for migraine headaches evolved into an addiction to prescription drugs and alcoholism. It was a steep dive from there. His marriage ended. He nearly died of overdoses more than once.

"It was very devastating to me and my family and my life," he says. "I had a spiritual hole inside me. I tried to fill it with cars and Rolex watches and gambling and drugs. You can't fill a spiritual hole with those things."

Through the support of family and friends, Alhadeff restarted his life. He's been clean and sober since July 20, 1984, and he works out regularly. He married an Italian-American Catholic woman, Marleen, of whom he's obviously very proud. They have two daughters, Alison, 16, and Andrea, 15. He uses his experience to help others. "My recovery is an important part of my life," Alhadeff says. "It's part of who I am. And I devote a great deal of energy toward helping other people with their recovery."

Alhadeff's spiritual hole is now filled with philanthropic work. It's no longer the attention that moves him. "What makes me tick is an insatiable belief in the spirit, in simple acts of kindness. People who do things for people who can't do something back for them," he says.

His attitude about himself has changed much from the days when he struggled with his self-image. "I had to learn certain skills and appreciate some of the inward journey along the way," he says.

"He's been through some of his own travails and has been very honest about those," says Howell. "He's done the work that you need to do to be in great places in your own life."

Sources say Alhadeff does a lot of little things that go unheralded. He hands out movie and baseball tickets to homeless kids. He rewards kindness and good deeds in others. "He doesn't make a big deal about it," says Howell. "He's gleeful about what he can do."

State representative Phyllis Kenney notes that Alhadeff does what he believes in, contributing to social justice and education causes through the Kenneth and Marleen Alhadeff Charitable Foundation. His work for arts emphasizing the state's immigrants and with troubled young people particularly impresses her. "He has instilled respect and self-confidence in so many people to succeed. He makes them feel that they're worth something, that they can do it."

Part of Alhadeff's manifesto declares that every person, from criminal to diplomat, deserves respect. "I believe deeply in the value of every single individual . . . in the opportunity that each of us has to bring grace and dignity and warmth and wonder to life."

"I believe if we all listen to the heart, the heart will never let us down," he says. "The devastation in the world, the poverty, the sickness, the hate, the difficulty, would be almost impossible, if we would listen to our heart, because our heart isn't racist. Our heart isn't violent."

Longacres, legends, and legacies

In Seattle, the Alhadeff name is perhaps best associated with Longacres, the racetrack built by his grandfather in 1933 and owned and operated by the family until 1990.

During the Depression, Longacres' surroundings were rural. But the towns of Renton and Tukwila grew up around it, making the land much more valuable than the track itself. By the late '80s, the facilities were showing their age. The concourse and barns needed "a mammoth financial investment" to bring them up to date and make them seismically safe in this earthquake-prone region. "And at the same time, the racing industry was in a very rapid and dramatic decline," Alhadeff says. So when Boeing offered to buy the land to build an office complex, the family accepted.

"Selling the racetrack was the most difficult thing I've ever been through . . . ," Alhadeff says now. "We were presented with an incredible business opportunity for our family. We took it. We knew we were ending a tradition, but ultimately our responsibility was to the financial stability of our family for generations to come."

Criticism rained down. Alhadeff says he understood why people were upset. "For many people, Longacres was a magic place. It was for me, too." Many people thought of Longacres as a public trust. "But it wasn't. It was a private entity that wasn't doing very well," he says. "It was impossible to defend ourselves, even though my heart and soul told me that 99.9 percent of people would have done the exact same thing."

To ease the consequences to the racing industry, Boeing

"I believe deeply in the value of every single individual . . . in the opportunity that each of us has to bring grace and dignity and warmth and wonder to life."

agreed to hold off for two seasons before claiming the site and bulldozing the track. In the meantime, the Alhadeffs leased out the facilities for only $1 per year, freeing up millions of dollars to be added to prize purses to help support the industry. The family contributed hundreds of thousands of additional dollars to purses.

Several years later, the new Emerald Downs track in Auburn replaced Longacres. The Alhadeffs sponsored an annual race there—the Longacres Mile—for years. Alhadeff still owns several racehorses, and he plans to continue racing the rest of his life.

His voice takes on a reverent note when he talks about the day Seattle Slew came to Longacres in 1977, just after winning the Triple Crown and an additional race in California. "We knew we couldn't put on a race that would justify him coming, but we just wanted him to be at our racetrack. So my father devised an event called the Golden Gallup," Alhadeff remembers. Billed as a fund-raiser, the family guaranteed at least $100,000 each to WSU's College of Veterinary Medicine and the Joe Gottstein Cancer Research Fund at the University of Washington, named after Alhadeff's grandfather, who founded Longacres.

"When that horse got out of the van in the barn area, horses started popping their heads out of their stalls. They knew they were in the presence of something special," Alhadeff says. With a 135-pound exercise rider on his back—30 pounds more than a jockey weighs—the exhausted horse was just asked for an exhibition gallop around the track.

"But when he headed for home, the crowd started cheering and yelling. Seattle Slew went into a dead run, because that Thoroughbred had so much heart and soul that he refused not to run as fast as he could," Alhadeff says. "When he came into the winner's circle for a ceremonial photograph, it was very clear that he felt as if he'd run a race."

That comment reveals much about Alhadeff and what he admires. "There's part of Ken that's larger than life, and his heart is just as big," says Mayor Rice, adding that Alhadeff supported him during rough times in his own life. "He knows about overcoming adversity. To him, struggles are as important as victories."

Asked what he has left to accomplish, Alhadeff responds that he'd like one of his horses to win the Longacres Mile, and he'd like to break 80 on the golf course. (He usually shoots in the high 90s.) He'd love to see the Cougar football team win the Rose Bowl. But mostly, he says, he'd like to feel some closure on his work for social justice. In the meantime, he continues his eclectic mission to save the world, one person at a time. ■

Beth Luce is a Seattle writer.

Ken and Marleen Alhadeff commissioned this carving at their home in Seattle. The swan carved into the base of the tree represents their symbol of hope and is the mascot of their charitable foundation.

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Lonny Suko '65 is confirmed as U.S. District Court judge.

COLLEEN CARROLL, *YAKIMA HERALD REPUBLIC*

Lonny Suko's rise to judicial prominence doesn't surprise those who know him.

THE KID FROM ODESSA

AS HE LOOKED around the U.S. Senate Judiciary Committee hearing room last June, Lonny Suko had not lost sight of how he got there.

At age 59, he had gone east to face questions about his ability to replace U.S. District Court judge William Fremming Nielsen, who took senior status.

Did Suko have the personal and professional mettle to serve as judge for the Eastern District of Washington state?

His answer came July 15, when the Senate confirmed President Bush's nomination of him by a 94-0 vote.

The trip to Washington, D.C., a venture backed by the area's Congressional delegation, capped what was a "tremendously exciting year," he says.

For Suko, a 1965 political science graduate of Washington State University and a 1968 University of Idaho Law School graduate, the judiciary committee was "awe inspiring." The judicial presence he had honed while serving as a federal magistrate in Yakima since 1995 enabled him to maintain his composure, but Suko admits to experiencing a case of intestinal gymnastics.

The son of a tractor mechanic and Ford auto dealer in Odessa, he marvels at the opportunity his confirmation hearing represented.

"Here's a kid from Odessa: 'What am I doing here?'" he recalls thinking. "It's a very humbling and moving experience. When I walked out of the room, I asked my wife [Marsha], 'What did I say?'"

Aside from a one-year law-clerk stint with federal Judge Charles Powell in Spokane, Suko has spent his entire legal career in Yakima. It was Powell who steered him to Yakima, where he worked with the Lyon, Beaulaurier, and Aaron law firm for 26 years, developing a reputation as a skilled mediator. He worked as a part-time federal magistrate from 1971 to 1991.

He represented many central Washington school districts in all aspects of education law.

Suko's rise to judicial prominence doesn't surprise Keith Schafer, a longtime friend and Odessa farmer who also graduated from WSU.

So conscientious was Suko while growing up that a neighbor, Henry Michaelsen, often referred to him as "the judge," Schafer says. "He was pretty serious and studious."

That continued at WSU.

"You could set your clock by his study habits," Schafer says.

Suko has never forgotten his humble beginnings—a perspective forged in a dawn-till-dusk farming community where the streets had no names or numbers and people left their doors unlocked, says Schafer, who lives within a stone's throw of the old Suko family home.

"It was a great place to grow up," says Suko, recalling how the community 75 miles from Spokane had three grocery stores, three car dealerships, two clothing stores, and about a half-dozen doctors and dentists.

His time at WSU was memorable as well.

Political science professors Steven Mitchell and H. Paul Castleberry and history professors Howard Payne and Herb Wood left an indelible mark, Suko says.

"I look back with great pride on my years at Washington State University.... It opened doors and worlds to me that I never would have had an opportunity to explore."

Suko has maintained strong ties with the University. The Phi Beta Kappa honors graduate continues to serve on the College of Liberal Arts advisory board. Marsha Suko, also a WSU graduate with a master's degree in guidance counseling, has served on numerous WSU advisory boards.

As a federal judge, Suko will have to scale back his civic involvement. Specifically, political and fund-raising activities are off limits, he says.

Some things won't change, however. Schedule permitting, Suko says he will swap his judicial robe for Cougar attire as he and his wife take their seats in Martin Stadium this fall.

"I don't consider that political," he says. "That's a religious meeting."

—Wes Nelson

CLASS NOTES

1930s

Necia Bennett Huntley ('35 Hist.) and her late husband, **Elmer Huntley** (x'37 Lib. Arts), Olympia, were recognized as Laureates of Washington State University for the scholarship they established at WSU. Elmer was a longtime legislator from eastern Washington.

