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SUMMER 2008



v7n3

Identity

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Coastal exploration has discovered traditional native technology for leaching tannins from acorns—identical to techniques discovered in northern Japan. Huge villages once lay near where the Deschutes and the John Day rivers enter the Columbia. And then they disappeared. A new era of Northwest archaeology is revealing that we have only started understanding the mysteries of our Pacific Northwest past. *by Tim Steury*

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Cover photo: Fritz Meisel, age 3½, tries on a superhero identity. He is a fifth-generation resident of the Palouse and has many ties to Washington State University through his parents Jeanne Fulfs '94, MFA '03, and Nickolus Meisel, MFA '02, an assistant sculpture professor in the fine arts department.



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first words

A sense of who we are :: Although I think freely of Washington as home, I must confess to a technicality. I actually live in Idaho, on a farm we moved onto the same year I started working at Washington State University, 19 years ago.

When I drive to work by the various back roads between Pullman and our home, I never quite know when I've crossed from Idaho into Washington. There are no signs, no point where my brain says okay, I'm in a different state. Examined from Twin Falls to Aberdeen, however, Idaho and Washington obviously have very different identities. Idaho has no Ho Rain Forest, no Pacific shoreline, no Rainier. Washington has no Sawtooths, no River of No Return, no Lake Pend d'Oreille. But these differences are simply geographical, spread over an enormous landscape. They define appearance, mostly spectacular, but offer only an underpinning for understanding the soul and identity of these great states.

Recent history—post-European contact history, that is—distinguishes the states to a certain extent. But move back in time and state lines and other superficial boundaries disappear. Identity becomes fundamental and ancient, geography combining with the territories of Umatillas, Lummi, and Coeur d'Alene. Time and culture shape our deeper identities, gradually eked out of mystery and etched into our collective memory through oral history, linguistic investigation, and archaeological exploration.

But forgive now me as I switch tacks. While still in a confessional mood, I may as well also admit that I am one of the great unwashed who did not graduate from WSU. Back in 1970, when I started college, back in the days before student recruiting, the Internet, and integrated marketing, I'd never heard of WSU. In fact, I didn't know it existed until I came, from Indiana, to graduate school at the University of Idaho in 1976.

And how my perspective and identity have changed since then.

Not only does my identity now include memories of listening to the corn grow through a Midwestern summer and the smell of the oilcloth on my grandmother's kitchen table, but also Cougar memories of Enoch Bryan, Lone Star Dietz, Hannah Aase, Edward R. Murrow, the 1952 ski team, and much much more.

In his 1950 study, *Childhood and Society*, Erik Erikson, in examining how a child gradually achieves a sense of self, writes that, "This sense of identity provides the ability to experience one's self as something that has continuity and sameness, and to act accordingly."

But once beyond that solidity and need for sameness, as one ages, one's identity becomes marvelously diverse and complex, memories over decades blending, sometimes chaotically, to form who one is.

However, even having absorbed 19 years of Cougar experience, the fact remains that I never graduated WSU. As an editor, perhaps it gives me an edge. Aside from the advantages of journalistic objectivity, this distance also gives me an interesting perspective on Cougar identity. I still marvel at how intensely loyal, enduring, and special it is.

One of those special Cougars is Phil Lighty, who died earlier this winter. He came here from California in 1936 and developed a great love for this place and his Cougar identity. I regret that I never met Mr. Lighty. But we at *Washington State Magazine*—and many others around the university—benefit daily from his love for WSU and his great generosity.

Tim Steury, Editor



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A WSU Legacy

Shines Like No Other

Every once in a while, remarkable people with vision and compassion succeed in making the world a better place. In the world of Washington State University, a most remarkable couple, Philip (Liberal Arts '40) and June Lighty, are a shining example of people whose foresight and generosity are improving lives every day.

The Lightys' positive impact on the University abides in the hearts and minds of countless students, faculty, and staff they've touched over the years. Marking the January passing of Phil Lighty at age 89, the WSU community paid tribute to a compassionate visionary and consummate Cougar who made our University a better place.

As philanthropists, the Lightys are the most generous alumni donors in WSU history. While their benevolence touched myriad programs across the University, their passion was most apparent and their gifts most impactful when they were helping students.

Coming to Washington State College from California in 1936, Phil almost dropped out of school because he couldn't cover his out-of-state tuition. A concerned mentor's help with educational expenses enabled Phil to complete his degree at WSC in 1940. Inspired by this uncommon act of kindness, he was determined to return the favor when he had the opportunity.

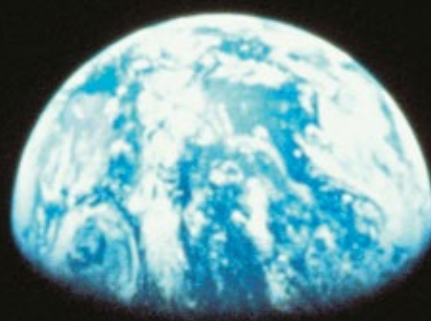
That opportunity came in 1980 when the Lightys established the Lighty Student Leadership Program Endowed Fund to provide scholarships for out-of-state students enrolled at WSU. To date, more than 80 students have benefitted from the scholarships generated by this fund.

"The Lighty family made it possible for many of us to attend Washington State University," said Bruce Cramer '92, one such scholarship recipient. "Inspired, I am working with my family to establish an endowed scholarship at WSU in my parents' names. Although our commitment cannot compare to that of the Lightys, we hope our contribution can ease the financial burden of attending college for future WSU students."

Through his remarkable legacy, it is clear that Phil Lighty will continue to touch the lives of WSU students for generations to come.



Gifts in memory of Phil Lighty may be designated to the Lighty Student Leadership Program Fund by completing the gift envelope enclosed in this magazine or by making a gift online at wsufoundation.wsu.edu/giving. For more information, please call the WSU Foundation at 800-448-2978 or e-mail foundation@wsu.edu.



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letters

The lonely flower

Your most interesting article about "The Orphan Flower" intrigued me. What a lovely and unique flower and leaf. Thank you for sharing its appearance with us.

I may say also, that having discovered *Washington State Magazine* in my today's mail, I spent the entire afternoon enjoying each article. What an exciting place is Washington State University. Receiving this publication is always stimulating and certainly makes me proud of the work being done there. Please extend my congratulations to each one making this a better place in which to live.

*Marley Austin Jesseph '47
Bloomington, Indiana*

School in the woods

I read with interest the article "A School in the Woods." Congratulations to Debbi Brainerd for giving children another opportunity to experience nature in an interactive and non-fearful way.

Reading this brought back many memories of a camp still owned by Highline School District called Camp Waskowitz. It has been in existence as an environmental camp used by the district since 1947. Highline also allows other districts to partake. I was lucky enough to attend as a 6th-grade student, a high school counselor, and as a teacher in training. The few weeks I spent there are highlights of my early education.

I hope camps such as these continue to thrive, allowing children a place to learn about the amazing life and peace to be found in nature. Kudos to Highline School District and to Debbi Brainerd for creating and maintaining these "out-of-the-city" pockets of learning.

*Susan Cary Paganelli '89
Colorado Springs, Colorado*

Sense of place

I absolutely loved the "Sense of Place" theme for your Spring 2008 WSM. Each article resonated with me, especially the Makah discoveries on the Olympic Peninsula, but the essay by David Wang hit me between the eyes.

My husband and I spent five weeks in India (from the western state of Rajasthan to the eastern state of Assam), plus a few days in Kathmandu, Nepal. We had a guide and a driver at our beck and call each day. After viewing ancient forts, ornate palaces, amazing monuments, many temples (active and inactive), stupas, etc., for days on end, my husband posed the question: What will we be leaving for visitors to our country to see in hundreds of years? It certainly gave me pause, but I finally came up with a hopeful answer: our wonderful natural resources. Thus the many articles about research in, conservation measures for, and exposure of the public to various habitats were heartwarming.

Buildings in our culture, per David Wang, are merely stage sets, but as we saw in India, e.g., "architecture always expresses in physical forms a culture's deepest yearnings ... transcendental values in physical forms." Amen to that! Fortunately, "The Industrial Revolution replaced yearning for the transcendental with yearning for the natural." We in the rural west certainly adhere to that premise and try to keep things much simpler, preserve our vast open spaces, and express our "culture's deepest yearnings."

Thank you for such provocative articles!

*Sara L. (McConnell) Johnson '65
Salmon, Idaho*

I found two articles within your Spring issue to have an interesting intersection. The article discussing architecture in the age of the strip mall and also the IslandWood article are in essence both discussing one of our most pressing modern issues: the disconnection of society from beauty, mystery, and the natural environment. In our belief that big is always better, less is never more, we lead lives of consumption and acquisition that leave little time for reflection or a life focused on community experiences and preservation. It is encouraging that this conversation is taking a larger form within journals and, hopefully, our national collective conscious. Fortunately, this is a problem where each of us, just by how we live our daily lives, makes a substantial difference in the outcome!

*Nancy Janzen '89
Spokane*

Defending Buddleja

In Cherie Winner's article, "Through the Garden Gate," she includes a sarcastic "Rogues Gallery" of problem invasive plant species in the Northwest. There are good reasons why these plants should be avoided; however, her reasoning that butterfly bushes kill butterflies displays some fundamental ignorance about the life cycle of butterflies. Adult butterflies do not normally feed on the same plants as their larvae, as she implies. While there may be other good reasons for avoiding the plant (they can be prolific), they do provide a summer-long source of food for adult butterflies.

*Mike MacDougall
(father of two WSU grads—Go Cougs!)
Nine Mile Falls*

As a lepidopterist, I'd like to spring to the defense of butterfly bush (*Buddleja*), listed in the "Rogues Gallery" at the end of the plant-invader article in the spring issue. It is true that this plant has become a serious invasive problem in some parts of the U.S. and Europe. However, its invasiveness is not universal; it can be grown in many areas without undue problems. But its benefit as a butterfly attracting and nourishing plant outweighs (in my opinion) the negative associations.

It is correct that no butterfly caterpillars are able to eat *Buddleja* leaves, but no butterfly species is so inept at finding their correct larval host plants that they cannot see beyond the nearest *Buddleja*! To the contrary, if you grow *Buddleja*, you will attract many butterfly species, and if you provide caterpillar hosts in the garden as well, you will soon have resident populations breeding and developing in your midst. Growing *Buddleja* is a sure way of attracting butterflies and is one of the most important features of a butterfly garden. Sure, there are many native plants that will also attract butterflies (e.g. native thistles, buckwheat, gerberas, yarrow, milkweed, *Liatris*, etc.), but none so powerful as *Buddleja*. *Buddlejas* are butterfly magnets par excellence! Concern over undue dispersal by *Buddleja* can be allayed by regular pruning of dead flower heads before the seeds fall out. This is in fact the best way to ensure continuous flowering (and butterfly-attracting) during the summer!

*David G. James, Associate Professor
WSU-Prosser*

Cherie Winner responds:

Buddleja is a serious enough problem throughout Washington

letters

that the state government deems it a Class C noxious weed. It is especially troublesome on the west side, where it thrives along roadways and forms dense thickets in riparian zones along the Dungeness and Nisqually rivers, among others.

Ecologists have documented several ways in which butterfly bush harms native communities. It displaces plants that are the usual nectar sources for many butterflies; it displaces plants that the larvae of many butterfly species rely on for food; and by being super-attractive to butterflies, it deprives some native plants of their natural pollinators. As for deadheading as a control method, even the most well intentioned gardener will likely let a few flowerheads reach maturity— each one producing up to 40,000 seeds; and who will deadhead the thousands of butterfly bushes already at liberty?

Finally, gardeners have plenty of options besides *Buddleja*. Many other plants, both native and non-native, will attract butterflies and will not damage the world beyond the garden gates. As long as our desire to have particular plants in our yards outweighs our sense of responsibility about the threat those plants pose, we will continue to struggle against species that jump the fence. As ecologist Dick Mack says, “Everyone is in favor of curbing the entry and spread of these species UNTIL the list includes one of their favorites.”

For more information about butterfly bush as an invader in Washington, go to www.nwcb.wa.gov/weed_info/buddleja_davidii.htm.

Ozette

When I graduated from WSU in 2004 with my degrees in Social Studies and History, I was completely unprepared for what the future would hold for me. After

applying for over 30 positions in Washington, I finally got an email from Cape Flattery School District in Clallam Bay. I had never even heard of Clallam Bay, but I interviewed and ended up getting the position of Social Studies teacher for the entire school.

This is now my third year teaching, and the things I have seen would fill a book. This is an area of the world that few ever see and even fewer appreciate. It is a place of tremendous natural beauty, as well as tremendous poverty. Living in Washington my entire life, I had never seen the west end of the Olympic Peninsula. Without many comforts many see in a city, Clallam Bay and neighboring Neah Bay survive through the sheer willpower of the people who live here. As the logging industry has slowly vanished, so too has the local economy. Regardless of circumstance, I have a tremendous amount of pride teaching, coaching, and just being around the kids of our community, as well as the many who come from Neah Bay. These kids are tough, and I have no doubt that many of them will go on to be very successful in their lives.

As a beginning teacher, there was no way I could have possibly been prepared for how much my life would change as a result of my experience here. After coaching, advising, and doing everything else I could have possibly done for the kids here, I am finally realizing that although I am the teacher, I learn far more from the students than they have from me.

I really enjoyed your recent article about the Ozette dig. It was exciting to recognize so many names and faces from the communities I have come to know so well. Having hiked the beach and seen the same pictures that were featured in the article

made it especially relevant to me. One of my greatest memories while teaching here was taking a group of fifth graders to the site and watching them play in the sand at the base of Cannonball Island. I remember digging shells out of the sand with two Makah girls who excitedly saved them for their Makah Days dresses. A tremendous feeling came over me as I realized that many of my student's ancestors may have lived in the very spot we were visiting.

Although I have never gotten used to the rain, I have spent countless hours hiking, fishing, and enjoying everything this part of our state has to offer. I have spent a week on Tatoosh Island, been to countless basketball and football games, and visited the Makah Museum many times. In three short years I have gone from tourist to resident and can drive

life changed by such a place here in our own state.

Aaron Fischer '04

Correction

We regret leaving a number of people out of our story on Ozette, due to the size of the story and limits to space. One of the largest omissions was Gerald (Jerry) H. Grosso '54. Grosso was the project manager and conservator for the Ozette project, spending most of 1970–1982 either at Ozette or at the conservation lab in Neah Bay.

Before working with Richard Daugherty on the Marmes and Ozette excavations, Grosso was the Military and Science editor for the *Bremerton Sun*. He worked with contacts from that period to set up the helicopter transport system for objects from and supplies into the site.



Gerald (Jerry) H. Grosso '54 was the project manager and conservator of the Ozette dig. He is third from the left in the upper row of the above photo. He worked with WSU department head Richard Daugherty on both Ozette and Marmes excavations. Photo courtesy Paul Gleeson.

from Clallam Bay to Neah Bay and recognize almost every car and driver I pass.

I had no idea what the future would hold for me as I sat through lectures in my various history classes in Pullman. Learning about ancient cultures and forgotten places from all around the world fascinated me; I had no idea that one day I would end up having my

In the above photo, Grosso is third from the left. His wife, Jan, is next to him in the striped shirt. Daughters Vykee, in front of Jan, Alicia, in front row holding puppy, and Andrea, head just showing to left of Alicia, spent much of their childhood at the site.

For more about Grosso and others who worked on the Ozette project, see wsm.wsu.edu.



STAFF PHOTOILLUSTRATION
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POSTCARDS AND STAMPS

A home for hotel history

by Hannelore Sudermann :: One day in the late 1920s, hoteliers Severt W. Thurston and Frank Dupar met by chance in a coffee shop in Yakima, Washington. Unbeknownst to one another, each had gone to Yakima to make separate hotel deals. But by the time they parted company that day, the two had decided to go into business together. In 1930 they joined with the Schmidt Brothers, who had hotels in Olympia, Seattle, and Bellingham, to form Western Hotels Inc., the foundation of what would become the Westin hotel chain.

That first year they had 17 properties, including the Roosevelt and Waldorf hotels in Seattle, the Marcus Whitman in Walla Walla, and the Leopold in Bellingham. The business quickly grew to include some of the great landmarks of the West, including the Multnomah Hotel in Portland, the Olympic Hotel in Seattle, the Davenport in Spokane, and the Sir Francis Drake in San Francisco.

Based in Seattle from 1930 until 1998, Western Inc./Westin Hotels & Resorts was run by people who had long careers in the Pacific Northwest hotel business. Some, like Edward E. Carlson, started at the bottom. From a job as a bellhop at the Benjamin Franklin in Seattle, Carlson rose to president of the company, and later became chairman of the state of Washington's World's Fair Commission. Harry Mullikin '51, who studied hotel administration at Washington State College, broke into the business as an elevator operator at the Cascadian Hotel in Wenatchee and worked up to Westin president in 1973 after Carlson retired.