Richard O. Moss ('36 Arch. Engr.), 92, and his wife of 65 years, Karrie, live in Spokane's Rockwood Manor. She is a retired elementary schoolteacher. He worked for the Army Corps of Engineers in Anchorage, Alaska, for nine years, and then in Seattle before joining the Atomic Energy Commission in Las Vegas. He helped set up the underground nuclear test sites at Jackass Flats, Nevada, and later at a remote island in Alaska.

1940s

George Clinton Fullmer '44 is retired. He is editor of a monthly newsletter for a 300-member retirement home in Los Gatos, California, and continues to write monthly musical parodies to introduce the speaker at the 375-member Sons in Retirement brunch in Palo Alto.

Jean Lancaster ('47 Educ.), retired educator in Longview, spent a week on Easter Island.

1950s

Ed Bator ('50 Phys. Educ.), Moses Lake, has been inducted into the Washington Baseball Coaches Association Hall of Fame. As baseball coach at Moses Lake High School, 1953-68 and 1972-79, he compiled a 289-207-2 record.

Charles E. Millard ('53 Gen. St.), Yakima, was selected to the Washington State High School Track & Field Coaches Hall of Fame in January 2003. His son, **Gary Millard** ('87 Gen. St.), was voted Track & Field Coach of the Year for winning the 3A Girls state track championship at Eastmont High School in East Wenatchee.

Joanne Layman Hespelt ('59 Educ.) has traveled to New Zealand and 11,570 miles across the U.S. and Canada with her husband since retiring from the Moscow, Idaho, school district.

1960s

Connie Millard Niva ('62 Bact.) was honored as the Everett Area Chamber of Commerce's 2003 Citizen of the Year. She is a former member of the Everett City Council and served on the Washington State Transportation Commission for 10 years. She is a WSU regent.

Meredith G. Cunningham ('64 Engl.), Mukilteo, spends six months a year in a small Mexican village, but doesn't leave the Northwest until after the Cougar football season.

Gordon L. Douglas ('65 Zool.) completed his term as president of the 7,500-member American Academy of Periodontology at the 89th annual meeting of the AAP in San Francisco September 2003. He maintains a full-time private periodontal practice in Sacramento and Folsom, and is a part-time educator and clinical researcher.

Former provost at University of Iowa **Jon Whitmore** ('67 Speech, '68 M.A. Speech) became the 14th president of Texas Tech University in September 2003. He served as chair of the Division of Theater at West Virginia University, 1979-83, and as assistant to the president, 1983-84. He was dean of the faculty of arts and letters at the State University of New York, Buffalo, 1985, and dean of the College of Fine Arts at the University of Texas at Austin, 1990.

Melinda Daugherty Beasley ('68 Political Sci.) is an associate broker at Beasley Realty in Pullman.

Robert Ivie ('68 M.A. Speech, '73 Ph.D. Speech) is a professor in communication and culture at Indiana University. His specialty is war rhetoric. In November 2003 he was invited to the United Nations' two-day conference on terrorism. There he, UN officials, CEOs, and university scholars explored options beyond coercion.

Donald "Joe" MacLean ('68 Phys. Educ., '74 M.A.T. Phys. Educ.) is director of the Recreational Sports Department and oversees the intramural sports program at Texas Tech University.

Sports agent **Joe Urban** (x'69 Bus. Mgmt.) heads the baseball division of Octagon Worldwide, a sports management and marketing company in Manhattan.

1970s

Gerald R. Girod ('70 Ed.D.) has retired as dean of education at Western Oregon University in Monmouth.

John Amos ('72 Agri.) and his wife, Cynthia, live in Mission Viejo, California. He is western regional sales manager for The Mentholatum Co. Their daughter, **Janel Amos** ('00 Educ., '00 Teaching Cert.), married **Ben Kincheloe** ('99 Educ., '99 Teaching Cert.) August 16, 2003, in Yakima.

Wayne Hamasaki ('72 Educ.) is an elementary school principal in the Issaquah School District.

Alvin De Jong ('72 Ph.D.), professor of biological sciences at California Polytechnic State University, San Louis Obispo, was one of three professors to receive the university's highest teaching honor for 2002-03. His scientific papers have been published in the journals *Condor* and *Physiology and Behavior*.

Linda D. Zerba ('72 Math.), Athena, Oregon, taught high-school and middle-school math for 26 years. For the past five years, she's been a regional math consultant for McDougal Littell.

Mary A. Fukuyama ('73 M.S. Educ., '81 Ph.D. Educ.), clinical professor at the University of Florida, Gainesville, has been elected a 2004 fellow of the American Psychological Association. Fellows must demonstrate the national impact of their work, such as numerous research-based publications, leadership roles within psychology, or community service in their clinical practice. She joined the UF faculty in 1982.

Douglas "Scott" Knight ('73 Political Sci., '76 Teaching Cert.) was selected as 2003 Coach of the Year by the American Baseball Coaches Association, Region VII, which covers seven western states. Selection was based on his success as longtime baseball coach at Stanwood High School, where he continues to teach, and his involvement with the Washington State High School Baseball Coaches Association. He was inducted into the Washington State Baseball Hall of Fame in 1993. He coached high-school baseball for 33 years.

Mark Murphy ('74 Police Sci., '74 Political Sci.) has joined the Yellowstone County Attorney's Office in Billings,

Pathfinder Award winner recognized early in career

JARED WILKEY, BRIGHAM YOUNG UNIVERSITY

Brad Rawlins examines ethical practice in public relations.

WASHINGTON STATE UNIVERSITY alumnus Brad Rawlins has earned one of the nation's top scholarly awards in public relations.

The assistant professor of communications at Brigham Young University received the Pathfinder Award November 20, 2003, in New York City. He was recognized by the Institute of Public Relations for "a whole body of work through a number of years."

Rawlins's research examines ethical practice in public relations, especially moral decision making. He hopes to use concepts such as authenticity, accountability, and responsibility to show the need for transparency in communications.

"If you can help an organization become more transparent, then that organization has to account for what it's doing, not only to itself but also to others who have a stake in the behavior and the practice of that particular organization," he says.

Rawlins ('87 Comm., For. Lang. & Lit.) worked on his research on and off for eight years as a faculty member at James Madison University in Virginia. It wasn't until he joined the Brigham Young communications faculty in 2000 that he began rigorous research in the area.

"Look at all the corporations that are having problems with ethics," says Don Stacks of the University of Miami School of Communication. "He [Rawlins] was pushing this research before all that happened. Brad has set a path that others are following."

The Pathfinder Award is usually given to scholars who are at the end of their careers.

"His work has been, for such a young man, an outstanding array of very effective research," says John W. Felton, president and CEO of the Institute of Public Relations.

Rawlins, the son of Mary Jo and V. Lane Rawlins, president of WSU, shares credit for his research with Kevin Stoker, assistant professor of communications at BYU.

—Thomas Grover/Pat Caraher

Pediatrician, music educator, engineer, wood researcher honored.

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, four individuals have been recognized.

RICHARD C. GUSTAFSON, JR.

Richard C. Gustafson, Jr. wants to spend up to two months a year in a third-world country providing health care for children. The WSU ('93 Psych.) and Vanderbilt University School of Medicine graduate ('98) completed a residency in pediatrics at The Children's Hospital, Denver, where he works in urgent-care medicine.

Between his third and fourth year of medical school, Gustafson spent five two-month medical rotations abroad—one each in Sweden, India, Thailand, Vietnam, and The People's Republic of China—studying community, family, and pediatric medicine, infectious diseases, and tropical, Tibetan, and traditional Chinese and Vietnamese medicine.

In developing countries, he says, small interventions such as an improved latrine or water well can make drastic impacts on the lives of entire communities.

He spent 10 weeks in Costa Rica, observing health care and working in an infectious disease lab. He worked a month in a rural Mexico clinic and two months in Peru, where he attended up to 35 patients each half day in a mountain village.

On a 2002-03 trip to China, he provided medical exams and advice on infants and young orphans up for adoption. He also supervised residents on international medicine electives in Guatemala (2002) and Spain (2003). Last year, he earned a diploma from the London School of Hygiene and Tropical Medicine, and spent a month in China, Laos, and Cambodia, providing medical care.

Richard C. Gustafson, Jr. '93

MICHAEL F. CHAPIN

Longtime Bellevue music educator Michael F. Chapin ('70 Music, '74 M.A. Music) was recognized at WSU's 2003 Homecoming football game, where he directed the Cougar Alumni Band. He spent his entire 30-year career in the Bellevue School District as band director in elementary schools, 1970-91, and at Tillicum Middle School, 1991-2000, where he founded the marching band.

ROBERT HUBNER

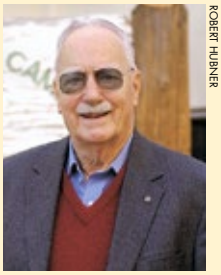
Michael F. Chapin '70

"Whatever it took, Mike would provide the opportunity for students to succeed, and he made a big difference in their lives," says Jerry Schaefer, former Tillicum principal.

His commitment to students and their music development was recognized many times by the school district. He has directed the Cougar Alumni Band for five years and played with the band since 1994. In the mid-1970s, he was a cofounder of the Bellevue All-City Band for fifth- and sixth-graders.

LEON LUCK

Leon D. Luck, Pullman, devoted 36 years to teaching, research, and administration at WSU. He chaired the Department of Civil and Environmental Engineering, 1972-76, before retiring in 1983.



ROBERT HUBNER

Leon Luck '48

"He took a deep personal interest in his students, who were greatly influenced by his professional and academic standards, ethics, and integrity," said David McLean, current department chair.

Luck ('43 Civil Engr.) came to WSU from Spokane, and joined the faculty in 1947 after three years in the Navy. For six years, he managed Camp Welch, WSU's civil engineering survey camp at White Pass, and spent 13 summers on the faculty there.

Luck initiated a videotaped graduate program for working professionals. He taught two of those courses that counted toward master's degrees for engineers in 10 public and investor-owned utilities, and the Puget Sound Naval Shipyard. He served as national director of the American Society of Civil Engineers and president of the Washington Society of Professional Engineers.

ROY F. PELLERIN

Roy F. Pellerin '59

For 38 years, Roy F. Pellerin's WSU research was designed to enhance the engineering uses of wood and wood materials. He began working in the College of Engineering's Wood Technology Section the same year he earned his degree ('59 Mech. and Materials Engr.). He retired in 1996 as professor of civil engineering and director of WSU's Wood Materials and Engineering Laboratory.

Pellerin was honored November 29, 2003, at a reception in Ocean Park, Washington, where he lives with his wife, Pat. He holds 20 U.S. and/or foreign patents for nondestructive testing and evaluation technologies and equipment.

Nondestructive testing of wood research was cited as one of the outstanding research efforts of the College of Engineering and School of Architecture over WSU's first 100 years.

—Pat Caraher

Montana, as new chief deputy county attorney for criminal cases.

Clifford Webster ('74 Political Sci.) has been elected president of the State Capital Global Law Firm Group, an international network of capital-based law firms. He is a principal at Carney Badley Spellman, a Seattle law firm, and heads the government affairs practice group.

Tom Norwalk ('75 Lib. Arts, '76 Comm.) has been promoted to president and chief operating officer of Seattle Hospitality Group. The company has ownership and investment interests in Sheraton Seattle Hotel & Towers and the Pacific Plaza Hotel, Seattle, and the Monterey Marriott in California.

Joy Beggs Rapp ('75 Educ., '91 Ed.D.), superintendent of the Lewiston, Idaho, school district, received the Idaho Superintendent of the Year Award at the American Association of School Administrators conference in New Orleans in February 2003.

Rob Ramer ('76 Civil Engr.) is district purchasing manager for Community Colleges of Spokane.

As a landscape architect for the Umpqua, Oregon, National Forest, **Christina Schroeder Lilienthal** ('76 Land. Arch.) is coordinator for the Rogue-Umpqua Scenic Byway, the 172-mile loop from Highway 138 in Roseburg past Diamond Lake to Highway 230, and on through the Rogue River National Forest and Gold Hill.

Terry W. Van Ellen ('76 Phys. Educ., '77 Teaching Cert.), Kemah, Texas, was named one of three national finalists for the 2003 Social Services Medal sponsored by the Partnership for Public Services in Washington, D.C. An operations specialist at the U.S. Department of Housing and Urban Development since 1998, he was instrumental in the construction of Public Inc., a nonprofit school of entrepreneurship for impoverished children in Galveston. He also facilitated the building of the first new housing development there for more than 20 years. His technical assistance helped lead to the construction of 40 new privately owned homes in a location where a dilapidated housing project once stood.

Tracy Barry ('77 Comm.) has completed 20 years as a weeknight news anchor for KGW-TV in Portland. She's seen the station's news philosophy change—initially emphasizing news coverage by helicopter, then moving into tabloid territory—before settling on what she describes as "an emphasis on responsible reporting." She and her husband, Larry Blackmar, have adopted two daughters from China.

Ginny Boyle ('77 Educ., '89 M.Ed.) is now vice president for operations at the WSU Foundation, after spending nine years as assistant director of alumni relations at WSU.

Jenise L. Wolff Falk ('78 Educ., Teaching Cert.) is a vice principal in the Pleasanton, California, school district.

Sue Lani Wicht Madsen ('78 Arch.) and her husband, Craig, have a family ranching business near Edwall called Healing Hooves. They raise goats and sheep and provide natural vegetation management services to landowners across the state. In a private architecture practice, she works extensively with public hospital and rural healthcare facilities in eastern Washington, as well as with a variety of community-focused projects, including the post-flood restoration of the Ferry County Fairgrounds.

Don Lynch ('79 Finance), Los Angeles, is author of *Ghosts of the Abyss*. The book describes the expedition filmmaker James Cameron conducted in August and September 2001, when he returned to the wreck of the *Titanic* to

Challenges remain for women, minorities in technical fields.

"I think . . . [managers] need to be educated. They need to see more women and minorities who are competent at their jobs to dispel any prejudices against them." —Shannon Nutt

Northrop Grumman Corp. engineer Shannon Nutt received a national Women of Color Achievement Award.

THE FACT that very few women were entering engineering careers 25 years ago didn't dissuade Shannon Ueda Nutt from pursuing her dream. Now she's enjoying a successful, challenging career with the Northrop Grumman Corp. in Palmdale, California, where she's engaged in a highly technical field supporting B-2 stealth bomber development.

"I knew my junior year in high school that I wanted to be an engineer," says Nutt. She remembers the day an engineer came to speak to her class at Spokane's Ferris High School. "My favorite classes were physics and math. I wanted to go into a field which utilized both."

Nutt credits her Japanese-American father, Hiroshi William Ueda, for convincing her that she could be a success at any profession she selected.

"His support made me believe that there were no boundaries . . . that I could do or be anything that I wanted, regardless of race or sex."

After graduating from Washington State University ('81 Elect. Engr.), Nutt worked during the 1980s with Rockwell International on the space shuttle program and the B1-B bomber.

At Northrop Grumman, she develops, tests, and integrates operational flight software for avionics control processors on the B-2 stealth bomber. She is part of a rotational program that allows employees to learn different aspects of the company for six-month stints. Her recent assignment was with the B-2 Radar Modernization Program, updating the B-2 radar system to meet new Air Force radio frequency requirements.

In September 2003, Nutt received a national Women of Color Achievement Award in Nashville, Tennessee. The awards were presented during the Women of Color Research Sciences and Technology Awards Conference celebrating the successes of minority women in mathematics, science, technology, and engineering.

"I try to mentor women who are new to the industry with their careers, if asked," Nutt says. Because of the award, she has had young women engineers who are relatively new to the company e-mail her, asking for advice.

Although honored by the award, Nutt wishes there were more awards simply recognizing achievement in research and technology, regardless of ethnicity or gender.

From her WSU days, Nutt recalls the influence of Harriett Rigas, chair of electrical engineering, who oversaw a Society of Women Engineers chapter, and assistant professor of electrical engineering Edmund Schweitzer. "I didn't appreciate until later in my career the immense quality of the teachers WSU provided," Nutt says.

Asked about challenges remaining for women and minorities in technical fields, Nutt cites the need to erase wrong perceptions about their abilities. She also recommends working hard, being prepared, continuous training, and networking.

"I see the inequities, and a lot of them are caused at the lower management level. I think they [managers] need to be educated. They need to see more women and minorities who are competent at their jobs to dispel any prejudices against them.

"There are still instances where not much is asked or expected from women or minorities because of certain perceptions and prejudices. There's a lot of talent out there that is under-utilized. Management isn't giving them the chance to prove themselves."

Nutt believes it's important to invest time in helping each other out professionally and to mentor, she says, "or this talent will be lost to another company."

—Treva Lind

CLASS NOTES *continued*

explore the ship's interior.

After retiring from the Army in 1997, **Roger P. Schatzel** ('79 Forest & Range Mgmt.) worked in telecommunications for three years. In 2000 he obtained a residential contractor's license and started his own company, Top Dog Contracting, specializing in custom home construction in Tampa, Florida.

Walter P. Weisenburger ('79 M.S. Psych, '84 Ph.D. Psych.) recently climbed 18,000-foot Mt. Elbrus in Russia. He serves on the editorial board of the journal *Neurotoxicology and Teratology*. He is a senior research investigator for Pfizer Pharmaceuticals, which is working to develop better methods for assessing the potential of compounds to affect function in the unborn.

1980s

Ken McElvain ('80 Compt. Sci., '80 Math.) is cofounder and CEO of Synplicity, Inc., a leading supplier of software design and verification of semiconductors in Sunnyvale, California. The company has more than 260 employees in 20 facilities worldwide.

In March 2003, **Herb Berg** ('81 Educ.) was appointed superintendent of Kershaw County School District in Camden, South Carolina.

Russ Wheelhouse ('81 Comm.) opened Blue Moon Antiques in Pullman in 1985, and later managed the Square One Antique Mall for a decade. In 2001, he purchased Deluxe Used Goods, an antique and resale shop in Uniontown.

Charles H. Bombardier ('84 M.S. Psych., '87 Ph.D. Psych.), an associate professor of rehabilitation medicine at the University of Washington School of Medicine, was elected a 2004 fellow of the American Psychological Association.

Tom Feist ('84 Elect. Engr.) is vice president of marketing for AccellChip, Milpitas, California, one of the leading providers of high-level design tools and models for acceleration and implementation of DSP algorithms in silicon.

Curt Roberts ('84 Hotel & Rest. Adm.) is district manager for GMAC in Bonney Lake, where he lives with his wife, Janelle. He increased the operation from one branch and five employees to five branches and 30 employees in western Washington.

Shirley Skidmore ('84 Comm., '89 M.A. Comm., '02 Engl.) is director of communications for the Office of Superintendent of Public Instruction in Olympia.

Author of two critically acclaimed memoirs, *In the Wilderness* (finalist for the 1997 Pulitzer Prize) and *Hungry for the World*, **Kim Barnes** ('85 M.A. Engl.) has published her first novel, *Finding Caruso* (Putnam, March 2003).

Irene Gonzales ('85 Educ.) is executive director of teaching and learning services for the Spokane Public Schools.