The papers and photographs of these individuals, as well as many other Westin treasures, now reside in Washington State University's archives. The materials came to WSU through the efforts of J. William Keithan, who started working for the company at Von's Café in Seattle, and retired as a senior vice president.

A historian by nature, Keithan recognized the value of the papers and memorabilia and made special efforts, even after retiring, to maintain and protect them. He even stored them in his basement for a time. Some things he found tucked away in the corporate offices, others he rescued from a loading dock.

A treat among the materials is the night log for the Multnomah from 1950 to 1953. In a few brief sentences, the manager captures some interesting scenes of Portland city life. "It was a real quiet night. You wouldn't know the grocers (attending a convention) were here," he wrote one evening. "Took two fellows to their rooms, very drunk," he wrote a few days later. And then there's an account of a guest who sprained her ankle on a small step, and another of a couple who were fighting and had to be moved to a room with two beds.

A view into Seattle history can be found in the scrapbooks of Christine Foreman, who

» panoramas

worked in the Olympic Hotel's grill from 1937 until 1972. Foreman attended WSC during the Depression, but dropped out because she couldn't attend school while working. Through her job at the Olympic Grill, she became a Seattle institution. For 25 years, men of influence in the city would meet at the grill for lunch and sit in Foreman's section. They included the local head of the U.S. Department of Immigration, attorneys, newspaper columnists, FBI office leaders, TV station managers, museum directors, and the head of the Seattle Chamber of Commerce. Though the group was called "The Table," it was also known as "Christine's Den." "Chris the waitress is the catalyst who holds the unlikely dining group together," noted a 1964 *Seattle Times* article.

Other precious pieces of the Westin collection include recipes from the well-known Trader Vics' restaurant which was housed at the Seattle Westin from 1949 to 1991, as well as coffee pots, coasters, Seattle World's Fair memorabilia, a key tag from the Shangra-La in Hong Kong, flatware, even chamber

pots from the Multnomah and a bath mat from the Arizona Biltmore.

Chris Marker '66 was an officer at Westin's corporate office in Seattle. His contributions to the collection include brochures, vintage post cards, and a menu from a dinner given in E.E. Carlson's honor in 1983.

All this might be lost if it weren't for Keithan, says Charles Comstock '52, who finished his Westin career as an officer of Western Service and Supply, a branch of the company that did purchasing and interior design for all the hotels. "Hardly anybody else had any interest in this material," he says. "But Bill is very much interested in posterity."

At its peak, Westin Hotels had 237 hotels

around the world. The brand turned 75 in 2005, and today as a subsidiary of Starwood Hotels and Resorts has more than 120 properties.

Wanting to find a permanent and useful place for the collection, Keithan turned to WSU in 1995. "When you have a bunch of junk you think is relevant, you get desperate for some place to maintain this material," said Keithan, who believed WSU would be a good home, since the hotel chain had so many connections with the University, particularly through employing so many of its graduates.

WSU was more than happy to accept the materials, said archivist Laila Miletic-Vejzovic. "The collection holds so much of the history of the Northwest."



J. William Keithan, a long-time senior executive with Westin Hotels & Resorts, was also the Seattle-based company's volunteer historian. He collected and organized materials covering the company's history from the 1930s to the 1990s and gave them to Washington State University's archives for safekeeping. Photo by Hannelore Sudermann.



Left: The Westin Hotels collection in WSU's archives holds some rare and beautiful pieces including, from left to right, a silver vessel and egg cup from the Davenport Hotel, a plate from the Multnomah Hotel, a 1930s cigarette holder/ash tray from the Olympic Hotel, and an oyster shell-shaped condiment tray from the Multnomah.

Above: Keys, tags, and badges from hotels owned by the Westin chain. Photos by Robert Hubner.



To see vintage postcards with pictures of some of the old Westin-owned hotels in the Northwest, visit wsm.wsu.edu.

“A joyous sight to see”

by *Cherie Winner* :: The next time you visit the Hiram M. Chittenden Locks in Seattle’s Ballard neighborhood, take a good look around. This is the only Army Corps of Engineers (ACE) facility in the nation that is home to a botanical garden, and the garden is due primarily to the efforts of one man.

The basic facts are easy to find. Carl English (’29 Botany) came to the site in 1931. In 1967 the Corps gave him its highest award for a civilian employee. Carl retired in 1974 and died two years later. In 1978 the site was designated a national historic district, due in no small part to Carl’s garden.

But who *was* Carl?

Michael Fleming, who served as horticulturist at the Chittenden locks from 1978 to 1989, met English a few times but got to know him mainly through the garden he had created and through stories told by people who had known him well. There wasn’t much else to go on, because English rarely wrote anything down. Whatever plans he made, whatever test plantings and seed exchanges he did, the details were all in his head.

“He never kept a record,” says Fleming. “I can’t figure out how he did what he did without records.”

During his years at the site, Fleming would occasionally find unusual plants that English had tucked into some odd corner and, perhaps, forgot.

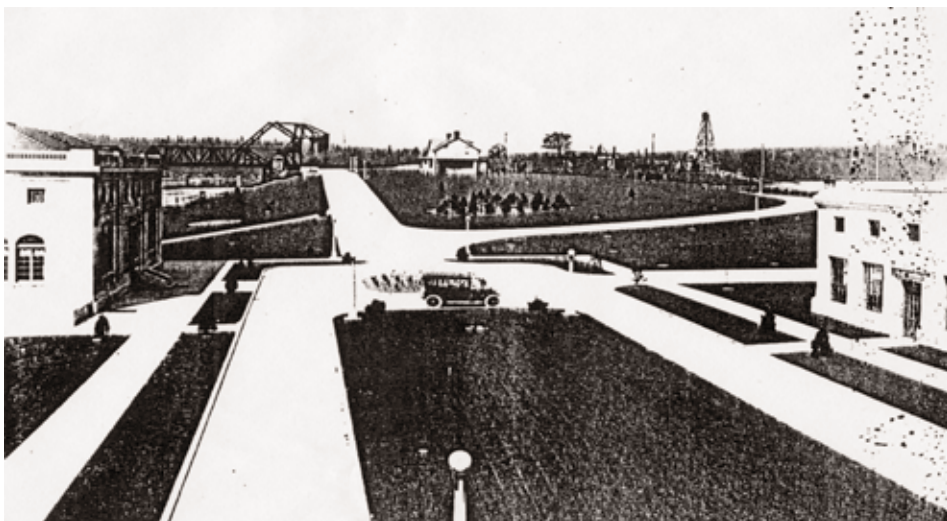
“There were things like that all over the garden,” he says. “It was like a treasure hunt.”

An ACE report on the history of the locks says that when English started working as assistant gardener there, the site had a military feel, with neatly trimmed conifer trees standing guard at sidewalk intersections. When he became the head gardener 10 years later, English began using the seven-acre site as a botanical canvas. He experimented with color, line, shape, and texture. He created a layered effect with naturalistic groupings of shrubs and trees, and his minimal pruning allowed the trees to achieve their natural form. He developed several new cultivars, including the scarlet horse chestnuts that now line the main walk. He planted little-known natives of the Cascades that he and his wife, Edith Hardin English (’24 Education, ’29 M.S. Zoology), collected during back-country expeditions. He also planted species from other continents, especially Asia, which he grew from seeds sent to him by colleagues overseas or brought to him by sailors he befriended as their ships passed through the locks.

English guarded his domain with parental ferocity. Fleming heard tales of English turning the sprinklers on would-be picnickers and brandishing a pitchfork at visitors who wandered onto the lawns. According to the ACE report, “English saw the primary (only) role of the garden as a botanical display, not as a park and least of all as a playground.”

An article English wrote in 1972 for *American Horticulturist* is one of the few records we have of his thoughts about the garden in his own words.

“An effort is made to have something of interest at all times of the year,” he wrote, adding that he did all his work in “hopes of developing a garden that not only would be a joyous sight to see but [would also be] worthy of serious study.”



Above, from top: Carl English amid thriving plants in one of his test gardens; scarlet horse-chestnut tree, a plant Carl English developed; the Carl S. English Jr. Botanical Gardens today. At left: the grounds of the Chittenden Locks facility in 1916, 25 years before English became head gardener there. Photos courtesy U.S. Army Corps of Engineers except scarlet horse-chestnut tree by Terry Donnelly.

Parkinson's house

by *Hannelore Sudermann* :: For a Parkinson's patient, every day is different. One day the symptoms could include tremors and muscle stiffness. Another might bring difficulty eating and swallowing. But every day, Parkinson's is a progressive, chronic, debilitating disease that can require special and specific accommodations.

Over 10 years, Wendy Holman's mother lived in 10 different facilities. Each time her needs changed, she had to find a new home to accommodate her new condition. Dick Almy's father has a very different story. He lost some cognitive abilities and ended up in a locked ward with Alzheimer's patients. But his dementia was very different from theirs, said Almy. And because of his Parkinson's-related physical impairments, the ward was a difficult and sometimes dangerous place to be.

Holman, president of Puget Sound Housing for Parkinson's Disease (PuSH for PD), traveled to Spokane this winter with Almy, the vice president, to look in on a large-scale project with Washington State University nursing and design students. The interdisciplinary project led by landscape architecture professor Bob Scarfo stems from an interest in the interaction between health and the built environment. To better understand the disease and the needs of their clients, Scarfo urged his students to visit Parkinson's patients to see firsthand the challenges they face.

"When I went into people's homes they said, 'We need this, we need that,'" said graduate student Amber Joplin in her presentation. "Each one presented me with totally different symptoms, relationships, and needs."

Often Parkinson's patients end up in nursing homes too early. The institutional character of many of the residences can affect the mental well-being of the patients and perhaps cause them to deteriorate faster, noted design students Ali Ilhan and Isel Oygur, who are working on their doctoral degrees in design.

While considering the changing needs of patients and valuing the feeling of home over institution, Scarfo's design students presented a variety of plans that included space for families, wide pathways and raised gardens for outdoor recreation, and a strong feeling of home.

The efforts of the WSU nursing and design students, as well as financial research from Eastern Washington University business students,

have been invaluable for PuSH for PD, which is now working on a residential care project to be built north of Seattle, says Holman. "To our knowledge there never has been a facility built ground-up with a focus on people with Parkinson's disease," says Holman. PuSH for PD is hoping to see the Seattle-area project completed in two to three years. It will house 24 patients and serve as a national model for other Parkinson's residence projects.

On the road

by *Tim Steury* :: Museum of Art director Chris Bruce has not been content of late to just set up a traveling show and then send it back. He'd just as soon put the show together and make sure it gets seen as much as possible by putting it on the road. Bruce started with a major Roy Lichtenstein exhibition a couple of years ago. After arranging with collector Jordan Schnitzer to assemble the exhibition, he sent it around the West to seven other museums, from the Henry Art Gallery in Seattle to the Austin Art Museum in Texas, making it possible for over 117,000 people to see work by Lichtenstein that is otherwise unavailable.

"The Lichtenstein was an easy sell," says Bruce. "We could have toured it forever, but didn't want to wear out the prints."

Bruce then organized a show of former WSU faculty member Gaylen Hansen's work and sent it out to four other museums, including the Seattle Art Museum. Much of Hansen's work had not been shown before, but came straight out of his studio.



Bruce observes that "collecting rare and amazing things" is not a real option for a museum the size of WSU's. "What we can do," he says, "is provide exhibitions for other people."

"We've hit about four out of five art museums in the Puget sound area over a period of three years," he continues. "Each of these shows has an accessibility that is intentional. It's a particular niche that seems to serve our audience well."

Sherry Markovitz: Shimmer is now on the road after its WSU Museum of Art's recent exhibit and will be at the Bellevue Arts Museum through the summer.



Design and architecture students from Washington State University worked with a Puget Sound non-profit organization to design residences for people with Parkinson's disease. With a mission of creating something that looked less like a nursing facility and felt more like a home, they presented their concepts at a meeting this winter. The Puget Sound Housing for Parkinson's Disease organization will adapt the best of their ideas into a project to be built in north King County.



A gift toward animal health

The Bill & Melinda Gates Foundation has committed \$25 million to Washington State University toward the construction of a research building that will become the centerpiece in the new School for Global Animal Health. The new facility will provide modern research space on the Pullman campus to support global animal health research. WSU is recognized internationally for research focused on preventing transmission of animal pathogens. "You cannot identify a healthy human population in which the animals are not also healthy," says Warwick Bayly, dean of WSU's College of Veterinary Medicine. "Humans are inextricably linked to their animals. Solving the challenge of global poverty is not possible without a focus on animals."

The school will focus on three interrelated approaches to global animal and public health: vaccine development and deployment, emerging pathogen and disease detection, and control

of disease transmission from animals to humans.

The \$35 million state-of-the-art infectious disease research facility will provide approximately 20,000 square feet of laboratories, office space, and meeting rooms for 12 to 15 research scientists and their support staff and graduate students. The Gates Foundation gift represents the largest single private financial commitment in WSU history. "The values of WSU's School for Global Animal Health are aligned with the mission of the Bill & Melinda Gates Foundation, which is guided by the belief that every life has equal value and that all people should be allowed to lead healthy, productive lives," says WSU president Elson Floyd.

Breathing life into Pullman's economy

by Corinna Nicolau :: In 2007, a marketing class at WSU surveyed undergraduates to determine what businesses they would most want to see in Pullman. At the top of their list: Red Robin, American Eagle, and Circuit City. They shared their findings with the Pullman Chamber of Commerce in hopes that these companies could be convinced to open establishments in Pullman. For years chamber officials have been trying to lure such companies to Pullman. In the mid-1990s, hopes were raised when Applebees showed interest. The company sent representatives to assess Pullman and found a great location—in Moscow. Flat land and a lower minimum wage would reduce construction and operating costs the company reasoned and, if they located at the western edge of town, Pullmanites would make the quick commute down the highway.

Fritz Hughes, president of the Chamber, admits that Pullman has a complicated relationship with growth. For a long time, planners believed the city would develop to the north. They built a bridge to what they thought would be plentiful commercial real estate; it was informally christened "the bridge to nowhere" when this pattern of development did not materialize (now

it leads to Schweitzer Engineering Laboratories). Hughes says Pullman's dedication to agriculture may have something to do with its blasé attitude towards urban development. Certainly, a few stubborn farmers refused to give up parcels of land for frivolous roads and shops.

Today, Pullman residents spend millions just about anywhere but Pullman. This pattern began when the first few settlers in the mid-1800s did their trading in Moscow, which was a bit more established with 100 residents. Eventually, in 1881, Pullman residents opened their own store, but if records of sluggish sales are any indication, customers have been slipping away to do buying ever since. This trend is particularly hard on the public sector—the parks, the police force, the fire department—that depends on the funds generated from the local economy.

Thank goodness for Duane Brelsford, Jr. In his effort to develop the Pullman economy and reverse this trend, Brelsford is earning a reputation as a hometown hero.

Born and raised in Pullman, Brelsford is a born risk-taker. In 1980, a photo of him plunging head first from the roof of his WSU fraternity house into a snow bank made the cover of the *Seattle Times*. After college, Brelsford moved to Los Angeles to become a stuntman. But he never lost his interest in building. He had taken almost enough courses in construction management to qualify as a major. His grandfather had worked as a plasterer at WSU and his father dabbled in Pullman real



COURTESY DUANE BRELSFORD, JR.

estate development. After six months of stunt training, he realized that his tolerance for risk could be put to more profitable use as a project manager for new hotel construction in California. By his late twenties, the value of Brelsford's completed projects totaled \$100 million.

Equipped with this experience, he returned to his hometown in 1998 with his wife Terri and their two daughters and created Corporate Pointe Developers. He immediately set about to increase the supply of student housing. He developed 1,400 apartments, transforming the east side of campus into a village of apartment complexes and

forcing other landlords to step up their game. In 2001, when Corner Drug on Main Street burned to the ground, he bought the lot. Town Centre, the building he put up in its spot, houses Sam

Dial Jewelers on the street level and the offices of the WSU Foundation on the second level. "Without Duane," says Hughes, "the Corner Drug would be a parking lot." Next, Brelsford built Bridgeway Centre I, where Identity Spa and Taco Del Mar are located, with stylish apartments on the second level.