After three years as publisher of the *Walla Walla-Union Bulletin*, **Michael Shepard** ('85 Comm.) was named publisher of the *Yakima Herald-Republic* in September 2003. He began his newspaper career in 1985 as a reporter with the *Moscow-Pullman Daily News* before becoming vice president of Sound Publishing, Inc., where he helped manage the company's 16 newspapers and 250 employees in the Puget Sound area.

While on professional leave from the Pullman School District in 2002-03, **Kristi Rennebohm Franz** ('89 M.Ed.) was a visiting practitioner at the Harvard University Graduate School of Education. Now she is a lead teacher for the International Education and Resource Network.

Michelle Zahrly ('89 Comm.), communications manager for the Washington Arts Commission in Olympia, returned to the Pullman campus in September 2003 for the dedication of *Palouse Columns*, six white-toned, 24-foot vertical columns created by Seattle artist Robert Maki.

Among old friends in Lahore

WSU has long-standing ties to Pakistan.

G. M. "GHAZI" GHAZANFAR (front row center, red tie) is among friends, many of them Washington State University or University of Idaho alumni. In December 2003 he was invited to Pakistan to lecture at a seminar hosted by the University of Veterinary and Animal Sciences (UVAS) in Lahore. He formerly lived in Karachi for nearly 11 years. In 1958 he enrolled at WSU as a freshman, and earned bachelor's and master's degrees, as well as a doctorate in economics. He taught for 35 years at Idaho, where he chaired the economics department from 1993 to 2002.

Seminar attendees included a number of UVAS faculty members. Those WSU graduates in the photo are designated by their years and degrees below.

WSU has long-standing educational ties to Pakistan. The West Pakistan Agricultural University, formerly Punjab Agricultural College and Research Institute at Lyallpur, 85 miles southwest of Lahore, was an outgrowth of the Inter-College Exchange Program between WSU and the University of Punjab in Lahore, begun in 1954 during the administration of President C. Clement French and terminated in 1962.

—Pat Caraher

FRONT ROW, FROM LEFT: Muhammad Yaqoob Malik ('62 M.S. Animal Sci.), Qadir Bukhsh Mahr ('67 Civil Engr.), Ashiq Hussain Cheema ('70 Ph.D. Veterinary Sci.), Gisele Butt Morion ('65-'66 Fulbright Fellow), G.M. Ghazanfar ('62 Econ., '64 M.S. Econ. '68 Ph.D. Econ.), Manzoor Ahmad ('61 M.S. Animal Sci., '66 Ph.D. Animal Sci.), Muhammad Ayaz ('72 Food Sci., '75 Ph.D. Food Sci.), Zubair Siddiqui ('68 M.S. Agri. Sci.), Rashid Ahmad, and Almdar Hussain.

BACK ROW: Fuad Ali Butt ('65 Arch. Engr.), Waheed Ahmad ('69 Ph.D. Plant Path.), Farid Ashan-ud-Din ('66 Civil Engr.), Ibne-Rassul Khan ('67 M.S. Agri. Sci.), M.A. Majeed ('60 M.S. Veterinary Sci.), Akkram Munir, H.A. Hashmi, Kamran Ashraf, Amir Awan, M. Nawaz ('61 M.S. Elect. Engr.), Ghuiam Sarwar, and Naeem Khan.

Antique dealer can't ignore a bargain

"I enjoy meeting people, doing things to feel the pulse of what's going on in the world."

—Anita Busek '49

CRAIG MURPHY

Anita Busek got her start in radio and television.

THE RUMBLE of a passing train tells you that All Aboard Antique Co. in Puyallup is no ordinary antique shop. The store is located 12 feet from train tracks, looks like a red caboose on the outside, and has railroad items displayed throughout.

The trains shake the whole building. "No picture hangs straight for long," says Anita Busek, 76, with a laugh. She's one of three owners.

Perhaps it's fitting that Busek went to college in a town named after George Pullman, inventor of the Pullman sleeping car. After earning a degree ('49 Speech Comm.) at Washington State College, she worked at several radio stations, and was manager of KBLE-FM in Seattle when it was sold to the Marriott family business in 1982. In her 60s, she was hired and later retired from Boeing.

Busek also had a couple of stints in early Pacific Northwest television—one at KCTS and another at KOMO. In 1958 KOMO had purchased the only color-television camera west of the Mississippi and north of California to broadcast one five-minute program in color per day: the weather in the early-evening newscast. She was billed as a strawberry-blonde weather girl. One of two newscasters in the still-black-and-white studio was fellow WSC grad Keith Jackson ('54 Speech Comm.).

Busek's fond memories of Washington State led her to establish a communication scholarship in her own name and a scholarship in women's studies in memory of her mother, Johanna Kostick Busek. She plans to create a third scholarship in the name of her sister, Agnes Busek Brenneis.

Anita Busek has been traveling to car swaps, flea markets, and glass and antique shows as a hobby for 35 years. She started collecting and selling Depression glassware—that pink- and green-colored glassware from the '30s frequently found in boxes of oatmeal or soap. Her collection has expanded over the years until she now has an eclectic mix.

"As a dealer, it's hard to ignore a bargain in anything," she says. Her favorites at the moment are teddy bears, ranging from Starbucks to Steiff, a German brand recognizable by the button in the bear's ear. She recently purchased five of the fuzzy bears for $700 and says, "I thought I got a bargain." Her bear collection—none of which are for sale—numbers in the 50s, including almost 20 Steiffs, which she plans to leave to friends.

Busek and her collector-partners Linda Febus and Jackie Jeffords purchased the business last summer and renamed it. It originally opened as Hickory Hill in September 2000. With the floor space of a basketball court, All Aboard accommodates some two-dozen vendors in color-designated exhibit areas. Collectibles range from the primitive—motor oilcans and a ship's wheel—to the refined—sterling hand mirrors and fabric stamps. Furniture includes oak chairs, desks, and bedroom suites. There's even a hand-carved wooden sailing ship.

As much as she enjoys the business, Busek says, "Reproductions, mostly from foreign countries, have made it tough on collecting."

While others her age might be content to sit in front of a television, Busek makes the half-hour drive from her Sea-Tac home to Puyallup four days a week.

She says, "I enjoy meeting people, doing things to feel the pulse of what's going on in the world."

—Craig Murphy

1990s

Cindi Nowlin Carlisle ('91 M.Ed.) is a counselor at Chief Joseph Middle School in Richland, and an adjunct faculty member in the counselor preparation program at WSU Tri-Cities.

Marine Corps Reserves major **Terrance R. Thomas III** ('91 Intl. Bus.) completed a five-month deployment to Kuwait. During "Operation Iraqi Freedom," teams from Thomas's unit controlled close air support missions throughout the Ramallah Oil Fields and the city of Basrah.

George Bombel ('92 M.Ed.) provides psychotherapy and clinical social services for the Seattle Counseling Service and maintains an independent practice.

Valerie Morgan Akerson ('93 Educ.), an associate professor of education at Indiana University, received the IU Trustees' Teaching Award in March 2003.

Chad Pearson ('93 Hotel & Rest. Adm.) is sales manager for the Marina del Rey Marriott. He married Jennifer Kubota in November 2003. They reside in Redondo Beach, California.

Kerri Richard Wegner ('94 M.Ed.), assistant professor of education at Eastern Oregon University in LaGrande, has developed a program to prepare teachers to teach the growing number of Latino students in the area.

Bill Druffel ('95 Animal Sci.) and **Katie Evermann Druffel** ('96 Sociology), Seattle, welcomed their first child, Henry Joseph, November 3, 2003. Bill is an attorney in the King County prosecuting attorney's office.

Jeanne H. Yamamura ('95 Ph.D. Bus. Adm.), associate professor of accounting at the University of Nevada, Reno, received a research fellowship for spring 2003 from the Economic Research Center of the School of Economics at Nagoya University in Japan.

Stephen Rice ('96 Crim. Just.) received the National Award for Heroism, the highest honor awarded by the Federal Law Enforcement Officers Association. He was cited for evacuating American citizens and other foreign nationals trapped in Palestinian territories in March and April 2002. He also received a Meritorious Honor for reestablishing the U.S. diplomatic presence in Kabul, Afghanistan, in 2002. He is a security officer assigned to the U.S. embassy in Berlin.

Susan Green Clayton ('98 Educ.) teaches freshman and sophomore language arts at Seattle's Nathan Hale High School.

Janet Collar ('99 Nursing, '02 Master's in Nursing), Spokane, has joined Heart Clinics Northwest. She previously was a clinical instructor at the Intercollegiate Center for Nursing Education/WSU Spokane, and worked in an acute cardiac-care unit.

2000s

Marlene Uilani Navor ('00 Comm.) joined Kansas State University in August 2003 as an assistant sports information director for the women's basketball and tennis programs.

Todd Benzell ('02 Crop Sci.) is assistant superintendent at the Overlake Golf and Country Club in Bellevue.

Jeff Jaeger ('02 Comm.) joined KVBC-TV in Las Vegas after leaving KNDU-TV in the Tri-Cities.

Toys, Games, and Unique Gifts

Entrepreneurial Spirit Drives Edmistons

The company wanted to offer a way to "unplug in a wired world."

—Steve Edmiston

Melody Wickline Edmiston '84 and Steve Edmiston '84 have found their niches.

TWO NICHE MARKETS—toys/games and a Web site for gifts—have taken husband-and-wife entrepreneurs into new territories.

Steve Edmiston is president of Seattle's Front Porch Classics. The company creates retro-feel toys and games. Melody Wickline Edmiston has created a Web-based consumer retail site specializing in high-quality and hard-to-find gifts. The couple lives in Des Moines. Both are Washington State University alumni.

Before joining the game company, Steve had created a Dread Pirate game as a Christmas gift for their daughters, 12 and 8. The game eventually developed into one of Front Porch Classics' leading products.

Melody ('84 Bus. Adm.) watched the marketing of that game, later renamed Old Century Dread Pirate. She became inspired by the challenge of getting a new, quality product into consumers' hands. Her business experience at that point included working mainly in defense operations at Boeing for 10 years before opting to stay home while her children were young. She launched her own business in 2002.

"There had to be other manufacturers out there, and people who have trouble finding their products in retail stores," she says about early efforts to get Dread Pirate into retail outlets. "Manufacturers can win all these awards. But they've got to get their products to retailers. Retailers can be very cautious. It takes time to get some products into stores."

Instead, she offers customers a link to a few products she believes are unique finds—specially designed patio fire pits, for example—through her business, Essential New Discoveries, and the essentialnewdiscoveries.com Web site. She enjoyed working at Boeing, she says, but she needed a new route that fit her better. "I don't want a boss. I have a lot of ideas."

Steve ('84 Econ.) describes his entry into the world of toys as a "career careen." After graduating from WSU, he completed a law degree at the University of Washington. He was in private practice for nearly 14 years, specializing in environmental Superfund litigation.

The last four years of that stretch, he started writing creatively. At 39, he decided to leave law. His plan to take a year off and write lasted only seven weeks, when he met two individuals starting Front Porch Classics, launched in 2000. Its Old Century Baseball was named *Family Fun Magazine*'s 2002 "Toy of the Year." Old Century Dread Pirate won the 2003 Oppenheim Gold Seal Award.

The timing was perfect for the idea, he says. The company wanted to offer a way to "unplug in a wired world" with games that looked like they came out decades ago, yet decorative enough to showcase on a coffee table. "Just when things were crazy before the dot.com bubble burst, we decided to do an antitechnology business."

He shared his Dread Pirate idea with his cofounders. "It ended up being the linchpin of our original investor presentation, because it was a product we could show," Steve says. Featuring pirate battles, mutinies, desert islands, and buried treasure, the game comes in a wooden treasure chest and is played on an illustrated, aged treasure map. Now Front Porch Classics has 20 employees and offers 20 products through such retailers as toysrus.com and barnesandnoble.com.

Steve also has had some early success as a screenwriter. His first script, called "Signature," was under option by an entertainment company for a while. Another script was shot as an independent film called *Farewell to Harry*. He also writes screenplays for independent feature films, including *A Relative Thing*, which premiered November 2003 at the Ft. Lauderdale International Film Festival. It will continue on the festival circuit throughout 2004. "It's a family drama," he says. "I wrote this one and, as it turns out, coproduced it."

In addition to contributing creative ideas, he does legal work for Front Porch Classics. Recently, he found the perfect marriage of the game business and his screenwriting passion. Front Porch Classics signed a deal with 20th Century Fox and developed a game to promote the feature movie, *Master and Commander*, starring Russell Crowe.

"I'm involved in writing for movies. I help create games," Steve says. "It's fun to be able to do both."

—Treva Lind

IN MEMORIAM

1920s

Lawrence "Red" Graham ('26 Dairy), 101, October 15, 2003, Cashmere. Before and during the Depression, he worked at several dairies in Everett, Port Orchard, and Seattle. In 1934 he sold partnership in Graham's Dairy in Seattle and bought an Oroville apple orchard. Manager of Tonasket Skookum Warehouse, 1937-38. In 1939 leased the orchard and moved to Seattle to teach agriculture at Highline High School until 1943. Returned to Oroville. Farmed until 1952. Sold orchard and moved to land on Lake Osooyoos. Later, he bought land near Ellisford and developed 70 acres of apples and pears with his son.

Elsie Jacobsen Stuhr ('26 Phys. Educ.), 100, December 26, 2003, Beaverton, Oregon. Longtime physical education teacher in Beaverton. Helped create Tualatin Hills Park & Recreation District, the Northwest's largest public parks and recreation district. Received Oregon Governor's Award for Excellence, 1989.

Reed Newcomb Bement ('28 Pharm.), 97, December 11, 2003, Kirkland. Pharmacist in Seattle and a drug inspector for the state until 1944, when he joined the U.S. Navy. Ran a wholesale drug business until he became the executive secretary of the Washington State Pharmaceutical Association. Retired in 1965.

Mary Hungate Buckley ('29 Phys. Educ.), 98, January 22, 2004, Spokane. Champion WSU swimmer and diver. Taught kindergarten and second grade for many years in Spokane. Pi Beta Phi sorority.

Kathryn Ragsdale Gyde ('29 Phys. Educ.), 96, November 14, 2003, Wallace, Idaho. Taught earth science and geology in middle schools in Burke, Wallace, and Silver Hills, Idaho, before retiring in 1973.

1930s

Mildred Femling Gaddy ('30 Phys. Educ.), 96, December 8, 2003, Lacey. Trained at Walter Reed Army General Hospital in Washington, D.C., and began working there. Assigned officer in charge of physical therapy in U.S. Army Air Force hospitals in 1941 until the end of WWII. Later, worked at

Arlington National Cemetery hallowed ground for Carson

"This is the only place I've worked where you get more money for your projects than you ask for."
—Kent Carson '82

Kent Carson is construction engineer at Arlington National Cemetery.

RARELY DO PEOPLE have their work viewed by U.S. presidents, congressmen, and millions of tourists. But that's the kind of scrutiny Kent Carson encounters. He is construction engineer at Arlington National Cemetery outside Washington, D.C.

The cemetery accommodates four million visitors annually. "It's exciting to know that decisions you make will impact hundreds of people every day," he says.

His work at ANC has included historic preservation of the white marble structures and monuments, as well as renovation of the granite plazas at the John F. Kennedy grave site. Current projects include developing 45 acres for burial sites that will last into 2050, and a $6 million renovation of the reception building at the Memorial Amphitheater—the gathering place for world dignitaries when they come to visit the Tomb of the Unknowns, and the spot U.S. presidents come on Memorial Day and Veterans Day to eulogize our nation's fallen patriots.

For employees overseeing the repair, maintenance, and general appearance of this national shrine, there's much work to do.

"This is the only place I've worked where you get more money for your projects than you ask for," says Carson, a 1982 Washington State University graduate in mechanical engineering.

Four sections of land have been designated for development. Digging began on 33 acres November 2003 in preparation for 20,000 to 26,000 new grave sites. Design begins later this year on another 31 forested acres that will contain 9,000 grave sites and 24,700 niches in a columbarium/retaining wall system. Plans call for construction of a parking structure in 2005 and 8,800 grave sites, plus 7,055 additional niches to a boundary wall on a 15-acre site to be acquired from Fort Myer adjacent to the national cemetery.

When the Navy Annex building on a hilltop overlooking Washington, D.C., is transferred to the ANC, 42 acres will be developed for 17,400 grave sites and 30,241 niches. The project is scheduled to begin in 2010.

Renovation of the Memorial Amphitheater will address water damage throughout the building, the interior drainage system, and flooding in a rest room and lower-level chapel area. The two-story building with arcade ring, stage, and observation deck was designed and constructed during World War I and is a premier attraction in the national capital.

"The biggest challenge in developing the site is acquiring the land from the Army, Navy, or Park Service," says Carson. "They are reluctant to give up space, as you can imagine. But Congress mandates the land be transferred [to ANC], and when. They complain, salute, and we proceed."

Carson, the cemetery's master planner for construction projects, is part of a three-man team that also writes up construction and maintenance contracts. Then the team oversees the work as it progresses. An outside agency, generally the Army Corps of Engineers, is hired to oversee the big jobs.

"This is one of the big ones, and will be under their watchful eye," Carson says.

He joined the Army Corps of Engineers in Walla Walla after graduating from WSU. Many of the corps' projects involved salmon and steelhead runs on all the Snake River dams. Then he spent nine years in Kaiserslautern, Germany, doing energy conservation and construction work for military bases in Germany, the Netherlands, Belgium, and England, followed by six years at Camp Zama near Tokyo, planning construction projects for military bases in Japan and Okinawa.

"I always loved traveling and solving engineering problems," says the 22-year civilian employee of the U.S. Army and son of a career soldier. His wife, Elaine, and four children have followed him around the world. He graduated from Fort Vancouver High School and always considered southwest Washington "home." Elaine is from Spokane, so the Carsons may end up retiring there. "Somewhere in the Northwest is our target," he says.

—Pat Caraher

Harrison National Public Radio pioneer

"Burt was a wonderful writer—at best when facing a deadline."
—Robert Mott

WHETHER PLINKING on the piano or pounding out scripts for public radio on his manual typewriter, Burton D. "Burt" Harrison enjoyed life to the fullest. During 27 years on the Washington State University communications faculty, including 17 as manager of KWSU Radio, he figured significantly in the formation and development of public broadcasting. Moreover, he exerted a positive influence on scores of students pursuing careers in broadcast journalism.

Harrison, 87, died January 22, 2004, in Centralia. Dee, his wife of 63 years, preceded him September 4, 2003.

To help finance his education at Kansas State Teachers College, the Atchison native played honky-tonk piano in nightclubs and even did a stint as a mortuary organist. He earned an English degree in 1943 and joined *The Emporia Gazette* staff.

After completing military service during World War II, he returned to his alma mater as radio production director and assistant manager of KTSW. He got his start in Colorado commercial broadcasting as station manager of KSFT, Trinidad, and at KOKO, La Junta. He earned a master's degree from the University of Denver.

At WSU (1949-76), Harrison became one of public radio's most influential spokesmen and colorful personalities. He wrote thousands of radio scripts—from drama to prize-winning science commentaries. His show, *Literary Scrapbook,* was distributed to nearly 50 stations. He also wrote for National Public Radio. His articles, reviews, and feature stories appeared in the *New York Herald-Tribune, Washington Star, Washington Post, Newsweek,* and *Popular Science*.