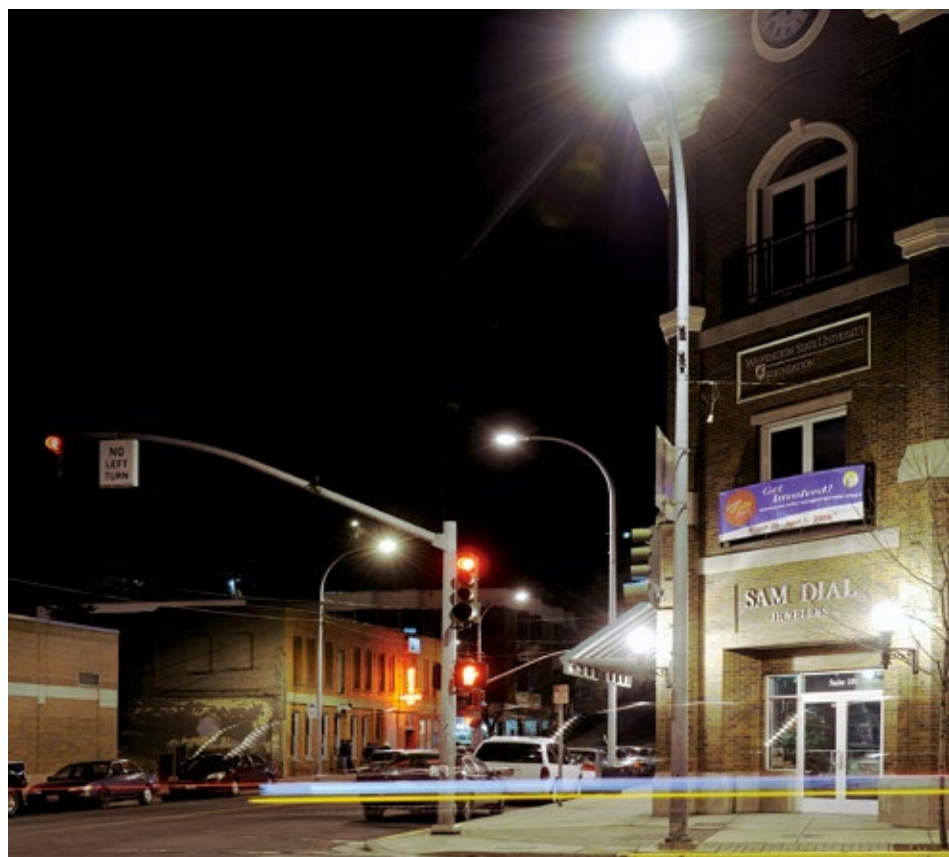
City planners speak of a vibrant downtown and a mix of retail and living spaces—but Brelsford gave the idea momentum. Brelsford also introduced downtown's Walk of

building. "I told them, 'We've got students from all over the state who rely on your sandwiches—the advertising is effective—and now you're going to let them go four years without it?'" It worked, and the Quiznos in downtown Pullman has been a top performer for the sandwich chain. Brelsford has a list of 80 companies he hopes he can persuade to come to Pullman. At the top are outlets for women's clothing. "Forever 21 would do really well here," he says. Every year he goes to the franchise convention in Las Vegas to extol the virtues of Pullman to as many vendors as possible.

Often, Brelsford recognizes a need for a type of business in Pullman and has no choice but to fill the void himself. "My daughters would go to Moscow to the multiplex," he says, sitting in his sun-filled office in the Corporate Pointe building on Bishop Boulevard, "and we'd worry ourselves sick about them getting home safely at night." His daughters' movie nights made him realize that Pullman needed its own multiplex so he built the



SHELLY HANKS



ROBERT HUBNER

Fame, an idea he borrowed from the stars on Hollywood Boulevard.

To fill his buildings, Brelsford often acts as a one-man chamber of commerce, pitching Pullman to the corporate headquarters of businesses he envisions here. He encouraged Quiznos executives to locate a shop in his downtown

building and established the company that runs the theater. More recently, he built and operates the Pullman Athletic Club. Under the umbrella of Corporate Pointe Developers, Brelsford owns 29 service and rental companies.

{ THEY MADE }

A difference.

Enoch Bryan, WSC president 1893–1915
(*Summer 2007 issue, page 27*)

Debbi Brainerd '79, outdoor education entrepreneur
(*Spring 2008 issue, page 43*)

Lori Carris '83, plant pathologist
(*Winter 2007-08 issue, page 33*)

Ed Claplanhoo '56, tribal leader
(*Spring 2008 issue, page 23*)

Bill Marler '82, attorney
(*Fall 2007 issue, page 39*)

Guy Palmer, epidemiologist
(*this issue, page 32*)

WSU alumni, faculty, students. **They make a difference.** We tell their stories. You can help us continue. Please **donate to Washington State Magazine** by writing us in on the attached envelope. **Thank you.**

:: continued page 21



Signing Day Central

PHOTOS BY ROBERT HUBNER



At Eastern Washington University, Rich Rasmussen was used to sitting by the fax machine for the letters of intent to arrive. Fresh off a whirlwind stretch of recruiting for WSU, he couldn't get used to sitting at his desk waiting for e-mails.

by Jason Krump :: During the early morning hours of Wednesday, February 6, Rich Rasmussen enters the Washington State University football office carrying two boxes, each containing a dozen donuts, and places them on the front counter.

Rasmussen opens the door to his office, where, taped on its outer side, is a piece of paper:

Core Values for WSU Football 2008:

Compete – Compete to win

Execution – Attention to detail

Effort – Relentless on every rep

Encouragement – Positive response to all situations

Rasmussen turns on his computer, checks his e-mail, and waits for the future of WSU football to commence.

Today is National Letter of Intent Signing Day. On the first Wednesday of February each year, high school players select the university they will attend, and play for.

It is a day that determines their future and shapes the future of the university's football program.

For Rasmussen, the recruiting coordinator for Washington State football, and the rest of head coach Paul Wulff's staff, this Wednesday caps a whirlwind 57 days.

Taking over from Bill Doba, Wulff became the first WSU football letterwinner and graduate to lead the Cougars since Phil Sarboe served as head coach from 1945 to 1949.

A 1990 graduate of WSU and a four-year letterwinner as center, Wulff has spent the past 15 seasons at Eastern Washington University, the final eight as head coach.

When he officially became head coach, there were precious few days available to recruit before the NCAA-mandated recruiting "dead period" started on December 17.

Wulff and members of his coaching staff, whom he hired just a day after accepting the position, hit the recruiting trail hard.

"Hectic but productive" is how Rasmussen puts it.

The results begin to reveal themselves when Kevin Frank and Zack Williams's national letters of intent come through the fax machine in the compliance office at 7:09 and 7:10 a.m.

They are the first of a flood of NLIs that come pouring out of the machine all morning.

As frenzied as things are in the compliance office, which certifies each student-athlete's NLI, the mood is calm in the football office one floor below in the Bohler Athletic Complex (BAC).

GEOFF CRIMMINS, MOSCOW-PULLMAN DAILY NEWS



Coach Wulff at the signing day news conference.

"It's not as intense as people think," Wulff says of the atmosphere surrounding signing day, "unless you are fighting to get a kid, which usually doesn't happen too often."

The tough part for Rasmussen is waiting for the e-mails from assistant compliance director Catherine Walker officially confirming the receipt of the NLIs.

At Eastern, Rasmussen was used to standing watch over the fax machine, waiting for the NLIs to arrive. At WSU, he is relegated to standing watch over his computer. "I can't get used to waiting for the e-mails."

Once he does receive an e-mail, Rasmussen makes a congratulatory call to the recruit welcoming him to the WSU program. Then it's back to waiting.

By 9:30 a.m., the tally of NLIs to come through the fax has reached 18, and coordinator of football operations Shawn Deeds drops off Wulff's itinerary.

Wulff is slated for a Spokane radio show at 1:30 p.m., a news conference at 2, a donor gathering at the Hotel Lusso in Spokane at 5, and a signing-day party for the general public at the Northern Quest Casino at 6:30. Then it's back to Pullman, where winter conditioning begins for current Cougar players at 6 the following morning.

But a winter storm is due this evening. Returning to Pullman for the 6 a.m. workout is not a sure thing.

The University has experienced one of the worst winters to hit the region in years, so bad that WSU was forced to close just a week earlier due to heavy snow.

Wulff says the winter weather concerned a couple of kids he was attempting to recruit.

Regardless, the appeal of the University and the Pacific-10 Conference made the recruiting process "a lot easier" at WSU compared to Eastern. "I would say that 95 to 98 percent of kids out there want to hear us out."

Part of that allure is the ongoing renovation of Martin Stadium.

At 11:30 a.m., with only five donuts remaining, all the NLIs that the coaches were expecting have arrived—a total of 24.

Wulff heads to lunch with members of his staff at the Cougar Fitness Café, just across the street from BAC. Rasmussen stays behind to participate in an online chat at wsucougars.com.

After lunch, Wulff confers with sports information director Bill Stevens on a quote for a press release, conducts his radio interview, speaks with reporters at the news conference, and takes off for Spokane.

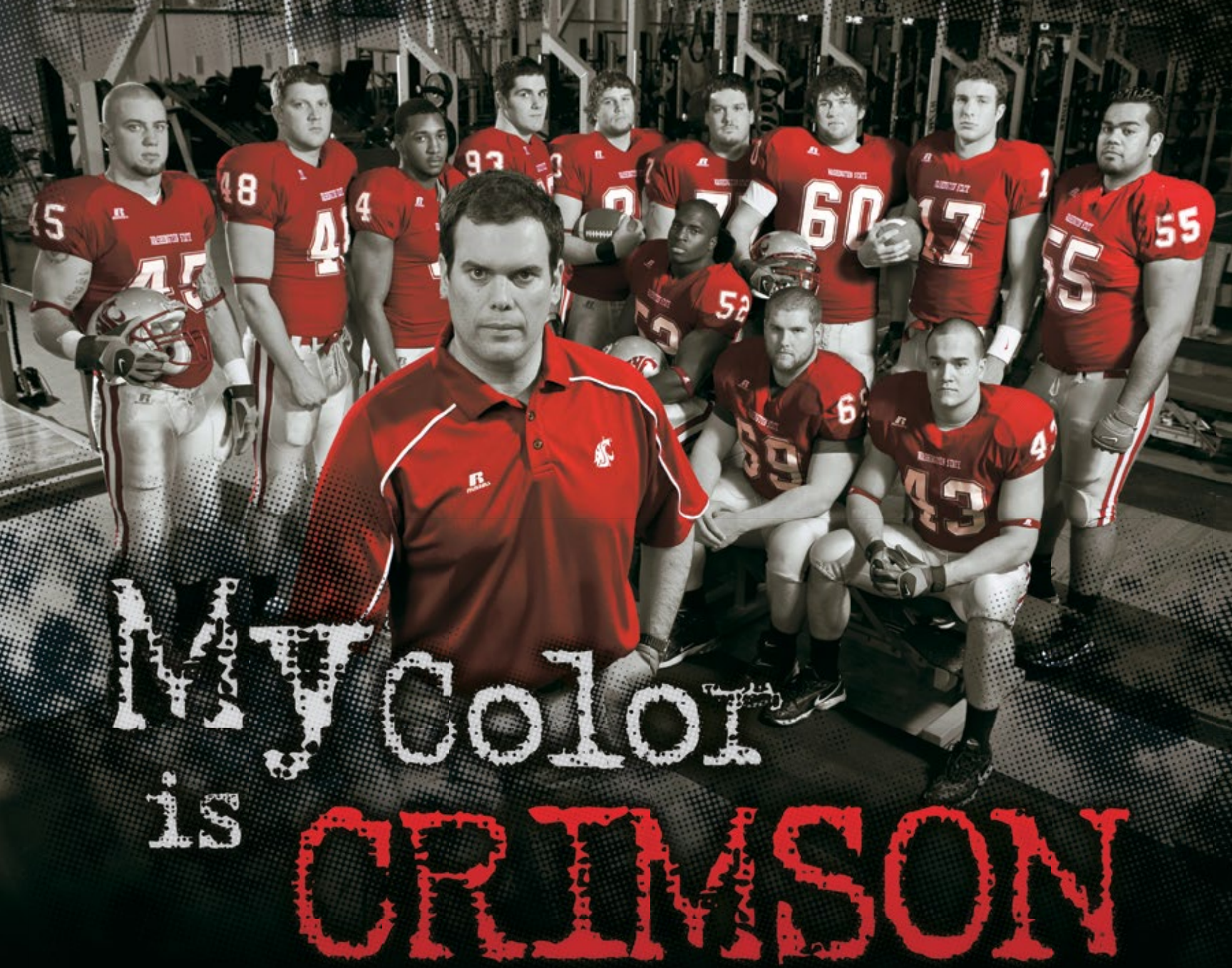
The predicted severe weather holds off until Wulff and his party leave the Hotel Lusso for the Northern Quest Casino. There, before a standing-room-only audience, Wulff, defensive coordinators Chris Ball and Sears, offensive coordinator Todd Sturdy, and Rasmussen speak and take a few questions. Afterward, Wulff shows video highlights of each signee.

It takes Wulff and his entourage nearly three hours to drive back through the snowstorm to Pullman.

In the office early next morning, the coaches find a single donut box still on the counter. Although the box is nearly empty, the WSU football cupboard is much fuller than it had been just 24 hours earlier.

The 2008 season opener is 175 days away. <<





My Color is CRIMSON

8/30 Oklahoma State
*Cougar Gridiron Classic Presented by
Washington's Beef Producers
Qwest Field in Seattle, WA*

9/6 California

9/13 Baylor

9/20 Portland State
Future Cougar Day

9/27 Oregon
Homecoming

10/4 UCLA

10/11 Oregon State

10/18 USC
Foundation day

11/1 Stanford

11/8 Arizona
Dad's Weekend/Armed Forces Day

11/15 Arizona State

11/22 Washington
Apple Cup Presented by Boeing

11/29 Hawai'i
Home games in **Bold**

Cougar Football
2008



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wsucougars.com

» in season

DAHLIAS

by Hannelore Sudermann

WHEN DAN PEARSON WAS EIGHT YEARS OLD, his father brought a batch of brown tubers home and planted them in the yard. Intrigued, Dan helped tend the vigorous plants that sprang from them and watched them bloom into flashy, brightly hued flowers, some as big as a dinner plate. He memorized the names of all 30 varieties.

The next spring, tickled by his son's interest, Chester Pearson '59 planted even more. Their yard was so full of color that cars would slow as they drove by. One day when a car stopped, Dan offered to sell some blooms for a dollar. Pretty soon it was a regular event. "I'd run in the house and get a steak knife out of the drawer and cut them a bouquet," he says. The next year the Pearsons hung a "Dan's Dahlias" sign, and the kid was in business.

Dan '95 tells this story while tending his busy booth at the Northwest Flower & Garden Show this February. What seemed to be a summer hobby for an eight-year-old has become a vocation for Pearson, who now has three acres and 300 varieties of dahlias, a winter business selling tubers, and a summer business selling blooms.

By the time he was 11, Dan was selling his flowers at the Olympia Farmers Market. Since the Pearsons lived a ways out in the country, Dan would ride with his mother into town and unload his jars and boxes before she headed off to get groceries. When she was done, she'd pick him up and head home.

"He was a really small boy," says Chester Pearson. "A lot of little old ladies wanted to give this kid their money."

There were some, though, who didn't realize he was the vendor, says Dan. "They'd see this child arranging the jars and would come up to me and say, 'Now, honey, don't touch the flowers.'"

All his earnings went into savings for college. Dan put himself through Washington State University with his dahlia dollars, studying for a landscape architecture degree and going home each summer to continue his flower farm. Though he worked for a landscaping firm for several years after college, the flower business grew so big he had to focus on it full time.

In dahlias, Dan found a business particularly well-suited to the climate and people of western Washington. A native of the Mexican highlands, the dahlia loves the mild weather and cool summers of the Northwest—and the Northwest loves it back. Many states have a dahlia society, and some, like California, have several. But Washington tops out at 13.

While many people simply prize dahlias for their vigor and color and the fact that they bloom in late summer, when most flowers go dormant, there is a subculture of hard-core dahlia aficionados, especially here in Washington. These are the competitive dahlia growers, the dahlia-obsessed who tend their plants daily, who set up parasols around them to protect them from too much sun, who

shell out big money for the newest varieties, and who study the art of arranging them so they can win prizes at flower shows. “There is a way to groom them, and pluck off the unsightly petals and leaves, but you’re not supposed to do that,” says Chester Pearson, who has become—you guessed it—one of those dahlia fanatics. During the blooming season he’s constantly watching his plants to decide what his entry might be. And every weekend it’s a new show and a new competition, he says.

With nine sizes, 18 classifications of form—including pompon, peony, and water lily—and 15 colors or color combinations, the dahlia has a lot going on. “Some people say a dahlia is a man’s flower,” says Dan, pointing to his father and family friend Dick Porter, who love the bloom because it’s so showy. But as an American Dahlia Society accredited judge, Dan’s seen serious cultivators of both genders.