"Burt was a wonderful writer—at best when facing a deadline," says Robert Mott, San Diego, WSU professor (1956-68) and Department of Communications chair. Folklore at KWSC-AM in the '40s and '50s was that Harrison would give the announcer the first 10 or 12 minutes of a script and finish the last three to five minutes while the first segment was being aired.

He was writer-producer for 16 film and television documentaries, including *This is WSU, To Build a Dam, The Comedians*, and *Mosaic*. In 1975, he was selected to deliver WSU's 36th Invited Faculty Address. In it, he said public broadcasting is the best means of adding "diversity and greater purpose to American television and quality to the diversity already existing in radio." He noted the three commercial television networks "have to offer essentially the same strawberries and ice cream, not out of desire but simply as a matter of survival." The whole system of television programming "is designated to give the majority what it wants."

Burt Harrison became one of public radio's most influential spokesmen.

"Without the efforts of Harrison and a few colleagues, National Public Radio would not exist today," Mott says. "He was a key person in the task force that lobbied Congress to include radio [television was already included] in the Public Broadcasting Act of 1976."

Harrison's honors include Emporia State's Alumni Achievement Award, 1977, and the Washington State Association of Broadcasters' Broadcaster of the Year Award, 1987. He conducted an oral history project for the Corporation for Public Broadcasting in 1977-78. In 1993, he completed *Washington State on the Air*, a history of radio and television at WSU.

Val Limburg joined the faculty in 1967, when the communications department and KWSU Radio were still blended together. He remembers Harrison listening to students auditioning for announcing positions. He would deliberately introduce words like "Grand Prix race" into the script and chuckle as the naïve student invariably mispronounced the term.

Students loved Harrison and his subtle humor in the classroom. In his office, he'd monitor the student station via a volume meter mounted above his desk. "He might not always listen, but he would watch that meter and make sure there was a constant sound emanating from the station," Limburg said.

"The Sage of the Palouse" had a large following for his *Behind the Mike* radio series that made the fictitious small Montana town of Elephant's Breath famous.

After he retired, he and Dee would sit in the press box at Bailey Field, where he played the organ at baseball games. His rendition of "Take Me Out to the Ballgame" was the fans' favorite. The Harrisons were longtime residents of nearby Albion, where Burt served as mayor for many years.

—Pat Caraher

IN MEMORIAM

IN MEMORIAM *continued*

Hines Veterans Administration Hospital in Chicago.

Kenneth McCallister ('36 Agri.), 90, October 31, 2003, Forest Heights, Maryland, heart disease. Economics statistician for the USDA, 1938-69, and professor at the University of the District of Columbia, 1969-79.

Elizabeth Camp ('37 Music), 88, November 25, 2003, Colfax. Classical musician. Taught music in the LaCrosse and Colfax area for years. Kappa Delta sorority.

William Knorre, Jr. (x'37 Bus. Adm.), 88, December 11, 2003, Spokane. Served in the U.S. Army during WWII. Built several grocery businesses in Spokane and Deer Park.

Glen Cameron Adams (x'38), 91, October 17, 2003, Fairfield. Livestock breeder in Fairfield until 1951. Postmaster of Fairfield, retiring in 1972. Fairfield mayor, 1974-78. Started Ye Galleon Press in 1937. Printed his first book in 1939. Named to the Washington State Centennial Hall of Honor by the Washington State Historical Society in 1983.

Margaret Akers Schlegel ('38 Home Ec.), 89, December 12, 2003, Fresno, California. Taught home economics in Lake Chelan. Later was secretary and bookkeeper at the Madera Cooperative Cotton Gin in Fresno. Later, taught at Edison and Fresno city high schools, and was a staff member of the University of California Expanded Nutrition Education Program.

Bernadine Turner Carey ('39 Gen. Ed.), 86, December 13, 2003, Spokane. Homemaker active in civic organizations. President of the Associated Women Students while at WSU. Kappa Alpha Theta sorority.

Carl Crouse ('39 Zool.), 87, December 4, 2003, Olympia, heart failure. Served 36 years for the state Department of Game as game warden, field biologist, deputy director, and director from 1970 to 1976. Later was regional director and president of the National Wildlife Federation. Instrumental in the creation of the Washington Wildlife Federation in 1988.

1940s

Lawrence "Mac" McCauley ('40 Agri., '40 Educ), 90, November 19, 2003, Olympia. Taught vocational agriculture at Rockford and Freeman high schools for 35 years. Retired in 1975, when he was named the State Vocational Educator of the Year. Trained 30 WSU vo-ag candidate teachers and coached numerous state champion FFA judging teams. Delta Chi fraternity.

Dorothy Busch ('41 Engl.), 84, November 10, 2003, Spokane. Case-

work supervisor at the Department of Social and Health Services in Spokane for 19 years. Retired in 1984.

Otis Fortner ('41 M.S. Chem.), 85, January 6, 2004, Baton Rouge, Louisiana. Retired research chemist with the Grant Chemical/Ferro Corp.

William Low ('41 Chem.), 84, December 22, 2003, Syracuse, New York. U.S. Navy officer during WWII and the Korean conflict. Research chemist, beginning his career at Allied Signal Corp., Syracuse Research Laboratory, 1946. Retired in 1986, and then worked for General Chemical Co.

Russel G. Parkins, Sr. ('41 Metallurgical Engr.), 84, November 20, 2003, Rochester, New York, heart attack. Retired in 1978 as technical director of the Armed Services Explosive Safety Board after a 27-year career with the Department of Defense.

Ivan R. Shirrod ('41 Elect. Engr.), 85, December 10, 2003, Pullman. Began career with IBM in New York City. Moved to the Seattle area to work for IBM at the Naval shipyards and later for Boeing Airplane Co. Retired in 1973 to Pullman.

Gilbert F. Whipps ('41 Pharm.), 85, October 22, 2003, Spokane. Administrative officer in the U.S. Air Corps in Australia and New Guinea, 1941-46. Started a pharmacy practice in Santa Monica, California, in 1954.

Anita Waadne Preston ('42 Phys. Educ.), October 2003, Tacoma. X-ray technician for Pierce County Hospital. Joined the WACs during WWII and received training as a physical therapist at Pierce County Hospital, where she treated polio patients and general orthopedic conditions for 16 years. First physical therapist employed by Pierce County Health Department. Retired in 1982. Honored by the city of Tacoma in 1991 as a Citizen Making a Difference and again in 2003 for her many contributions to the community.

Betty E. McGee ('43 Sociology, '49 M.A. Sociology), 82, November 14, 2003, Las Cruces, New Mexico. Social worker.

Charles W. Howard ('44 D.V.M.), 84, Otis Orchards, Washington, pulmonary fibrosis. Owned a veterinary practice in Colfax for 17 years. In 1960 joined the USDA in Spokane. Visited many states a month at a time to help eradicate disease. Retired in 1980.

Lois J. Cunningham Roach ('45 Speech Comm.), 79, February 8, 2004, Spokane. Instructor at WSU, 1946-48. Taught at Spokane Falls Community College and Gonzaga University. Joined speech department at Spokane Community College in 1968. Retired as department chair in 1990.

ROBERT HUBNER

Maxine and Pat Patterson with Keith Lincoln

Patterson enjoyed best of both worlds as alumni director, state legislator

EUGENE G. "PAT" PATTERSON always thought there was something special about the loyalty of Washington State University alumni. Analyzing that phenomenon, he concluded the University's location, traditions, and residential campus, which provided the opportunity for a 24-hour student experience, were key factors in developing those fierce loyalties.

A Pullman native and WSU graduate himself ('46 Political Science), Patterson served as alumni director at his alma mater for 26 years. When he stepped down in 1978, he said, "Working in a college environment has to be one of the most gratifying experiences one could ever have. Young people with new and differing ideas presented different challenges."

He enjoyed his association with University administrators, faculty, and staff. He also was a close observer of the Cougar sports scene, and served on the Athletic Council and as part-time golf coach in the late '60s.

As alumni director, he was credited for his visionary leadership. He established the WSU Scholarship and Development Fund, which raised more than $12 million in endowed, capital, and annual gifts. He also maintained WSU's graduate records, and helped spearhead a successful $1 million campaign to expand the football stadium, a project completed in time for the 1972 season.

Later he would put his political science degree to work as a state legislator, representing Washington's 9th District. He proved to be a strong voice for higher education, including WSU, and agriculture. He was elected to the House in 1972 as a Republican and served four two-year terms. Four three-year terms followed in the Senate.

WSU president C. Clement French once said he considered Patterson his "eyes and ears in Olympia." He was minority whip in the House. He also served on important legislative committees dealing with higher education, transportation, the judiciary, local government, and the constitution before retiring from the Senate in 1992.

Patterson died February 15, 2004, in the Avalon Care Center, Pullman, of complications from diabetes. He was 84.

Patterson enrolled at WSU with the Class of '41 and joined Kappa Sigma fraternity. World War II interrupted his education. He served with distinction as an Army infantry officer in the South Pacific, including battles at Guadalcanal and New Georgia. His military honors included the Bronze Star, Purple Heart, and Combat Infantryman's Badge.

After completing his degree, he spent nearly six years in Seattle as executive secretary and lobbyist for the State Veterans of Foreign Wars organization, before returning to Pullman in 1952. As district chair of the American Alumni Council, he promoted the merger of the AAC and the American College Public Relations Association to create CASE, the Council for Advancement and Support of Education. He received the WSU Alumni Achievement Award, 1978, and the CASE District VIII Distinguished Service Award for 1983-84.

As WSU's primary fund-raiser, he acknowledged that finding new approaches to asking for money was a constant challenge. "I think our success would have been diminished if it hadn't been for the loyalty of our alumni," he said.