“It’s the competitive spirit,” says Porter, a retiree who has a few hundred dahlia plants in his yard near Bellingham. “We’re always looking for the greatest new one.” Pearson the elder grins and nods, admitting that it doesn’t hurt that when it comes to spring planting time, he gets the pick of his son’s supply.

In spite of the flower’s popularity, only a few scientists in the country work specifically with ornamental dahlias. Narrow that down to the pathogens that affect the plant, and the list of experts gets even smaller. One of those rare plant pathologists who worked with dahlias was Sam Smith, who studied the subject at Penn State years before coming to WSU to be president. In his honor, the American Dahlia Society established a dahlia research endowment at WSU in his name.

Hanu Pappu is the second plant virologist at WSU to hold the Smith endowment, and as such is charged with studying diseases that affect dahlias. His work is leading to new disease identification aids, including the development of field tests so that growers can perform their own diagnoses.

When asked if he grows dahlias at home, Pappu says he’s not into healthy plants. “It’s the sick ones that fascinate me,” he says. A virus like the dahlia mosaic virus (DMV) can impair the quality of the flowers and affect the vigor of the plant. “But isn’t that beautiful,” says Pappu as he shows a picture of an infected leaf with a patchwork of dark and light greens.

Pappu has had an exciting few years since coming to WSU in 2002, discovering, first, that diseased plants have not one, but three separate viruses, and second, that one of the three DMV viruses is actually inserting itself into the DNA of the plant and reproducing itself as the plant reproduces.

Viruses won’t often kill the plant, but they will weaken and discolor it. Because they can be transmitted through aphids, they can easily spread to other dahlias nearby. Growers and hobbyists who find virus in their dahlias tend to hang on to the plants because of sentimental attachment, says Pappu. But professional growers and garden centers are serious about detecting disease and must act quickly to eliminate the infected dahlias, or lose business and credibility.

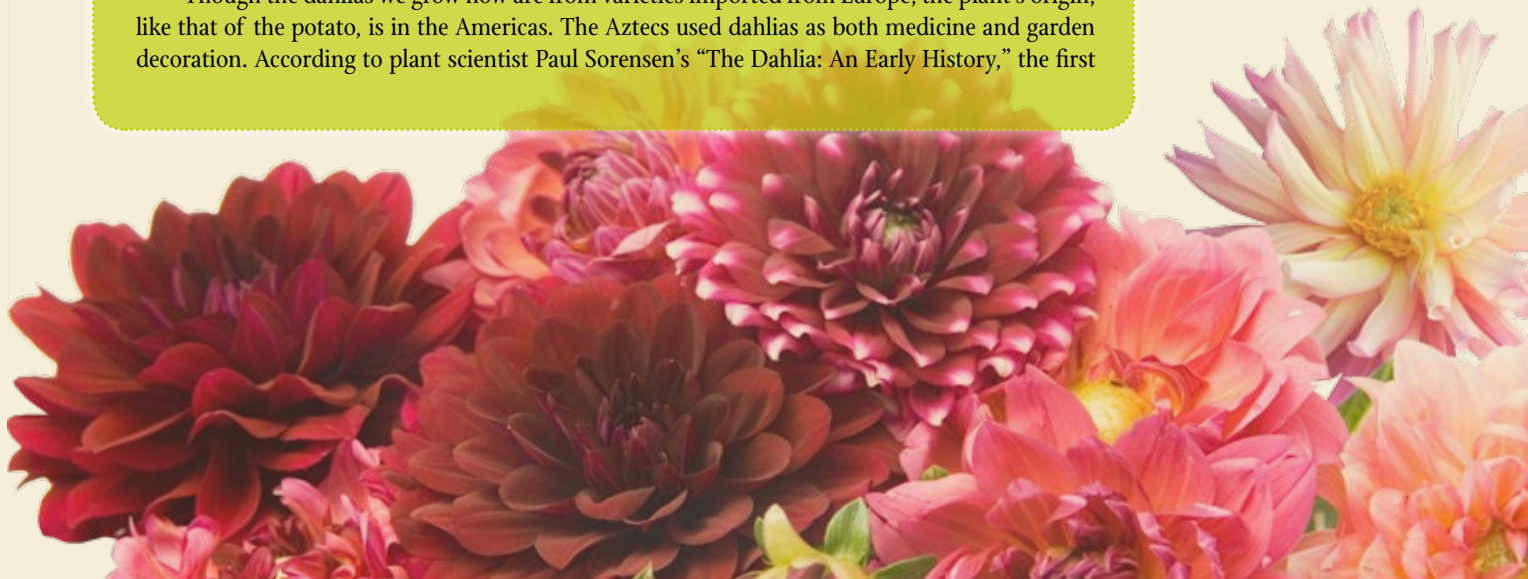
Dahlias are only part of Pappu’s research. He also works with vegetable crops like potatoes and onions. His is a tale of two tubers, he says. On one end you have the affordable potato. On the other, a desirable new dahlia can sell for hundreds of dollars.

Though the dahlias we grow now are from varieties imported from Europe, the plant’s origin, like that of the potato, is in the Americas. The Aztecs used dahlias as both medicine and garden decoration. According to plant scientist Paul Sorensen’s “The Dahlia: An Early History,” the first



COURTESY MIEKE PEARSON

Dan Pearson and daughter Alyssa



mention of the dahlia appears in *The Badianus Manuscript*, a book on Indian medicinal herbs written in 1552 by two Aztec Indians attending the college of Santa Cruz in Mexico. The rare illustrated manuscript was brought to Spain and then disappeared into the Vatican library for several hundred years until it was rediscovered in 1929.

Like that manuscript, the dahlia was brought into Europe through Spain by early explorers. It was a lively time for horticulture. Many illustrious gardens were seeking to incorporate exotic plants from around the world. The Royal Botanical Garden in Madrid sent specimens of the plant to Germany, England, Italy, France, and the Netherlands.

Because of its rarity and showy nature, the dahlia was a treasured bloom. In 1828 England, a new dahlia could fetch a very high price, more than several weeks' wages for a laborer. Gardeners all over Europe were intensely breeding and hybridizing the plant to achieve new colors, fuller and showier blooms, prettier foliage, and stronger stems. Their efforts became a foundation for the thousands of varieties that exist today.

The plant has retained its value as a bloom. For a commercial grower, an acre of dahlias could be worth as much as \$200,000. With that much at stake, it's no wonder they're concerned about viruses.

To get a better understanding of dahlia mosaic virus, Pappu and his students are turning back to the wild species in Mexico. With the help of geneticist Dayle Saar, a colleague at Murray State University who searches for wild dahlias, Pappu has been able to discover that some of the viruses that affect dahlias were present in the plant's ancestors.

To date, scientists have identified 36 different species of dahlia in Mexico. By studying them and their infection and interaction with viruses, Pappu hopes to find a way to address the virus in the garden-variety plant.

Until more is known about the viruses, commercial growers like Dan Pearson use quarantine sites to grow out new varieties before introducing them to their farms. But Dan's biggest challenge so far hasn't been disease. It was a much larger culprit.

In the summer of 1994 a major, even earth-shaking, event wiped out Dan's crop. While he was away at a family wedding in California, the neighbor's Holsteins broke loose and "ate a whole three acres of dahlias to the ground, broke the wooden stakes, and destroyed all the plastic identification ribbons," says Dan. "They wiped me out that year."

But he maintains a sense of humor about it, which is why his logo is a cow munching a dahlia. "It keeps me humble, reminds me of my roots," he says. <<



HANU PAPPU COURTESY
DEBORAH DIETZ



Dahlia hortensis 'Bodacious'
Photo by Franck Avril

Dahlia Resources

The American Dahlia Society (www.dahlia.org) has listings of state and local dahlia societies, as well as information about where to find and purchase dahlias and how to grow your own.

The best time to plant dahlias is in early spring, after the danger of frost is past. Plant the tuber in pH-neutral (not acid), well-draining soil in full sun. Water deeply once a week, or more frequently if it's hot and dry. Dig the tubers in late fall before the first hard freeze. (Dan digs his in late October and November.) Store the tubers over winter in a cool (50-degree), dry environment.

If you suspect your dahlia has a virus, Pappu (dahlia.wsu.edu) has a disease information page with photos.

Washington is full of great gardens where you can view dahlias in bloom, including the following: Tacoma—The Washington State Dahlia Society's Trial Garden at Point Defiance Park (one of Pappu's favorite sites). Each year the new blooms are judged by the American Dahlia Society. August is the peak time for blooms; Spokane—Manito Park; Seattle—Volunteer Park.

:: from page 14

This past December, WSU announced that Corporate Pointe Developers put together the winning team that will design, build, and manage a new on-campus hotel and conference center. Brelsford beat out prominent firms based in Virginia, Chicago, and Spokane. The estimated \$20 million project will go hand-in-hand with the new golf course. Not only is it the largest project Corporate Pointe Developers has taken on, but it is perhaps one of the most important. The hotel and conference center, which will include condominiums, has the potential to transform how residents and visitors experience Pullman. "Alumni can come and stay in nice accommodations," Brelsford explains, "They can play golf and tennis in the summer and stick around for the beginning of football season. All of these state-of-the-art facilities will be within walking distance."

It might just represent a turning point for Pullman. Mayor Glenn Johnson believes it is a precursor of good things to come and that Brelsford has led the way for others to do business in Pullman. "He's shown that developers can make money here. Alumni are going to see his success and want to do businesses here. Our franchises are doing well. The Holiday Inn Express is one of the most successful out there. Same with Quiznos." As corporate America finds its way to Pullman, other local developers and business people have begun to follow Brelsford's lead, if on a smaller scale. Mike Yates is turning the old antique mall at the corner of Main Street and Grand Avenue into sleek apartments with retail on the first level. He and his wife also opened the Plum Orchard shop on Main Street in 2006.

With so many businesses for which he is responsible, Brelsford's ability to tolerate risk has been put to the test. Every month, the combined total of his mortgages is millions of dollars. Brelsford admits to suffering a bit of stress, a feeling that once was foreign to him. He says he would be willing to sell a company or two if the right buyers show interest. But, having just turned 50, Brelsford has no intention of slowing down any time soon. After he completes the hotel and conference center, he'll once again turn his sights to the area that surrounds campus. He owns plots of land all over Pullman where only he can see the buildings he has yet to build, and he has much more work to do downtown to make it the bustling community center he envisions. In the meantime, he's taken up yoga at his Pullman Athletic Club.

What a dive

by Cherie Winner :: Paul Schroeder thought he'd missed the boat. The Washington State University biologist, who retired in 2001 after decades of studying marine worms, was shorebound when the stubby little submarine called *Alvin* first carried humans to the bottom of the sea.

Schroeder remembers the excitement in his lab when scientists aboard *Alvin* discovered vents in the ocean floor, where three-foot-long tube worms and other weird-looking animals lived on the mineral exhalations of the earth's interior.

"I had a graduate student working on worms then," he recalls, "and it was in *Time* magazine, these guys with these giant worms, and [my student] came running into my office and said, 'What the hell are these things?'"

That was in the late 1970s. Since then Schroeder has avidly followed the discoveries of researchers fortunate enough to see the vents and their strange life forms in person. He never expected to make the trip himself.

Then last summer, WSU biologist Ray Lee invited Schroeder and three WSU colleagues on the cruise of a lifetime. Lee was chief scientist on *Alvin*'s mother ship, the research vessel *Atlantis*. Part of his job was choosing who would get dive time. In addition to his grad student Ray Andrell and post-doc Christian Rinke, who are studying deep-sea creatures, Lee offered slots to about 20 scientists from other institutions, to Schroeder, and to John Rutherford, a master craftsman in WSU's technical services department who has

designed and made high-pressure chambers for Lee's lab. Of the WSU divers, only Andrell had been to the bottom of the sea before. He joined Lee on a 2006 cruise when he was an undergrad at Whitman College.

So in late August, the *Atlantis* sailed out of Astoria, Oregon, bound for waters about 200 miles west of Vancouver Island. Once there, the *Alvin* would make a dozen trips to hydrothermal vents along the Juan de Fuca Ridge on the seabed more than a mile below the surface.

Alvin made its deep-sea debut in 1964 and is still going strong, thanks to frequent upgrades. Only the seal around the hatch is original equipment, says Rutherford. Everything else has been replaced at least once. The sub's shape is due to a fiberglass shell that provides stability and houses hydraulic and electrical lines, sampling tools, and five small motors, three aft and one on each side. Under the fiberglass is a thick layer of syntactic foam, which provides buoyancy and cushions the craft against bumps and dings.

"They've got rocks down there," says Andrell.

"There are currents down there, too," says Schroeder. "If you're not aware of which way the wind is blowing, so to speak, you can get blown right into something."

Inside the fiberglass-and-foam shell lies the spherical cabin. Made of inch-and-a-half-thick titanium, the cabin looks much like the original diving "bells" of the late 1800s. It has an interior diameter of about six feet; with a pilot and two other people aboard, the cabin is, shall we say, cozy. Schroeder, who stands about five-foot-four,

Fisheye views of *Alvin* near the ocean floor (left) and WSU's John Rutherford in *Alvin*'s cabin. Photos Deep-sea Photography and Mark Spear, Woods Hole Oceanographic Institute, respectively.



» panoramas

says it's no problem for him. Rinke, at six-foot-five, has a bit harder time.

"You have to sit like this," he laughs, drawing his knees up near his chin. "It's very crowded, but it works."

Divers wear casual clothes (nothing acrylic, which would release toxic fumes if it caught fire); many bring gloves and a stocking cap. Surrounded by near-freezing water, *Alvin* cools quickly. Heat from the people on board keeps the cabin at about 50° F, which is a bit chilly when you're sitting in one place for up to eight hours.

Then there's the issue that arises on any all-day trip: what do you do about bathroom business? Let's just say the overly shy or fastidious need not apply. If you do go, you take a capped container along—Schroeder calls his a "thunder mug"—and when the time comes, you simply use it. With luck, you won't have to use it often.

"It's better if you don't drink too much," advises Schroeder.

Weighted with 800 pounds of iron plates, *Alvin* takes about an hour and a half to drop to the sea floor. After the first few hundred feet, the craft descends in a profound darkness punctuated only by flashes of bioluminescence from jellyfish and other denizens of the middle depths. Most



Left, *Alvin*'s mother ship, the *Atlantis*, prepares to lower *Alvin* to the water from the A-frame boom. *Photo Woods Hole Oceanographic Institution.* **Right**, associate professor Ray Lee, scientific director of the cruise, unloads the biobox holding tube worms and other deep-sea creatures picked up by *Alvin*'s mechanical arms. *Photo courtesy John Rutherford.*

creatures there light up when they're disturbed, says Schroeder, and as *Alvin* brushes past them on its way down, they spark briefly and wink out again before you can get a good look at them.

"In some ways it's unreal," says Lee. "You do sense the distance you've traveled. You definitely feel like you're separated from everything else."

During its dive, *Alvin* is on its own. The crew is in phone contact with the mother ship, but the sub is not tethered to the *Atlantis*. On-board tanks hold enough oxygen to keep the divers alive for 72 hours if the sub gets stuck somewhere. Everyone does safety drills for emergencies on the big ship, but if an accident happens on the *Alvin*, there aren't many options.

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"There's one lever in the bottom of the *Alvin* that releases it from everything," says Rutherford. "When you turn this handle, all the cowling and everything comes away, and all there is, is the sphere—and up it goes."

"But that's the last thing you should do!" laughs Rinke. He says the cabin would probably spin as it rose, tossing its occupants around and making them royally sick. So far, no one has ever had to pull the lever.

As *Alvin* nears the bottom, the pilot jettisons ballast until the craft is able to hover, and he turns on the exterior floodlights. Each diver has a Plexiglas porthole to peer through, but at three inches across and five inches thick, the portholes are more peepholes than windows. Most of the sightseeing is done by remote control. Each diver controls a video camera that can pan 360 degrees. Each also has a screen on which to view what all three cameras are pointed at.

What the divers saw depended on the specific area of their dive. Some saw mud flats populated by clam-like creatures called ocean quahogs, recently discovered to be the longest-lived animals on earth. Others saw towering "chimneys" encrusted with snails and tube worms. In some places, says Schroeder, the snails are stacked so deep "they look like gravel. It's astonishing."

Directed by the lead diver—the one with the most experience—the pilot manipulates mechanical arms to scoop up sediment and creatures to be taken back to the ship for study. Andrell, having dived before, found himself in the lead chair on this trip.