The youngest of Mattie and David Mitchell Patterson's six children was born October 8, 1919. He met Maxine Weeks ('46 Fine Arts) at Pullman High School. They married August 31, 1940, in Coeur d'Alene, Idaho. That union produced four sons and three daughters. Six either attended or graduated from WSU. They also have seven grandchildren and two great-grandchildren.

Memorial gifts may be made in Patterson's name, care of the WSU Foundation, PO Box 641925, Pullman, Washington 99164-1925.

—Pat Caraher

IN MEMORIAM *continued*

Earl F. Anderson ('46 Elect. Engr.), 87, November 16, 2003, Redmond. Applications engineer for General Electric in Lynn, Massachusetts, 1946-49. Electrical engineer for Washington Water Power in Spokane, 1951-74.

Mary Ferguson ('47 Psych.), November 12, 2003, Clarkston. 46-year career in teaching. First job was at Garner School, a one-room schoolhouse in Peck, Idaho. Later taught at Craigmont, Idaho, and in Washington at Colton, Asotin, Lind, and Clarkston.

Verona Ebe Harbaugh ('47 Home Ec.), 77, November 30, 2003, Santa Anna, California. Nursery schoolteacher in Encino. Secretary at Los Angeles State College.

Gilbert Graham ('49 Bus. Adm.), 84, November 13, 2003, Spokane. Served in the U.S. Army Air Corps in England, 1940-45. Owned Gilbert T. Graham and Associates, a Spokane accounting firm, 1954-93. Delta Chi fraternity.

Victor "Monty" Montgomery ('49 M.S. Psych.), 80, December 18, 2003, Moscow, Idaho. Joined the Army in 1942, earning a Purple Heart in the South Pacific. Civilian contractor to the U.S. Air Force in San Antonio, Albuquerque, and Denver. Worked on Boeing's Man-in-Space Program in Seattle. Began teaching at the University of Redlands in California, 1961. Taught psychology at the University of Idaho, 1963-85, department chair for 10 years.

1950s

Mollie Lou Jensen Bedford ('50 Educ.), August 16, 2003, Evergreen, Colorado, lung cancer. Taught secondary school in Oregon, California, and Alaska.

Ronald M. Button ('50 Civil Engr.), 78, Tacoma, February 11, 2004, cancer. Civil engineer on the design of the I-5 freeway through Pierce County for the Washington State Highway Department. Joined the city of Tacoma Public Works Department, 1952. Became chief of the Building Division, city engineer, and was director of public works, 1976-85. Was in charge of the restoration of the Stadium Bowl in Tacoma, design and construction of the Tacoma Dome, and design of Highway I-705 and I-509. Member of WSU's Northern Division championship basketball team, 1950. Theta Chi fraternity.

George Dodds ('50 Bus. Adm.), 75, January 6, 2004, Spokane. Served in the National Guard for 27 years, retiring as a major, 1997. Worked in the insurance industry for 31 years in various capacities, including insurance instructor at Spokane Falls Community College. Past president of the Insurance Agents and Brokers of Spokane. Sigma Nu fraternity.

Vernon Scott Murbach ('50 Foreign Lang., '52 Foreign Lang.), 77, November 26, 2003, Silver Spring, Maryland, lung cancer. Retired U.S. Foreign Service officer.

Ralph Kilpatrick ('51 Speech Comm.), 76, December 8, 2003, Oakesdale. Created RMK Farms, Inc., a family farm corporation, 1949.

John Westergreen ('51 Agri., '51 Educ.), 79, December 5, 2003, Nooksack Valley, lymphoma. Worked for 38 years as a teacher, extension agent, and as member relations supervisor for Darigold's Northwest Dairymen.

Norma French Hobble ('52 Gen. St.), 74, May 23, 2003, Chelan, multiple sclerosis.

Ted Bryant ('53 Speech), 74, November 20, 2003, Portland, Oregon, heart attack. Sports broadcaster. Reporter for KTNT-TV, Tacoma. Reporter-anchor KING-TV, Seattle. Moved to Portland, where he was anchor for KATU-TV, news director for KOIN-TV, talk-show host for KXL radio, and news director for KOPB National Public Radio. Two-term president of the Oregon Associated Press Broadcasters Association.

William E. Kreitz ('55 Bus. Adm.), 73, October 31, 2003, Fairfax, Virginia, lung cancer. Employed by Boeing in the 1950s. Contracts administrator for Atlantic Research Corp., 1963-1990, Alexandria, Virginia. Phi Delta Theta fraternity.

Joy Brown Hofstrand ('59 M.A. Home Ec.), 86, November 15, 2003, Pullman. Taught school in British Columbia and Saskatchewan for nine years. Worked for WSU for 13 years.

1960s

Michael P. Whitelaw ('60 Forestry), 67, January 31, 2004, Spokane. Worked for the Bureau of Indian Affairs for 37 years as a forester and superintendent on several Indian reservations in Washington and Montana, retiring in 1993.

Raymond Blumenschein ('62 Pharm.), 64, January 4, 2004, Endicott. Owned and operated drugstores for 30 years. Started as manager of Tick Klock Drug in St. John, which he later purchased. Also owned stores in Wilbur, and at Coeur d'Alene, Idaho.

Dennis R. Johnson ('63 Police Sci.), 63, February 5, 2004, Camarillo, California, brain cancer. Military policeman with the U.S. Air Force for six years. Retired FBI special agent with service in Dallas, Texas; Appleton, Wisconsin; and Los Angeles. WSU varsity golfer. Phi Kappa Theta fraternity.

J. Richard Quirk ('63 Political Sci.), August 2003, pancreatic cancer. Retired U.S. Navy lieutenant commander. Practiced law in Seattle.

Stephen Kikuchi ('68 Engl.), 57, January 27, 2003, Indianola. Assistant director of human resources for King County. He previously worked for the city of Seattle and the U.S. Office for Civil Rights. ASWSU president in 1967-68.

1970s

Michael W. McDonald ('70 Political Sci.), December 23, 2003, Houston, Texas, Lou Gehrig's Disease.

Marion Davis Bateman ('71 Journalism), 95, December 2, 2003, Sun City, Arizona. Alpha Delta Pi sorority.

Arthur K. Bell ('71 Elect. Engr.), 56, December 13, 2003, Spokane Valley. Worked for WSU, American Sign and Indicator, General Instruments, and Transtector until 1988.

Phyllis Adrienne Haynes ('75 Apparel, Merch. & Interior Design), 51, December 17, 2003, Seattle. Created Adrienne Originals, a business providing tailoring services and original designs. Consultant for Bedazzles, a clothing retail store in Seattle. In 1991, she began working as an account executive for Dudley Products, a beauty-product company. Founded Native Flavor, a travel agency specializing in trips to Jamaica.

Rich Novak ('75 M.S. Forest & Range Mgmt.), 56, January 21, 2004, Charlotte County, Florida. Since 1997, he was a Charlotte County extension agent for the Florida Sea Grant, researching artificial reefs, marine and habitat enhancement, and coastal and marine recreation. Earlier worked for the North Carolina Sea Grant for 14 years.

1980s

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

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

1990s

Army capt. **James Allen Shull** ('95 Criminal Justice), 32, November 17, 2003, from Kirkland, died in Baghdad while serving with the 1st Armored Division. Joined the U.S. Army in 1996. Most recently was stationed at Fort Riley, Kansas.

Renee Armel Wolfson ('95 D.V.M.), 40, December 10, 2003, Port Angeles. Veterinarian at Angeles Clinic for Animals. Earlier practiced in Tacoma and Olympia.

Mark T. Sullivan ('97 M.B.A.), 41, November 21, 2003, Vancouver, leukemia.

Faculty & Staff

Hank Wolfe, 82, January 9, 2004, Redmond. Spent 40 months in the Army during WWII. Agronomist for the University of Nebraska, and then worked for the WSU Extension Service for 20 years. Retired in 1977.

Ronald Sorem, 79, December 22, 2003, Tekoa. WSU geology professor, 1959-82. Authority on manganese nodules occurring on the deep-ocean floor. Part of an international scientific team that studied manganese nodules and the ecological impact of deep-ocean mining. His collection of manganese nodules at the Smithsonian Institution is unique to the world. Authored many technical articles.

Luverne J. Williams, 77, September 5, 2003, Bainbridge Island. Secretary to longtime sociologist Paul Landis, WSU dean of Graduate School, 1946, and assistant to Stuart Hazlet, dean of the Graduate School, 1946-49.

Ladd Mitchell, 70, November 29, 2003, Ephrata. Spent 35 years in WSU Extension Service.

Written a good book lately?

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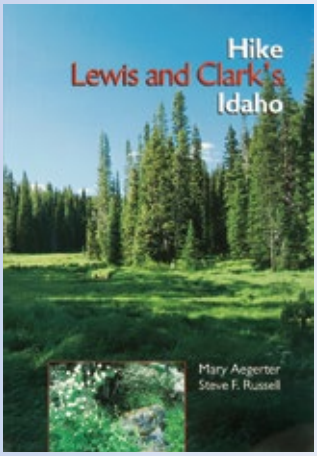


Hike Lewis and Clark's Idaho

By Mary Aegerter and Steve F. Russell
University of Idaho Press, Moscow, 2002

Anyone interested in exploring firsthand the mountains and forests Lewis and Clark traversed in 1805-06 in western Montana and the Idaho panhandle will find this guidebook indispensable. *Hike Lewis and Clark's Idaho* is a collaboration between writer Mary Aegerter, a frequent contributor to *Washington State Magazine*, and Steve Russell, a native of the region who has researched its historic trails.