"Last time I was just sitting there watching, basically, and this time I was actually responsible for getting some things done," he says. "It worked out fine, but that was partially thanks to the pilot."

When it's time to return, the pilot unloads the rest of the ballast. During the trip back to the surface, which takes about as long as the descent, some divers talk about what they've seen. Others wait quietly. One pilot, a veteran of dozens of dives, takes a nap.

On days when they didn't dive, everyone stayed busy with other duties. Rutherford helped maintain pumps; Schroeder sorted organisms collected earlier in the cruise; Rinke, Andrell, and Lee worked on experiments in *Atlantis's* lab.

As chief scientist for the cruise, Lee could have scheduled himself for a dive but chose not to. He hasn't taken *Alvin's* magical mystery tour since 2006.

"I've seen it," he says of the undersea world. "I'd like to go again, but compared to someone

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like Paul Schroeder getting his first dive, unless there's a scientific reason why I should go, I'd rather let someone else do it."

To mark their return from the deep, first-time divers are greeted with a certificate and a ceremony—a thorough drenching. Rutherford teases Schroeder about getting hit with clean, warm water from the ship's tap. His own

dousing "was cold salt water that had worms in it. And it was *smelly*. You got the royal treatment," he says.

"I did!" says a beaming Schroeder. <<

 To learn more about Ray Lee's work and life at the bottom of the sea, visit wsm.wsu.edu/stories/2006/November/hotstuff.html.

Ballast water rushes out as *Alvin* is lifted from the sea (left); professor emeritus Paul Schroeder gets a wet welcome back. Photos Deep-sea Photography and courtesy John Rutherford, respectively.





Twins Beckmann, *left*, and Fritz Meisel play
in front of the barn at their grandfather's farm
near Pullman.



Identity



Identity

by Tim Steury :: photos by Zach Mazur

A DIALOGUE *with the* PAST }

Modern archaeology in the
Pacific Northwest and
what we are

{ A FIERCE PACIFIC STORM IN FEBRUARY 1970 revealed early remains of Ozette, on the Olympic Coast between Cape Flattery and La Push. Worried about the site's vulnerability to looters and further storms, Makah tribal leader Ed Claplanhoo '56 called archaeologist Richard Daugherty at Washington State University, commencing an 11-year excavation of the site. The excavation yielded thousands of well-preserved artifacts and a wealth of clues to the history and culture of Makahs and other coastal tribes.





One of the guiding principles Daugherty instilled in the generation of Northwest archaeologists who found their passion, and dissertations, at Ozette was his ethic of excavation.

“Excavate 10 percent, leave the rest,” explains Dale Croes (’77 Ph.D.), who wrote his dissertation on basketry at Ozette, is an adjunct WSU faculty member, and now teaches archaeology at South Puget Sound Community College in Olympia.

Daugherty’s principle is based primarily on the idea that by definition excavating an archaeological site means destroying it. Once a site has been explored, there is no going back to reconsider chronology or to look at the placement of an artifact more carefully. So if, as Daugherty believed, 10 percent would keep everyone busy, then the remaining 90 percent could be left for later.

All of which led Daugherty to leave the bulk of the site, including Ozette, to future exploration. Time, he reasoned, may bring new techniques, new technology, and new ideas.

The legacy of Ozette is rich, deep, and diverse. In the preface to volume three of *Ozette Archaeological Research Reports* (WSU Department of Anthropology Reports of Investigations 68, 2005, ed. David L. Whelchel ’75), archaeologist Kenneth Ames (’76 Ph.D.) warns against “Ozettopeia,” the notion that Ozette is Pacific Northwest archaeology. He then proceeds to explain what a profound effect the exploration of the village has had on our archaeological methods and understanding of coastal Northwest culture.

Wet-site archaeology was not invented at Ozette, but it was certainly refined there. Equally significant is Ozette’s contribution to Northwest ethnoarchaeology, the combining of ethnography—the study of a living culture—with archaeology, the systematic scientific recovery of past life and culture. Abandoned only in the 1920s, Ozette had been occupied continuously for at least 2,000 years. And for the Makah people, many of whom live in Neah Bay and had family who had lived in Ozette, the place was not just a memory. It was home. And thus Ozette presented an extraordinary opportunity, confirming much of Makah tradition and oral history. The Makahs could identify many of the artifacts recovered from the dig—because they themselves had used them or remembered their parents or grandparents using them.

Colin Grier recently joined WSU’s anthropology department in the Northwest archaeology position occupied by Robert Ackerman for 50 years. Grier’s dissertation, *The Social Economy of a Prehistoric Northwest Coast Plank House*, was “essentially based on what had been accomplished at Ozette,” he says. He, like Ames, is a prominent investigator in the relatively new field of “household archaeology.”

“I started out in the Gulf Islands [Canadian San Juans] digging houses.”

The digging of the Ozette houses led to a great many insights both about the Ozette people themselves and about other “complex hunter-gatherers” along the Northwest Coast.

One such insight regarded property ownership, says David Huelsbeck (’83 Ph.D.), who earned his doctorate at Ozette and is now a professor of archaeology at Pacific Lutheran University.

“We demonstrated archaeologically that people did own different beaches for shellfish,” says Huelsbeck.

Ozette had been thought of as a winter village, with Tatoosh Island, off Cape Flattery, as the Makahs’ summer home.

“The assumption was very neat,” says Huelsbeck. “Everyone picked up and moved to the next seasonal camp. That isn’t accurate. Some people moved, some didn’t.” Much as some of us go to the beach, and some don’t.

As demonstrated by the excavation, many inhabitants of Ozette had far too many belongings just to pick up and move for the summer. The excavated houses, for example, contained 13 looms. Those possessions were simply too valuable to leave for the taking.

There were things in the historic record, noted by 19-century ethnographer James Swan and others, that recent anthropologists doubted, but that Ozette confirmed. The importance of whaling, for example. Some thought that the role of whaling had been exaggerated.

“Quite prominent anthropologists in the Northwest thought that whale hunting couldn’t possibly have been the important economic activity native people said it was,” says Huelsbeck.

Well, he continues, “At Ozette, you can’t move a foot without tripping over a whale bone.”

Much also was learned about social patterning and behavior, with analogies that could extend up and down the West Coast, says Huelsbeck. For example, the high-status houses, swept by slaves, were cleaner than



“However, at the simplest most fundamental level, Ozette is important because it is many stories, many really good human stories.” —Kenneth Ames, Ozette Archaeological Project Research Reports, Volume III

others. Such an observation can be extended to any coastal people who lived in plank houses similar to the Makahs’.

It might well be inferred that, given advances in the understanding of Northwest coastal culture as well as improved carbon dating and DNA techniques, the time for going back to look at some more of that remaining 90 percent could be now. “Ozette should be dug,” says Croes, noting that beneath the initial excavation lies an 800-year-old house, buried, evidently, by an earlier slide.

But a new excavation is highly unlikely. Wet-site archaeology in the Northwest has diminished. In fact, Croes is one of the few people currently working wet sites. As few as a 100 people from around the world attend wet-site meetings, he says. “Most of my stuff is published in England and Scotland. I can’t explain it. I never thought 30 years later we’d be just sitting here.

“People say it’s too expensive,” he says. “It’s not. We do it here, at a community college.”

One reason for the lack of activity, says Croes, is that the technique is still not being taught. The learning tradition is still stone, bone, and shell, and the excavation of middens, the refuse dumps of ancient communities. Much can be learned from a community’s refuse. But middens lack the preservation and detail of wet-site households.

Another reason that more wet sites are not being explored could be that projects such as Ozette are simply too daunting. Coordinating and paying for a massive 11-year dig requires a leader with equal parts ego, salesmanship, political and diplomatic skill, and persistence—as minimum requirements.

Even if such a person were to step forward to resurrect wet-site archaeology, there’s another small matter.

“There’s no money here,” says Croes.

Funding for archaeology has actually risen consistently over the years, explains Bill Andrefsky, who has headed WSU’s Department of Anthropology for the past eight years. But most of that has been directed toward private contractors, primarily for “cultural resource management”—and consequently away from academic archaeology.

Just as excavation destroys a site, so of course does development. Whether it’s a housing development or a sewer project, if any sort of archaeological site is found, it must be assessed through Cultural Resource Management. CRM is the federally mandated survey and assessment of cultural resources, often archaeological sites, and particularly those threatened through development or other disruption. Most of it is done by private contractors.

ONE OF THOSE CONTRACTORS is Gary Wessen (’82 Ph.D.). Wessen has been working with the Makahs almost continuously since Ozette, and he wrote his dissertation on the use of shellfish by the Ozette residents. Over the past 30 years, he has worked with probably 25 coastal tribes.

“I do probably 30–40 small CRM jobs a year,” he says.

Wessen points to a corresponding, but not necessarily resulting, shift in regional archaeology that has lurked behind this story all along.

In the summer of 1974, a year after he came West, drawn by the promise of Ozette, there were four different field schools operated by WSU, all in Washington. The University of Washington had already shifted its archaeological focus elsewhere. Following high-profile digs such as Ozette and Hoko River, which was directed by Croes, large-scale Northwest archaeology, along with public and academic interest, has nearly disappeared.

What bothers Wessen most is that so much archaeology is going undone—and so much knowledge of our past is being lost.

“I understand that it’s cool go off somewhere far away,” he says. “But the reality is, the University of New Mexico does not send archaeologists to the Puget Sound Basin.”

Andrefsky acknowledges that shift in focus by both the UW and WSU away from the Northwest.

“I don’t think UW is interested in developing their strengths in that way. Their faculty are all over the map,” he says. “They don’t have a Northwest focus any more, and in some sense we don’t either. We need to tap into that.”

WSU has traditionally had a regional strength, he continues. But for various reasons we've lost the emphasis of the regional past. Again, the reasons are many, including not-so-subtle pressures within academe.

"One thing people are afraid of is becoming identified as a regional university," says Andrefsky. "A lot of faculty think we should not hire based on region. Most big schools don't do that, because they don't want to be labeled as regional institutions. Many feel we should hire based on theoretical perspective.

But Andrefsky hopes for more.

"We can hire someone with a theoretical perspective as well as a Northwest regional emphasis."

HOPES FOR REFOCUSSING

"The museum is already there," says Andrefsky, referring to WSU's Museum of Anthropology, directed by Mary Collins. "It has collections from the old days, which we can go back and analyze in new ways." The museum, which is primarily curatorial, contains many collections that have been only quickly analyzed, if at all, including hurriedly excavated artifacts from



the Marmes site, one of the oldest documented human occupations in North America. Andrefsky points also to the recently developed Plateau Center and WSU's longtime relationship with regional tribes.

"There are a lot of resources right at our fingertips," he says. And not just resources, but multiple questions. "We have hunter-gatherer archaeology here, we've got complex hunter-gatherer archaeology here, we've got major social change on the coast during aboriginal time periods, incredible stuff, ripe for theory, too, *fascinating stuff*."

Andrefsky's optimism is fueled by the many major questions that have recently been identified. Much remains to be explored, both on the coast and on the Plateau.

During the heyday of reservoir building, all the money was directed toward salvage work on the big rivers, primarily the Snake and Columbia. Now those sites are submerged—at least until the reservoirs silt in or the dams are breached. As a result, what archaeology is being done in the Plateau region has moved up out of the canyons into the uplands.

"As a result of lack of reservoir work, people are starting to look in the uplands, ... places they haven't looked in the past."

Andrefsky points to sites "right here in Pullman" that have long been ignored.

"[We] don't know how these sites fit into the larger occupation picture down on the river."

At one time, he says, there were huge occupations where the Deschutes and the John Day rivers come into the Columbia.

"Then for a 3,000-year period nobody was there."

Like the better-known Anasazi of the Southwest, these people simply disappeared.

It turns out those same kinds of villages that were abandoned are now located far upriver, in the upper stretches of the John Day.

While it's not clear that these are the same people, the village structures are the same.

Were they the same people? What happened? Was there flooding? Drought? Was it warmer inland? Or safer, perhaps?

Another excavation, on the Oregon Plateau, revealed human coprolites—petrified feces—over 12,000 years old. DNA analysis showed the people at that site were eating horse; it was previously thought that the native horse had been long extinct at the time.

Andrefsky points to yet other unresolved questions. It is now believed that there were migrations—perhaps many—into North America between 10,000 and 14,000 years ago.

"My feeling," says Andrefsky, "is that one of the places [where] they could have turned into the interior was right here at the Columbia River.



"That means the interior Northwest should hold promise of some of the earliest people in all of the New World, because the ice sheet reached as far south as Spokane."

Andrefsky talks about a graduate student who came here recently from the University of Wyoming. He was interested in arrow technology and brought with him some arrows he had found on the Great Plains. Andrefsky suggested that he begin documenting arrow technology across North America. It turns out the earliest sites were on the Plateau, including the Harder site near Washtucna.

"How did it come that arrow technology was earliest in the Plateau?" Andrefsky asks. "It obviously didn't start here. The technology is 10,000 years old in the Old World. In fact the dating takes these arrows back only 2,400 years, which is actually fairly recent, even in American archaeology."

But the first documented arrows in the Southwest are 1,500 years old.

"Isn't that neat?" Andrefsky says, from the edge of his seat. "The earliest is *right here*."

Meanwhile, in his Olympia laboratory, Dale Croes has set up a model of an acorn leaching system used by coastal tribes. A basket of acorns would be buried in a shallow aquifer. The constant wash of fresh water would leach the harsh tannins from the acorns, yielding a nutritious meal. Intriguingly, Japanese archaeologists have discovered identical systems used in northern Japan, one tantalizing reason the Japanese are interested in, and have invested heavily in, Northwest archaeology.

"The Indians around here take great notice," says Croes, "that they will put a billion dollars a year into doing archaeology, and it's not their ancestry."

"Why can't we be more like that here? We may not be Indian, but this is where we live. It's a lot of what we are."

Colin Grier will be excavating a 2,000-year-old house on Galiano Island in the Canadian Gulf Islands this summer. He is investigating a cultural shift that occurred over the past 5,000 years, a move toward multi-family dwellings and the development of social hierarchy.

"It's unique when a bunch of people want to live together," says Grier. "It suggests something unique about this large social, collaborative unit. And how does that fit in with the overall organization of Northwest Coast people?"

Public attention may well be directed toward the prehistory and early migrations into the Pacific Northwest now that the courts have cleared the way again for study of the 9,000-year-old Kennewick Man remains. In spite of the unresolved cultural issues in how those remains have been handled, any information as to who Kennewick Man was and whether or not he is an ancestor of contemporary tribes could give profound insight into the deep history of human occupation of the New World.

"Without getting too cosmic," says Gary Wessen, "I'm 58 years old and have been doing this stuff continuously since 1973."

"Archaeological resources come closer to being magical than anything else in my existence. Archaeological sites have a real time-transcendent quality. The first director of the [Makah] museum likes to say Ozette is his book. And books can talk to us."

"But I like to [say] archaeological sites are better than books. If we're smart, we can have a dialogue with the past." ☒

"Archaeologists are very, very good at minutiae. On the other hand, archaeologists are infamous for not seeing the forest for the trees. Traditional elders, while they don't have all the details, understand how the pieces go together, even if they don't have all the pieces." — Gary Wessen, archaeologist, interview

Opposite page, left to right: Gary Wessen ('82 Ph.D.); Dale Croes ('77 Ph.D.); Dave Huelsbeck ('83 Ph.D.); Bill Andrefsky, Chair, Anthropology. Photos courtesy respectively. Below: Young Makahs perform a traditional paddle dance at Makah Days in Neah Bay.



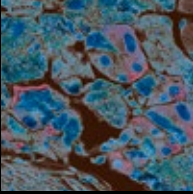
For more on Ozette art and on modern Northwest archaeology, visit wsm.wsu.edu.



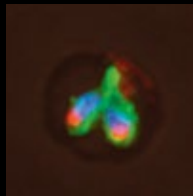
ILLUSTRATION BY NASSOS VAKALIS



MASTERS



Anaplasma marginale (above right) is a bacterial blood parasite that causes **anaplasmosis** (an-na-plaz-MOH-sis), a severe anemia. It is found almost everywhere—in Washington as far north as the Okanogan Valley. It's the most common vector-borne disease of livestock worldwide. *Babesia bovis* (below left) is a protozoan blood parasite causing **babesiosis** (buh-BEE-zee-OH-sis), a severe anemia that often settles in capillaries in the brain. Found in tropical and subtropical regions, it was common in Texas until the 1940s, when tick-control efforts and a cooling trend drove the ticks south of the border. Rising temperatures may allow the ticks, and *Babesia*, to return to the United States. Photomicrographs courtesy Guy Palmer and the WSU Franceschi Microscopy and Imaging Center.



o f DISGUISE { WSU researchers close in on an elusive pair of pathogens.

:: by Cherie Winner ::

GUY PALMER ('84 Ph.D.) and TERRY McELWAIN ('86 Ph.D.) are on the hunt. The Washington State University research veterinarians know their quarry—*Anaplasma* and *Babesia*, the pathogens that cause two of the world's most debilitating diseases of livestock—but they haven't found the right weapon to bring them down. What they need, what they have worked for years to find, are vaccines that will stop the pathogens dead in their tracks.

Vaccines are such a routine part of health care for us that they can seem like old news. Because of effective vaccines, those of us who live in developed countries don't have to worry about measles, polio, or smallpox, diseases that inflicted grave harm on our grandparents' generation. Other than "new" diseases like next year's strain of influenza, we're well protected. Yet, some of the most common infectious diseases of people and animals have been around just about forever—and we still don't have vaccines against them.

"The way I look at this is that we have vaccines for all the ones that are easy to vaccinate against," says McElwain. They're easy because of



« Terry McElwain heads the Washington Animal Disease Diagnostic Laboratory, which monitors diseases of livestock, pets, poultry, and fish throughout the Pacific Northwest.

their biology, he says. When you get the disease, it either kills you or your immune system fights it off and the pathogen is cleared from your system. Vaccination gives you a head start in the fight; it primes your immune system to recognize and get rid of the pathogen before harm is done.

The “hard” diseases operate differently. If you get infected with one of these pathogens, you will probably remain infected for life. Your immune system can’t get rid of it. In humans the list of such diseases includes malaria, sleeping sickness, and syphilis. In cattle, it includes anaplasmosis and babesiosis, the diseases Palmer and McElwain have targeted. Both are tick-borne blood infections that cause severe anemia, often leading to death, and both share an interesting MO.

“It’s an impressive disease to see,” says McElwain of babesiosis. “Animals go from being fairly normal-looking one day to just very, very sick the next.” Anaplasmosis is usually less dramatic, but it is more widespread, affecting more than two-thirds of the cattle in some regions. The economic costs of the diseases are enormous—billions of dollars a year in lost animals and lowered productivity—but the human costs are immeasurable. In sub-Saharan Africa, for instance, smallholder farmers depend on their small herds of cattle or goats for food, for cash income, for status, and as beasts of burden.

“The loss of one animal can have a profound effect on the family’s well-being,” says McElwain. “It may be the difference between one of the children going to school or not.”

Palmer says most persistent pathogens are transmitted by vectors (ticks, mosquitoes, tsetse flies) or by sexual contact. Since they can’t spread to new hosts by casual contact, the pathogens have to survive in one host until a transmission opportunity comes along. Unfortunately for us, the strategies they’ve evolved to avoid the host’s defenses also stymie our efforts to make a vaccine.

A vaccine works by showing the body’s immune system a pathogen or part of a pathogen (usually a protein, in this context called an *antigen*) so that it can develop cellular memory and antibodies that will recognize and attack the pathogen in the future.

Many vaccines use the entire pathogen, which has been killed or weakened so it won’t cause the full-blown disease. Such vaccines work against persistent pathogens, but they are often expensive to make and difficult to deploy. Live vaccines, for instance, need a “cold chain”: they must be kept cold or frozen until just before use, which is a tall order in poor countries in the tropics. A subunit vaccine, based on just one or a few proteins, is usually cheaper and harder. Theoretically, any protein that sparks an immune response and is a distinctive feature of the pathogen could be the basis for a good vaccine. The problem is that no one’s been able to make a subunit vaccine against *Anaplasma*, *Babesia*, or any of the other persistent pathogens.



The M.O.

With both *Anaplasma* and *Babesia*, infection starts with a bite from a tick that carries the pathogen. Within a couple of weeks, the bitten cow becomes severely anemic. The pathogens invade red blood cells, multiply inside them, then break apart the cells and travel through the bloodstream to find new red blood cells to invade. Infected cows may lose more than half their red blood cells. Mortality can run as high as 70 percent.

Animals that survive the initial phase of illness recover and are “just healthy as hounds,” says Guy Palmer. But they are not free of the pathogen. Long after a cow recovers from acute anaplasmosis, for instance, every milliliter of its blood—less than a quarter teaspoonful—still carries a million *Anaplasma* organisms. The number of pathogens peaks every four to six weeks, then drops to very low numbers, then rises again. That ebb and flow continues for the life of the cow. She remains healthy, but she becomes a reservoir from which ticks can pick up the pathogen and transmit it to other victims.

“Our challenge is to figure out why that is,” says McElwain. “Biologically and immunologically, why is that the case? If we could get a handle on that, I think we’d really have a significant advance.”

IN THE MID-1980s, a flurry of new techniques for working with proteins and DNA led to identification of a key malaria antigen. Palmer and McElwain, just beginning their careers on the WSU faculty, immediately applied the new techniques to their organisms.

When Palmer used the new tools to search for *Anaplasma* antigens, he found Msp2 (major surface protein 2). Msp2 is the most abundant protein on the surface of the pathogen. Both ends of Msp2 are embedded in the *Anaplasma* cell membrane, and the middle portion loops out into the extracellular space. Since the loop is exposed to the bloodstream, whenever *Anaplasma* goes looking for new red blood cells to infect, it is the part of the protein the host’s antibodies have a chance to recognize and grab onto.

In other words, Msp2 looked like a perfect candidate as a vaccine antigen.

Then why doesn’t the host’s immune system target Msp2 and knock out the infection? That part still didn’t make sense. Palmer’s lab found that infected cows do make antibody against Msp2, a lot of it; that’s likely what drives down the number of pathogen cells and allows the cow to recover from acute illness. But why do pathogen numbers rise again a couple of weeks later? Why doesn’t the cow clear the infection completely?

After months of protein and gene analysis, Palmer’s team reached a stunning conclusion. The pathogen persists because the host no longer

Tendai Ushe, who earned her master's degree with Terry McElwain, and Devere Munodzana, who earned his master's with Guy Palmer, participated in WSU's collaborative research efforts in Zimbabwe in the early 1990s. *Photo courtesy WSU College of Veterinary Medicine.*

recognizes it—because Msp2 changes. It's still present, but it doesn't look like the Msp2 that was there before. Palmer's group found that at any given stage of the infection, several forms of Msp2 are present—and none of them are recognized by antibodies the host made in earlier stages. By altering the most abundant protein in its surface coat, *Anaplasma* avoids detection by antibodies the host has already made.

"That's why the immune system can never catch up with what's going on," says molecular biologist Kelly Brayton. She describes Msp2 as throwing up a smokescreen that allows *Anaplasma* cells to escape direct attack by the immune system. "Part of the job of this molecule is to be this thing that's going, 'Hey! Look at me!' Because *it* can change. So it's trying to attract the attention of the immune system, and then as soon as the host makes a response to that particular variant, it's moved on."

So how did *Anaplasma* do it?

Palmer calculated that a cow infected early in life might see more than 1,000 variants of Msp2 over its lifetime. The *Anaplasma* genome codes for fewer than 1,000 proteins. There's no way it could have 1,000 genes for Msp2 alone. The pathogen had to be doing something unusual with its genes to generate that many variants.

Brayton sequenced the entire *Anaplasma* genome and looked for something that would explain the diversity of Msp2 forms. What she found is a process called "gene conversion," a masterwork of deception in which a handful of "pseudogenes" mix and mingle to continually change the identity of Msp2—and of *Anaplasma* itself. (See illustration, page 38.)

It was a major finding. Gene conversion explained how *Anaplasma* escapes detection by the immune system. It also led to the discovery, by researchers elsewhere, that a similar process occurs in the pathogen that causes relapsing fever in humans.

And yet, figuring out how gene conversion works was a bit like finally bursting into the room of a con man you've been hunting for years, to find only a trunk full of wigs and false noses. The team still wasn't in sight of a vaccine. And the culprit himself had fled again.

SO ANAPLASMA DISGUISES ITSELF. Can we help the immune system see past the Msp2 mask? Is there some other surface protein—one that doesn't change every few weeks—that could be used as a vaccine? Msp2 garners most of the attention from the immune system, but there are dozens more, present in small amounts and not well understood. Most intriguing of all, vaccinating with Msp2 alone does not protect against *Anaplasma* infection—but vaccinating with a mixture of outer membrane proteins does.

"So there's *something* in the outer membrane that's important," says immunologist Wendy Brown. Unfortunately, she says, a vaccine made of membrane preparations is "impractical. You'd have to pay \$500





◀ Guy Palmer was recently elected to the Institute of Medicine of the National Academies.

a shot, probably.” She set out to discover which proteins in the outer membrane mixture confer protection. Perhaps *they* could be the basis for an economical vaccine.

Analyzing membrane proteins is not a new idea, but until recently the experiments weren’t feasible. Getting enough of any one protein to use as a test vaccine was difficult, and testing any vaccine in cattle takes months. Testing multiple combinations of proteins was simply unmanageable.

Brown invented a way to test proteins on cow cells rather than in a whole cow. She first immunizes a cow with the mixture of membrane proteins. After the cow’s immune system has had a chance to respond, she takes a blood sample, and from that she extracts T cells. Those are the immune system’s “memory cells”; if the vaccinated cow were to be bitten by an *Anaplasma*-carrying tick, its T cells would recognize antigen(s) on the *Anaplasma* surface and would trigger antibody production by other immune system cells. Brown presents the T cells with individual *Anaplasma* proteins in a way that mimics what happens in the body. If the T cells recognize a protein, they start dividing and making interferon—which tells her the cow’s immune system had responded to that particular protein. It’s a nifty way to rapidly screen a large number of proteins for their potential as vaccines.

With help from WSU chemist Bill Siems, Brown identified more than 20 proteins from *Anaplasma*’s outer membrane that had never been described before and that were recognized by T cells from vaccinated cows. Now the group is testing whether any of the proteins make an effective vaccine. They’ve found that a combination of some of the proteins does protect against infection by *Anaplasma*. Will the mixture lead to a commercially viable vaccine? Brown and her colleagues don’t know yet; but after years of chasing the shape-shifting Msp2, it’s an encouraging result.

LIKE ANAPLASMA, BABESIA IS STUDDERED WITH PROTEINS, at least two of which change over time. Because *Babesia*’s genome is larger and more complex than *Anaplasma*’s, the team hasn’t yet figured out how the proteins change. The one thing that’s clear is that *Babesia* doesn’t use the same process of gene conversion as *Anaplasma*.

In addition to working on variable proteins, Brayton and McElwain have teamed with The Institute for Genomic Research to take a closer look at *Babesia*’s genome. They’ve discovered a group of DNA sequences they call “SmORFs,” for “small open reading frames.” (“We took some heat on that name from reviewers, but we stuck to it,” says McElwain. “We’ve got to have some fun with this.”) Since all 44 SmORFs lie next to genes for a variable surface protein, McElwain suspects they’re involved with immune escape, but work on them is still preliminary.

Although its variable proteins remain puzzling, *Babesia* might be outmaneuvered another way. In the 1960s, scientists in Australia discovered

Out of Africa

Terry McElwain, Guy Palmer, Wendy Brown, and Kelly Brayton all found their research calling when they worked in Africa early in their careers.

“You don’t know how fascinating these infectious diseases are until you see the diversity in Africa,” says Palmer. Working in Africa also brought home to him and his colleagues how devastating the diseases are in human terms. In sub-Saharan Africa, most smallholder farmers live on less than two dollars a day. When a family’s few cows are its major source of food and only source of income, illness in a single cow can have profound effects.

“We tend to think of animal health as distant from our own well-being,” says Palmer. “In Africa, that’s not the case.”

McElwain and Palmer first went to Africa in the early 1980s as doctoral students in WSU’s Department of Veterinary Microbiology and Pathology. Their adviser, Travis McGuire (’68 Ph.D.), had previously taken a leave of absence from his faculty post to help department chair Jim Henson (’64 Ph.D.) establish a research program in Nairobi, Kenya. Henson had been recruited by the Rockefeller Foundation and other sponsors to head the brand-new International Laboratory for Research on Animal Diseases.

“It was a career-changing experience,” says Henson, who retired from WSU in 1999. In Africa he developed an intense interest in health and science in the developing world and an ability to forge collaborations. Soon after he returned to Pullman in late 1978, he started WSU’s International Program Development Office. The IPDO’s primary mission was to aid educational and research institutions overseas, but it benefited WSU as well.

“We were interested in what became known as the internationalization of WSU—how to get students and faculty here to have an appreciation of the world and their role in it,” says Henson.

One of the IPDO’s early projects brought Kenyan students to Pullman for coursework and research planning. Once their studies here were completed, the students returned to Kenya to do their field experiments. To supervise the students there, McGuire recruited a scientist he’d met while at ILRAD. Fred Rurangirwa already had a lot of international experience. A native of Uganda, he’d earned a veterinary degree in Kenya, a master’s at Colorado State, and a Ph.D. at the University of Guelph in Ontario. His work on contagious caprine pleuropneumonia, an infectious disease of goats, had caught the attention of Henson and McGuire.

Meanwhile, McGuire, Palmer, and McElwain came back to Pullman to continue their research. The lab started attracting federal and foundation research money, and its reputation as a hub of infectious disease research grew. In the mid-1980s the WSU team got a huge boost when the U.S. Department of Agriculture moved its Hemoparasite Disease Laboratory



COURTESY WSU COLLEGE OF VETERINARY MEDICINE

from Maryland to Pullman. Now called the Animal Disease Research Unit and led by Donald Knowles ('88 Ph.D.), the lab has worked closely with WSU scientists. McElwain, Knowles, and USDA colleague Will Goff developed the diagnostic tests for *Babesia* and *Anaplasma* that are used worldwide to ensure that cattle and horses are free of those pathogens before being moved across international borders.

The team kept its connection with Africa alive through the students who came here and through visits there. McGuire returned to Africa every year for 16 years to work with students and gather data. Wendy Brown and Kelly Brayton came on board in the 1990s, after working at other research institutes in Africa, and in 1995 Rurangirwa joined the Pullman faculty. His two eldest children also became Cougars, majoring in engineering and microbiology.

Last fall Rurangirwa visited Kenya and Ethiopia to consult on the production of a vaccine he developed to protect goats against contagious caprine pleuropneumonia. Scientists in Africa have a hard time sustaining a research program, he says; funding is minimal, and expectations are often unreasonably high. "People are always saying, where is the vaccine? Well, how do you produce a vaccine in two years? It's not easy."

He and Palmer dispute the common perception that students from less-developed countries don't want to go home after getting their degrees in the U.S. "Actually, they do want to return," says Palmer. "They just want to do something when they're there. It's not about salary or anything else; it's about, they want to do science."

Palmer says WSU's new School for Global Animal Health, which is being launched this year with a \$25 million grant from the Gates Foundation, will provide scientists in developing countries with equipment, supplies, technical know-how, and the opportunity to team up with Cougar researchers.

"Having that collaborative infrastructure is very important to meet our broader goal, which is to develop science-literate and science-capable countries throughout the world," says Palmer.

The group's current emphasis on Latin America rather than Africa came about for practical reasons, says Palmer. Field trials of vaccines against *Anaplasma* and *Babesia* give clearer results in Latin America, because those are the only two such diseases livestock encounter there. Livestock in Africa also face sleeping sickness, heartwater, and East Coast fever, whose symptoms could mask the effect of a vaccine against one of the others.

"I'm hoping it's a temporary hiatus from Africa," says Palmer. While their work in Latin America fills definite needs, when asked whether he'd like to go back to Africa some day, Palmer doesn't hesitate.

"That's where the problems are."

According to Guy Palmer, Wendy Brown knows >> as much about the immune system of cows as anyone in the world.



ROBERT HUBNER

that if they infected a calf with *Babesia*, let the infection develop for about a week, drew some blood from that calf and used it to infect another calf, and did that 25 to 30 times, the pathogen would lose its ability to cause disease. It still provoked an immune response when inoculated into a new host, but the host no longer got sick; instead, it gained protection. In other words, the so-called attenuated strain worked as a vaccine.

It worked so well that attenuated strains have been used in Australia and Israel—both fertile grounds for *Babesia*—for many years. Attenuated *Babesia* vaccines have been banned in many other countries, including the United States, because they are blood-based and might carry other pathogens. For countries like the U.S. where *Babesia* is not a big threat, they're not worth the risk. Even in countries where *Babesia* is a threat, their value is limited because they require a cold chain. They're also not a permanent solution; every few years, they change so they no longer protect the host. When that happens, the whole attenuation process has to be repeated.

In 2005, the WSU team won a \$1.8 million grant from the Wellcome Trust to figure out why attenuated *Babesia* protects against further infection, yet does not cause disease itself. Can we *design* strains of *Babesia* that will mimic the attenuation effect, and that can be used as vaccines? Such a vaccine would avoid the threat of blood-borne pathogens and the tedious and expensive attenuation process.