The heart of the book is a set of detailed reviews of 44 trails between Lolo Ranger Station in Montana and Weippe, Idaho, accessible from either U.S. Highway 12, the Lolo Motorway—a primitive road that parallels the highway—or the Selway River. Aegerter rounds out the book with chapters on the history and geology of the area and appendices on additional trails, preparedness, minimizing problems, what to do in case of trouble, dangers one might encounter, equipment, and woodland ethics and etiquette.

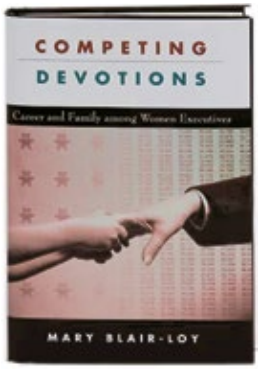
Many of the trails Aegerter describes are of historic interest, some because Lewis and Clark traveled them, others because they figure in Nez Perce history or other regional lore. One hike from the Lolo Motorway, for example, leads in turn to Sinque Hole Camp, where Lewis and Clark camped in September 1805, the grave of a Nez Perce teenager who died there around 1895, and to the Smoking Place, where Lewis and Clark stopped in June 1806 to smoke with their Nez Perce guides.

Throughout the book, Aegerter holds forth on trailside plants, local history, animal sightings, place names, and more, often with wry humor. "Both times I've hiked up Fish Butte," she muses, "I've seen the same wildlife: vultures. And this is the only hike in the area where I've seen them. It makes me wonder what they know about hiking this trail that I don't."

She evokes at times a sense of the unexpected beauties—and strangeness—one encounters on the trail. Describing a storm literally passing over her head as she sat on a hilltop on Glover Ridge, she writes, "…[T]he flat, bottom layer of the clouds was just a few feet above my head. Gray tendrils moved tentatively down from it, as if testing whether it was safe for the cloud to drop down a few more feet to envelop me."

But it's Aegerter's thoughtfulness that hikers in the field will most appreciate. She places her discussions of particular wildflowers, for example, exactly where they'll be most useful: in descriptions of trails where those flowers are most likely to be found. In her chapter on the Colgate licks trail, which she calls "a good spot to sort out the tracks belonging to . . . deer, elk, and moose," she provides illustrations of those tracks. It's a small thing to do, but it's touches like this that make *Hike Lewis and Clark's Idaho* more than a simple trail guide.

—George Bedirian



Competing Devotions: Career and Family Among Women Executives

By Mary Blair-Loy
Harvard University Press, Cambridge, Massachusetts, 2003

To be or not to be a devoted mother, corporate executive—or both? These are the choices and challenges facing career women more than ever. In *Competing Devotions: Career and Family Among Women Executives*, former Washington State University sociology professor Mary Blair-Loy examines the lifestyles of two groups of women and the decisions they made regarding the delicate balance of raising children along with—or versus—the long hours they spend behind an executive's desk.

The first group, made up of 56 predominantly white female finance executives, was called the *career-committed group*. The second group, the *family-committed group*, was made up of 25 white women who left full-time, promising, professional careers when they had children. Using

cultural models, Blair-Loy's *family devotion schema* is made up of a stable marriage and assigns responsibility for home and family to women. The *work devotion schema* requires intense time commitments and strong loyalty to one's career. Both models promise different types of rewards that, when summed up, are the means to a life worth living.

Still, not all of the women in both groups fit neatly into their respective boxes of societal expectation. While some of the women in the family devotion group were unequivocally happy with their choice, others lamented the loss of their former lives. Some members of the career-committed group also expressed sadness over being away from their children. As a result, subsets of women who see themselves as both devoted mothers *and* committed professionals emerged from both groups. For instance, 15 of the 25 members of the family group carved out careers based on part-time hours, even though employers and coworkers define part-time workers as "uncommitted, second-class citizens."

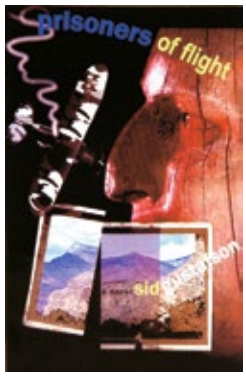
Of particular interest were the attitudes expressed between the two subject groups concerning children. Family women were criticized by the career women for regarding their offspring as fragile and producing less resilient, clingy children. Career women were criticized by family women for failing to provide intensive nurturing. When asked if couples ever seriously considered the father as being the one to quit work and stay at home, the response was always negative. These attitudes reinforced Blair-Loy's assertion that cultural acceptance of woman as a child's primary caregiver only serves to perpetuate gender inequality, because the end result was generally detrimental to the woman's career. A certain percentage also expressed emotional dissatisfaction with the homemaker role.

The good news is, as Blair-Loy broke down the career-minded group into pre- and post-baby boomers, she uncovered hope that as time goes on, the issue of work vs. family will morph into a less conflicted scenario. The younger the women, the more likely it was that both mothers and fathers shared responsibility for the home and children, providing hope that society is working toward more satisfying compromises at home and in the workplace. Blair-Loy's book serves as a handy benchmark for the gender-studies scholar, illustrating where society is with this issue and where we're headed in the new millennium, and a trail guide for women aspiring to a high-powered career.

For more information, see www.hup.harvard.edu/catalog/BLACOD.html.

—Kathie Meyer '92

***Kathie Meyer writes the "Careers" column for* Washington State Magazine.**



Prisoners of Flight

By Sid Gustafson '77
The Permanent Press, Sag Harbor, 2003

In *Prisoners of Flight,* Sid Gustafson's veterinarian protagonist refers often to angels: "We haven't heard from our angels in a long time. But they're out there . . . waiting somewhere in the sky."

Two ex-military pilots, Gustafson's protagonist and his comrade, Henson, crash their plane into wilderness alongside Montana's Flathead River. Former Vietnam POWs, they have wrestled with life's trials ever since, holding to a single constant: a fierce longing for an idealized sky. Says Gustafson's protagonist: "The flying rule is: When in doubt, do nothing. But I'm not flying anymore." For indeed, Gustafson's characters are themselves fallen forms of the angels they seek.

Gustafson (B.S., D.V.M. '77) manages both an economy of words and a compelling lyricism. There's a rhythm here that makes for a read difficult to interrupt. And he's not afraid to toss the rules. Single-word sentences. Pop phraseology. Recurring metaphors. The result is a harrowing adventure part magical realism (with a hint of psychedelia), part paean to the deep forest, part redemption chronicle, and part cryptogram.

Gustafson strands his characters with only a river shack for shelter. Soon, twin sisters—"two breathless earth cookies"—searching for their dog (named Hope—"lost Hope") emerge from the forest cold and bewildered.

The protagonist recalls how he and Henson communicated cell-to-cell as POWs—through tapping out a simple alphabetic code. They repeatedly refer to this "old dance," often lapsing into it. Acutely aware of their frailties and failures, they call often on God. And while longing to be back in the sky, they fool themselves like lost boys whistling in the dark that happiness can be found on the ground: "Our earthbound angels can't stop smiling. And we thought they only lived in the constellations of our skyblown minds."

The narrative dealing with Henson's fate is both mythic and sad. (I'm not giving away much here, since the first two words of Gustafson's novel are, "Henson's dead.") Finally, the protagonist's escape and redemption are pulse-pounding.

There is much that is satisfying about *Prisoners of Flight.* Best is that it ends, as all good prayers do, with a single word, tapped out in code:

"Amen."

For more information, see www.thepermanentpress.com/bookdisp.ihtml?id=331.

—Brian Ames '85

Brian Ames's second book of short stories,* Head Full of Traffic, *was recently published by Pocol Press, Clifton, Virginia.

Bernice and Joseph Baily

For the Love of Animals

With an estate gift of nearly $3 million to the College of Veterinary Medicine, Joseph and Bernice Baily have left the single largest private gift ever to Washington State University.

As a young girl in Spokane, Bernice Gilman would stop daily to visit the bears at the former Manito Park Zoo near her home. She developed a kinship with the bears and a friendship with the zookeeper, who would on occasion allow her to slip inside the cages. Bernice was heartbroken when the decision was made to close the zoo, but her love of animals stayed with her throughout her life.

With no children, the Bailys decided to name WSU's College of Veterinary Medicine the beneficiary of their estate, based in part on Bernice's connection with the bears from her childhood. "We're happy to give this gift to ensure that the best interest of animals remains forever," said Joseph, a former newspaper editor, shortly before his death.

The gift will endow a professorship in animal well- being and will provide for an operations budget critical to attracting a top candidate. "The gift allows us to create infrastructure necessary to attract the very best," said Dr. Warwick Bayly, dean of the College of Veterinary Medicine.

Professor Rick Sias is the Gary P. Brinson Chair of Investment Management in WSU's Department of Finance, Insurance, and Real Estate.

Brinson Adds More Than $500,000 to Finance Chair

Acclaimed global investing authority and philanthropist Gary P. Brinson '68 has made a gift of securities valued at more than half a million dollars to the endowed chair in finance that bears his name at Washington State University.

The Gary P. Brinson Endowed Chair in Investment Management was established with a $1.5 million gift in 1993, 25 years after Brinson earned a Master of Business Administration at WSU. It was the largest cash gift WSU had received from a living individual.

The new $502,000 gift will further support the many initiatives administered by professor Rick Sias, who holds the chair, says College of Business and Economics dean Len Jessup.

"The Brinson funds have fueled extraordinary and innovative teaching, learning, and research for our students and faculty," Jessup said. "Gary Brinson's new gift reinforces our ability to continue to provide a world-class program in investment management, and we appreciate his generosity and his vision."

a THOUSAND WORDS

"The Boy and His Kite, Wardak, Afghanistan," 2003. Part of an exhibition of photographs by WSU architecture professor Rafi Samizay, *Afghanistan, Land of Light and Shadow,* organized and hosted by the Museum of Art/WSU in collaboration with the School of Architecture and Construction Management.

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