Colleagues in Argentina have already produced an attenuated strain the old-fashioned way. While they test it on herds there, Brayton and molecular biologist Audrey Lau in Pullman are comparing the genome of the attenuated strain with that of the original strain. Since they know the sequence of the original, they can trace any changes that occurred during the attenuation process. With luck, they'll identify what change(s) turned a killer into a life-preserving vaccine.

"The clearest-cut scenario is that a gene's missing," says Brayton. "You're usually not that lucky. But [if that happens], you could [ask], what is that gene in the virulent strain? What do we know about it?" Even if nothing is missing, they might find that one or more genes have changed. If Lau and Brayton find clear differences between the strains, the next step will be to create a copy of the attenuated pathogen in the lab and test its effectiveness as a vaccine.

The field tests will be done by the group's collaborators in Mexico and Argentina, working with herds under natural conditions. Palmer says translating lab results into real-world applications is central to what the WSU group is trying to do—and essential to developing a vaccine that will work against the form of the pathogen that cattle actually encounter.

"People don't like to do it, because nature's messy, you know, and the lab is not," he says. "For a long time there's been a tendency to rely

◀ Kelly Brayton is a whiz at sequencing genomes and spotting the clues they hold.

on strains [of pathogens] that are well established in the laboratory. But when you get out into the field, you find that isn't necessarily representative of what's out there in the natural situation."

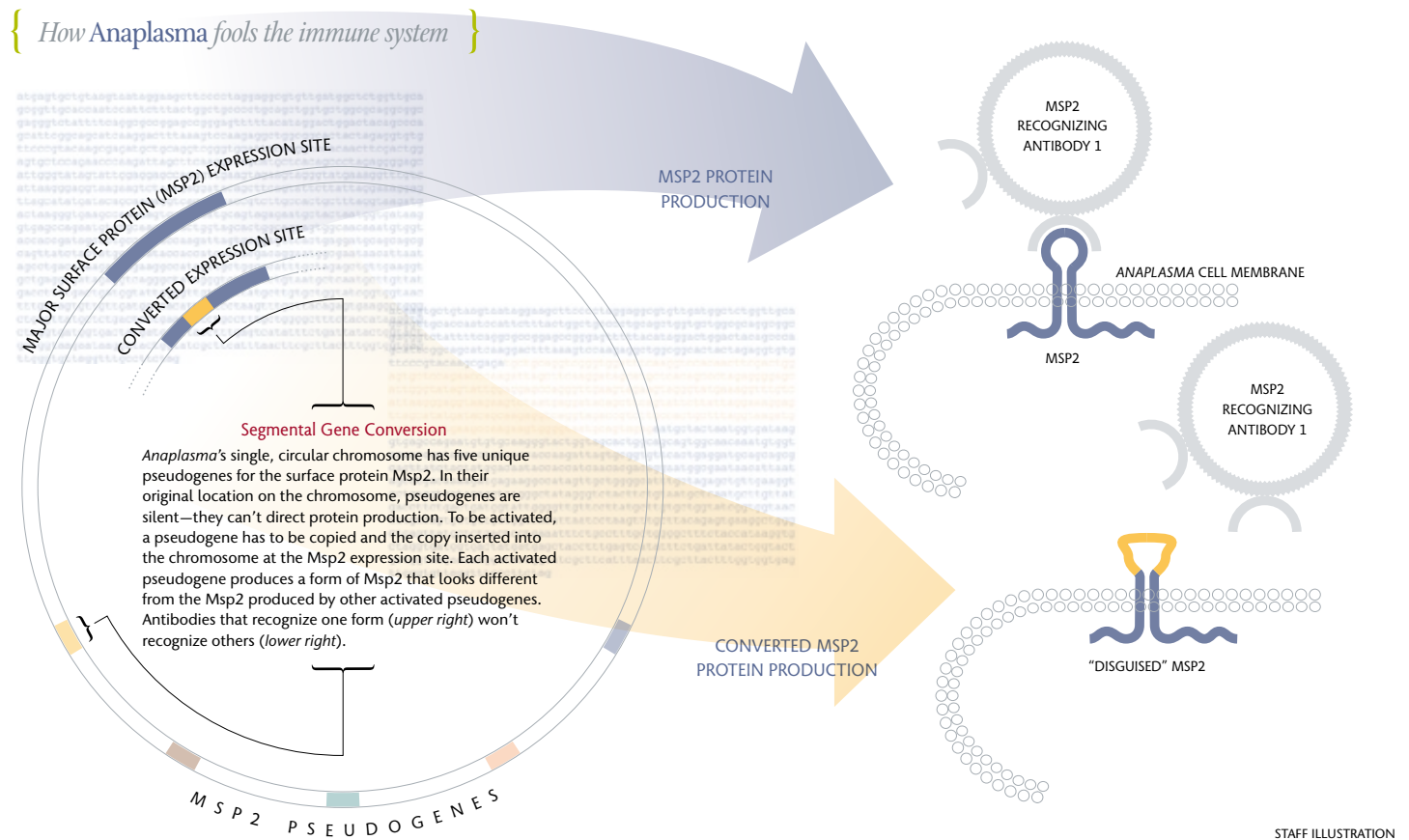
No one in the group is predicting when they'll have a vaccine for either disease. *Anaplasma* and *Babesia* have confounded expectations before. But the team members share a sense of excitement about their progress—and an admiration for their elusive adversaries. The most rewarding aspect of their work so far, says McElwain, has been gaining an understanding

of the complex, elegant strategies that enable these pathogens to persist in their supposedly more sophisticated hosts.

"That's been something that we started out, 25 years ago, not appreciating," he says. "And that is not only something that you can appreciate, if you can find beauty in these organisms. It's also the challenge, the huge challenge that we have." ☒



For more faculty research on pathogens, visit *Washington State Magazine Online*, wsm.wsu.edu.



Msp2 changes form when a silent pseudogene is copied and the copy is plugged into the expression site, displacing the pseudogene copy that had been there. Once it is installed in the expression site, a pseudogene is able to create its version of Msp2, whose middle loop differs from the loop in the previous Msp2. Antibodies that recognized the original Msp2 can't recognize the new form, so *Anaplasma* cells that are making the new form thrive. It takes the immune system a few weeks to make antibodies against the new Msp2. By that time, another gene conversion event has occurred and a third form of Msp2 is on the scene.

If gene conversion involved only whole pseudogenes, *Anaplasma* would be able to make just five versions of Msp2—not enough to escape attack by the host's immune system for years. The incredible variety of Msp2 comes about because the pseudogenes can mingle. Guy Palmer and Kelly Brayton found that slivers of up to four pseudogenes can be combined at the expression site. Each combination creates a form of Msp2 that's different from previous forms—different enough so that antibodies that recognized earlier forms won't recognize the new one. Palmer estimates that the system enables *Anaplasma* to make at least 1,024 different versions of Msp2.

{ How to Survive the Coming Depression }



Identity

I DON'T KNOW ABOUT YOU, but I've been waiting for this all my life. Growing up with parents born in the crash year of '29, and with grandparents marked and ennobled by sacrifice and ingenuity in living well with nothing, I've amounted to nothing but a Baby Boomer: first coddled and spoiled, and soon to bring down, single-handedly, the world's climate stability and Social Security.

But now I have a chance to redeem myself. Pretty soon I'm gonna experience some real honest-to-goodness privation, my own little corner of a general decline in living standards in the U.S. of A.

I'm psyched. A Depression of my own!

I'm not talking about those piddly little personal glooms that have made Pfizer and Lilly a few quadrillion dollars in the last 20 years. No, sir. I'm talking about the kind of depression that swallows quadrillions of dollars like they were swallows, in a black hole of economic collapse from which no light and no equity (if you got any) emerge.

We won't need Prozac and Zoloft, because, friends, with something actually, really, objectively bad on the horizon, we're immunized against such boomer whining. There's no depression in the Depression! As the

{ How to Survive the Coming Depression }

uncanny sage Walker Percy (born 1920, a teenager in the Depression) put it, “People feel good when bad things happen.”

Amen, brother Percy. I’m already feeling friskier myself just thinking about the catastrophes, the breadlines, the rusting Jags in front of the mansions from LA to the Florida intercoastal.

The nation needs 70 billion dollars in foreign investment every month just to service our debts. The Chinese provide much of this, and though they don’t want to let us down, the dollar’s looking a little low-rent. They’re thinking, we’d like to diversify into something more solid, like the Euro, or maybe the *zloty*.

The sub-prime meltdown is affecting markets worldwide. Investments tied to billions in adjustable-rate mortgages due to reset this year—these are as stable as a unicycle on the beach. An epidemic of foreclosures follows for people who were persuaded to buy too much house with too little means.

If you’re in debt, you’re in real trouble. If you have money in the bank, you’re in real trouble. Soon your thousand will be worth five hundred. Extrapolate to determine your personal doom.

And with oil production peaking around the world, an increasing demand will coincide with a falling supply. This means, quite simply, no more mangoes in January. Or July, for that matter. Yes, the Edvard Munch mask on your face is extremely life-like, and understandable. But you’ll have to get over it, and plumb the charms of root vegetables. Shortages, disruptions in the economy, desperate grasping for what’s left. Resource wars replacing football as the number one American spectator sport. Oh, the late-harvest *schadenfreude* will be flowing! Except it’s not someone else’s troubles we’re toasting. Drink, for tomorrow we...?

With such signs of a major crisis glowing in neon, I’m purring. Spoiled no more, spoiled no more, great-grandpa in heaven I’m spoiled no more. Sacrifices and suffering are on the way. Here’s how to deal, and emerge with a bona-fide bad-times street cred.

If you have a house, rent out rooms. If you have a trailer, rent out a corner. That’s what they did in Depression I, right? People are going to need affordable housing, and you’re going to need the cash to make the mortgage. You can live in the basement.

Turn every square inch of your yard into a garden, your 50-by-130-foot lot into a .15 acre farm. Tear out the azaleas and plant spuds. Out with the lovely and parasitic roses. In with the broccoli and the cukes. Climate change now welcomes peach trees to once forbidding zones. Can bananas be far behind? Take a canning class. Keep rabbits. Get a goat.

And, people, I can’t stress this enough: compost, compost, compost.

Bake bread with natural yeasts culled from thin air. Forage for edible grasses. Once you cursed dandelions and tried to kill them. Soon you’ll worship their Vitamin A and potassium (while you wait on the bananas’ march north).

Sell the car and ride your bike to work. Forty-mile commute? Start early. You won’t have the job for long anyway.

Stock up on nonperishable food items. Shop for sales. Remember, Depression prices aren’t necessarily bargains when you have no money. My local grocery store is discontinuing a certain brand of canned sardines. They’re going for 47 cents apiece. I’ve squirreled away 92 cans so far. At these prices I suspect I’m buying a compact mercury delivery system, but they’re a great source of protein and calcium, and they’re just yummy on saltines with a beer. Yes, beer. I’ll accept most privations, but at this point I still plan on smiling once in awhile.

Oh, these are dire, desperate, utterly inspiring days ahead. Our deliverance, clearly, from lifelong condemnation by harder folk as over-fed, unappreciative, materialistic, utterly self-centered, narcissistic, and vain. We’ll show the Greatest Generation just how ... not so execrable we really are. The housing market is sapped and sloughing. Consumer spending is 70 percent of GDP. Low-interest rates gave us cash in our pockets, when our buying power really hasn’t been the same since 1973. We used the cash to buy plasma TVs and trips to Provence, and we kept the economy from collapsing years ago... The last, cleverly lighted scrim is being peeled away to reveal... Whoa, wait a minute. That means—is it possible—that actually, things haven’t been as rosy as we thought? Are roasted quail really not going to continue flying into our mouths? Have we been dazzled by mirrors? Are these silly questions? No wonder we’re mired, on average, in \$10,000 of credit-card debt. The hardy folk bought houses for \$10,000 and sold them for 50 times that. That’s history. They retired on pensions, in Phoenix condos and RVs.

We’re keeping our fingers crossed for reverse mortgages and a Social Security benefit we may trample out of existence with our sheer size.

Forget what I said. The Depression of ’08 isn’t a cleansing penance. It’s just a surprise, but logically crafted, denouement to an intricate bit of theater begun in the ’50s with tail fins and Levittowns, and duck and cover, and ending now, soon, with dandelion greens and canned sardines. Move over, Tony Kushner. Two nights in the theater? We’ve been glued to our seats for 50 years. Will the last one to leave turn out the lights?

Seriously, turn out the lights. You think this is 1962? And then replace them with compact fluorescents. Waste not, want not, save that string, clean your plate, and compost, compost, compost. And, can I get a beer, please? ☒

Full disclosure: the author’s tone suggests facetiousness. This is to avoid the appearance of being out of his mind. He’s actually doing and/or done nearly everything described above. Still buys his yeast in bulk and has no lawn left to cultivate dandelions. But the tomatoes and the beets were irrepressible last summer. The bike has 50,000 miles on it. And Walt, upstairs, is quiet, cleans up the kitchen, and pays on time.



A g e o f I d e n t i t y

by Hannelore Sudermann

SHE JOURNEYED ACROSS AN OCEAN and traveled back two centuries to find some of history's most infamous women imposters. She came home with their stories and a new understanding of how culture and identity—both today and through the ages—are intertwined.

Debbie Lee was driving through the Devonshire countryside one muggy July day on the 200-year-old trail of a mysterious Englishwoman. She was tracking the wanton daughter of a local cobbler, a woman who had donned the identity of an exotic princess and conned her way into the company of the aristocracy.

Lee's adventure had begun a few months before, when she found an intriguing footnote about an identity theft in a book by Samuel Taylor Coleridge. A salesman had fooled Coleridge and an entire community into believing he was an English gentleman. Intrigued by the story, Lee, an associate professor of English at Washington State University, turned her find into a paper, which she presented at a conference in Canada. When an editor approached her and asked if she was working on a book, she said, "Sure. Yeah, it's going to be a book." Lee admits now that she had simply acted on opportunity.

Those few words led to a grant proposal, a book deal to write *Romantic Liars*, and a large cash advance—enough to bankroll a lengthy stay in England for Lee to hunt out her stories. What Lee didn't realize at the time was that she, a teacher, scholar, wife, and mother, would be taking on the new roles of hunter, sleuth, and historian; and that, following in the footsteps of her subjects—among them a Javanese princess, a sailor, and a witch—living where they lived, eating where they ate, she would slip out of her own identity and into theirs to better understand them. Nor did she realize the toll that moving between countries, living among strangers, and pursuing what were often the unhappy pasts of her subjects would take.

That July day in Devonshire, the village of Witheridge looked to her like something out of a fairytale, with its quaint stone buildings and thatched roofs. But what was more on her mind, as she drove into the village, was how she could win over the locals. She stopped at a pub in the hope that someone there could offer some details about Mary Baker, a woman born into the community in 1791. What she did know was that Mary was pretty, dark-haired, and petite, with a cunning ability to tell tales.

The folks at the Angel pub knew all about Mary, telling Lee that she was somewhat of a local celebrity. They urged her to seek out the town historians who lived close by.

Moments later, she was sharing tea with the historians, an older couple, and listening as they imparted details about the town, noting that the members of Mary's family had been craftsmen, and that Mary as a child had been boyish and willful. Yes, Lee thought, she already liked this woman.

The historians showed her to their garage, a room stuffed floor-to-ceiling with boxes of diaries, papers, deeds, marriage certificates, and firsthand histories of the community. A village had existed in the area of Witheridge from prehistoric times, and for thousands of years the landscape had been dotted with farmhouses of mud walls and thatched roofs. It was not a wealthy place. In Mary's day, the village had had a bakery, which is still standing, a few pubs and inns, a stone church, and a large market square. For a girl with aspirations, life there must have been frustrating.

Digging into the piles of boxes, the historians handed Lee her first great find, an aged, hand-written document detailing Mary's family history and her early years in the village before she became the famous Caraboo, a princess from "Javasu" who had escaped from pirate captors.

ON THE HUNT

Lee spent six months in Britain hunting for Romantic-era imposters and hoaxes. She explored her subjects' villages, spent nights in or near their childhood homes, sought out their churches and graves, and wandered the neighborhoods where they lived out their lives.

The investigation, though exciting, wasn't easy. Lee was used to doing her scholarly work through books. But to best understand these subjects, she needed to walk in their footsteps, hold their letters, sit in their pews. She was amazed at what these women of limited means were able to accomplish simply by altering their identities.

Working out of a small apartment in London, Lee would line up visits and interviews, schedule appointments at museums and libraries, dig up maps, and find places to stay. Then she'd hit the road for a week or two at a time. It was lonely work, she says, and, where Mary Baker was concerned, sometimes frustrating, since Lee often couldn't tell if she had uncovered the truth, or just stumbled into another of the woman's fabrications.

Though it was Coleridge's salesman masquerading as a lord who gave Lee the impetus for the project, Lee found herself much more drawn to the stories of women, in part because she had more in common with them, having come from a working class family herself and sought ways to improve her own lot in life. She was also intrigued by what their assumed identities said about their times—how they reflected

cultural and religious issues of the day, and attitudes toward gender, education, and wealth. “No one really had looked at these women as a group—completely reforming their identities,” says Lee.

And who were these women?

There was textile worker Mary Bateman, the “Yorkshire witch” who practiced folk medicine on lonely women, preying on their fears, extorting money from them with the promise of preventing impending disaster. In addition to killing her victims with poison, Bateman

ability to survive without food. The trick, it is said, is that her daughter would pass food to her when they kissed.

Yet another was John Taylor, or rather Mary Anne Talbot, who spent a good part of her life as a man, sailing with the British navy first as a footboy and later as a sailor. She lived in the guise of a man into adulthood, until a press gang tried to force her to join the crew of a war ship. Her only way out was to reveal that she was a woman.

But of all the hoaxes and imposters, Lee was most enthralled with Mary Baker, the working-class girl who found a way out of small-town life through lies and invention.

“I tell my students this: go for what interests you most, even if you don’t know why you’re interested. It’s an intuitive way of investigating, but that’s what’s going to probably deliver up the most interesting and important work,” says Lee.

A TIME OF CHANGE

Following one’s feelings and instincts, as Lee did, is certainly a characteristic of the Romantic period—roughly the late 18th through the mid-19th centuries. It was an era of change and exploration—and of reaction against the previous generations’ classical ideals of reason and logic. The industrial revolution had eclipsed agriculture, and many people were trading their rural lives for cosmopolitan ones. It was the peak of the British Empire, when the country had more colonies in more countries around the world than it would ever have again. There was a fascination with the exotic, but a limited understanding of it. And within this culture of change, the idea of the self emerged, celebrating individual creativity and imagination.

Lee loves the period and has made a career of studying it. “There were these fascinating characters leading insane lives,” she says. The poet Percy Bysshe Shelley, for example, left his pregnant wife and their child to run away with Mary Wollstonecraft Godwin (who became Mary Shelley, the author of *Frankenstein*). They traveled across Europe, sometimes with very little money, befriended other great artists, and contributed greatly to English thought and literature. In the end, Shelley drowned in a lake in Italy under mysterious circumstances. “It’s a wild time,” says Lee. “I first got interested in this group of writers when I was 22. I’m still not tired of talking about them and teaching them.

“Wordsworth once said, ‘Bliss was it in that dawn to be alive,’” says Lee. “They knew that living at that time was something special.”

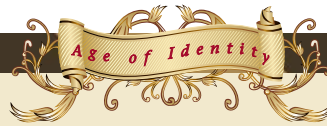
For women, especially, it was a complex period. While they caught glimpses of the wide world, they were discouraged from being independent, sometimes punished for being imaginative, and often forced to stay within the confines of the social class into which they were born. Men had the option of leaving home, sailing the seas



invented two alter egos, clairvoyants named Miss Blythe and Mrs. Moore, who would write letters on her behalf.

There was the prophetess Joanna Southcott, unmarried, middle-aged, who attracted thousands of followers from around England. At one point Southcott convinced her flock that she was going to give birth to the second messiah.

Another was Ann Moore, a protégé of Southcott’s, who deceived thousands of visitors and donors into believing in the miracle of her



or exploring new countries as members of the military, or simply bettering their lives by finding different vocations than their fathers. But women who came into hard times could only become servants, beggars, or prostitutes, says Lee.

Some of Lee's subjects frequented Bath at the same time as Jane Austen. But unlike Austen's heroines, the women in Lee's stories had few prospects. Born into poverty and lacking education, it was only through invention, opportunity, and daring—abetted by the public fascination with the new, the mystical, and the exotic—that they could find ways to move out of their class.

THE AGE OF IDENTITY

On the first day of class this spring, Lee talked to her students about her imposter project, detailing these famous British hoaxes. Afterward she was mobbed at the podium. She wasn't surprised by her students' fascination. "It taps into a sense that we all have, especially as we're developing, that there is some leeway to play with the self and who we are when we go to a new place."

Lee had come home to a generation of American students swamped with notions and issues of identity. This group, she noticed, is fascinated with self, as well as with being recognized by others.

So many of her students are into social networking and have blogs, MySpace pages, or a place on Facebook. They are members of the "Look at Me" generation, according to *Generation Next*, a recent report on 18- to 25-year-olds from the Pew Research Center for People and the Press. According to the Pew findings, more than half of this age group uses sites like MySpace and Facebook, and of that group 82 percent have created personal profiles or online identities.

About half of them have altered their appearance, either with a tattoo, by dying their hair, and/or by piercing a part of their body other than their earlobes. And fame and fortune are their generation's top goals, they say.

A fixation on identity, appearance, the desire to be rich and famous—these are all things 18- to 25-year-olds have in common with Mary Baker, says Lee.

In fact, our own time has much in common with Baker's Romantic era. Two hundred years ago, England had a global perspective and was creating colonies and trade relations throughout the world through entities like the Honorable East India Company. The United States today is focused on global trade and international relations.

The rise of Romanticism coincided with a shift from an agrarian society to an industrial one. Now the United States is in the middle of another major shift, from an industrial society to a post-industrial one, in which our manufacturing-based economy is transforming to one based on information and service. Harvard sociologist Daniel

Bell predicted the change in 1973 in his book, *The Coming of Post Industrial Society*.

And both societies are fascinated with the notions of individual identity and celebrity. In our case, one need only watch the nightly news for half an hour.

Facebook sites with links to WSU students reinforce the Pew findings that this generation wants to be seen. There are hundreds



of carefully crafted online versions of students, complete with photos and personal details like favorite books, music, even current moods. One woman posts her wedding photos on both her Facebook and MySpace pages. Another, a freshman, leads off with a photo displaying her pierced eyebrow. A third student posts his modeling portfolio and lists his interests as including "working out" and "inspiring others."

These are idealized versions of oneself, says Regina McMenemy, a WSU doctoral student in American studies. Her research focus is girls, the Internet, online gaming, and identity. The creators pick the characteristics and images they think will be most appealing to their viewers. What they choose to say can be both revealing about themselves and about what they believe is important to the community around them.

Beyond social network profiles, identity-shaping takes place in the characters young adults create through video games. McMenemy has been studying people who play *World of Warcraft*, a popular online multi-player game. Each participant can create an avatar, choosing a race—such as human, orc, or elf—gender, physical appearance, and social role. “You have so many choices in creating avatars,” says McMenemy, “it can reflect how you want to be seen.” Some of the teens in her study spend more hours gaming online than they do with people in real life. McMenemy wonders if they are struggling with “which self is the true self.”

This focus on crafting identity is something Lee finds fascinating, though not new. But this generation has what the Romantics did not, an opportunity to immediately create, alter, and—through Web cams, cell phones, and computers—share their identity in a very public way. It’s not the identity-shaping that leaves Lee wondering, it’s the act of doing it where the whole world can see. “These are strange times,” she says.

CHASING THE PAST

After she left the historians’ home in Witheridge, Lee went straightaway to visit a distant relative of Mary Baker’s, a man who was living in the house where Mary was born. He pointed her to the spot where Mary, boldly improper, often swam in the ditch with the local boys.

He had a rare copy of an old book about Caraboo/Mary Baker. While Lee looked through it, the older man filled out the story with details that he had learned at the knees of his parents and grandparents. Lee was able to piece together a picture of an attractive girl who liked to compete, wanted to learn to read and write, and was punished for her “wild” behaviors. She left home at the first opportunity—at age 16. (Lee and Mary had that in common, since Lee, too, had run away from home at age 16.)

She followed Mary’s trail to Bristol and then to the London suburbs, where the cobbler’s daughter worked as a servant for three years. In that job she learned to read and write and developed her tendency for fabricating, until she was caught in a lie by her employers and was forced to leave. Lee next picked up Mary’s trail at a home for reformed prostitutes. Telling her own story much later, Mary said she had lied about being a prostitute to get in. But Lee wondered, as she struggled through the tangle of truth and lies along Mary’s path—maybe that *wasn’t* a lie.

Then along came a man. John Baker seduced Mary, traveled with her, and shared with her his fascination for the East. Then he left her. She was 25 and pregnant.

This last detail led Lee to a foundling hospital, where Mary had taken her infant son. There, Lee came closest, she felt, to catching the true Mary Baker, who simply couldn’t have invented a baby or the need to have it cared for. Lee held and examined the very documents detailing a story of seduction and betrayal that Mary had held in her hands and signed. “You’d find these old tattered letters. But because she was so clever and she did tell so many lies, even as you were sitting there reading these letters in a public record office, you knew that even this could not be true.”

Lee was pulled even deeper into Mary’s story. “I tried to actually live it,” she says. “I kind of got a little weirdly obsessed. I was thinking so much what it would be like to be her.”

The records do show that Mary visited the baby at the foundling hospital every week for several months. A mother herself, Lee understood what drew her back. But when Mary’s baby died, everything changed. “She sort of went off the deep end,” says Lee.

CARABOO

It’s at this point in Mary’s story that she vanishes and Princess Caraboo appears.

To flesh out the details of Mary’s subsequent history, Lee turned to the research of John Wells, who spent many years on the trail of Caraboo, and whose book, *Princess Caraboo*, was adapted into a movie in 1994.

Shortly after Mary Baker’s baby dies, an exotic woman appears in the town of Almondsbury, an upscale suburb of Bristol. According to Lee’s account and others, she wears a black shawl around her head, speaks no English, and tries to communicate using strange sounds and gestures. People offer her food. Then someone takes her to the magistrate who, confounded by her appearance and lack of history, wants to leave her at the outskirts of the village. His wife, an American heiress, thinks otherwise. She takes the woman in, imagining she’s a traveler in need of help.

The strange woman speaks a language all her own, calls herself “Caraboo,” and behaves in ways her hosts find fascinating. She tries to sleep on the floor, she prays devoutly before tasting her food. A sailor claiming to speak her language chatters with her. He tells her hosts that she is royalty from Java who was stolen from her home by pirates.

Titillated by the story and thrilled by the attention brought by housing a lost princess, Caraboo’s hosts contact the newspapers. She catches the interest of historians, orientalist, and journalists. A noted artist comes to paint her portrait. As her exposure to these “experts”

continues, her portrayal of Caraboo evolves to incorporate the defining “Oriental” characteristics the experts discuss in front of her. At one point, she even creates a written version of her language. When she appears in public, people fawn over her, and even kneel before her with respect.

The charade does not last, though. A few months after she first appears in *Almondsbury*, she is unmasked by a woman who recognizes Mary Baker in a description of Caraboo printed in the newspaper.

Her hosts, still caught up in her charms, promise not to punish her if she reveals her true story. So the details of Mary Baker’s “real” life come out and are published, revealing how even the experts and aristocrats were duped by her clever ruse.

In the ensuing months, Caraboo’s celebrity carries her across the ocean to America, where the stories of her imposture and her duping of the British elite precede her arrival. What is more American, after all, than the brashness and ingenuity of a member of the working class winning her fame and fortune?

Through correspondence with another of Mary’s distant relatives, Lee was able to find newspaper accounts of Caraboo’s visit in the *New York Post* and the *American Beacon*. People crowded the dock to meet her as her ship arrived. She was feted, invited out, and often visited by people wanting to see her perform as the exotic princess.

Mary Baker made her living portraying Caraboo for audiences, then eventually returned to England, where her popularity gradually waned. She supported herself by selling leeches to a local hospital, died at the age of 74, and was buried in a mass grave. Lee found the site, but no headstone to acknowledge that Baker was buried there.

AS LEE’S TIME in England wound down, she felt worn out from trailing these characters with their shifting identities. She was also lonely and unsure of the direction of her project. “I started to kind of lose it,” she admits. “You don’t make that many friends when you’re just researching and writing. I became depressed. I started to kind of lose my sense of self.”

It wasn’t until she came home to her family and set her research aside for a time that she recovered. “Then one day, in February, I thought maybe I’d just sit down and write,” she says. Two months later she had completed 80,000 words about women imposters and what their chicanery revealed about the follies of British society at the time. For example, the false prophet mocked religion, according to Lee. The healer mocked medicine. The sailor, warfare. And Mary Baker/Caraboo mocked ethnography and aristocracy.

All of them, through the reinvention of self, managed for a time to overcome the barriers of gender and class.

“We construct identities all the time—based on who we’re with and where we are. We even believe different things about ourselves at different times,” says Lee. “What’s interesting about these people [the imposters] is that they push that phenomenon that happens to all of us. They push that to an extreme.”



To see photographs of Mary Baker’s home village, portraits of her dressed as Caraboo, and written samples of her made-up language, visit *Washington State Magazine Online*, wsm.wsu.edu.



Much ado about...identity?

Pamela Bettis, WSU professor of education, regards with some doubt the “Look at Me” label that often describes 18- to 25-year-olds as egocentric and driven by peer evaluation. Rather than egocentric, “Self aware is a good phrase,” she says.

In shaping their identities, says Bettis, women of this age group have benefited from the second wave of the feminist movement, gender equity laws, and the “Girl Power” movement of the 1990s, which addressed academic issues and low self-esteem among adolescent girls. Boys, on the other hand, are facing their own identity struggle, at least according to popular theory. Bettis wrote about this “boy crisis” in *Troubling Boys and Alpha Girls: The Continual Worries over Gender and Schooling*. Scholars note how girls consistently outperform boys in school, while boys face a higher rate of expulsions, suspensions, and disciplinary measures. And in college, women outnumber men in both undergraduate and graduate school. Bettis points out that these studies focus mainly on white, middle-class populations.

This concern about boys may be much ado about nothing. It could be that there’s a perceived “boy crisis,” because men are feeling edged out of the workplace. Today’s workers are prized for being educated, committed, and able to work within a team, a very different paradigm than the lone-worker/wage-labor/industrial setting of our past.

“The traits of masculinity no longer serve you as well,” says Bettis. “It’s those of femininity—relationships, network building, those kinds of skills—[that] are now valued in a work context.”





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Trauma Nurse

Bachelor of Sciences in Nursing and
Co-Chair of the Washington State
Nurses Association.

Alumni Advisor to Gamma Alpha Omega
Sorority, the first Chicana/Latina
Sorority at WSU.

Loves being married to Stephen '02 &
'03 and growing their Cougar family.

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CLASS NOTES

1920s

Mildred F. Sotola ('25 Ed.) is one of WSU's oldest alumni at 105 years old. She lives at a nursing home in Florida.

1940s

Richard Bartram ('43 Hort.) is retired and lives in Wenatchee, where he raised three sons. His wife, Louise, passed away in 1995. Bartram worked for the Washington Tree Research Commission from 1983 to 1994.

Norman E. Cunningham ('49 D.V.M.) is a retired, self-employed veterinarian. He resides on a small farm in South Carolina, where he moved in 2005.

1950s

John Ray ('53 Bus. Admin.) has worked at the United States General Services Administration since 1974. Currently, he is deputy director of the Interagency Policy and Management division and works on emerging information technology policy issues. Previously, he worked in the aerospace industry and served as a communications officer in the Air Force Security Service.

Edward Claplanhoo ('56 For. & Range Mgmt.) donated property for a park in Neah Bay that will honor 283 Makah veterans from World War I through the Iraq War.

Ann E. McClure ('58 Journ.) was recently honored as one of 90 "GSAE Movers & Shakers" by the Georgia Society of Association Executives. McClure, a management consultant and certified association executive (CAE), was president of GSAE 1996-97, and an association executive for 20 years.

1960s

Shirley Irene Cannon ('61 Gen. Stud.) is retired and living in San Diego. She keeps close ties with life-long friends from the Class of '61, with whom she vacations every year.

Michael "Mike" G. Thorne ('62 Ag. Mech.) is a member of the board of directors for the Pendleton Round-Up, an Oregon event that draws about 50,000 people each year.

Harold ('69 Comm.) and **Patricia Palmer** ('69 Ed.) recently celebrated 38 years of marriage, two children, and 7.5 grandchildren. Hal is a 30-year real estate broker and Pat, a 20-year physical education teacher at Christian School in Longview, Washington.

1970s

Linda McCanna ('70 Ed.) has retired after teaching second and first grades for 37 years in the Chewelah School District. She and husband, Jerry, are enjoying many retirement projects and, especially, spending time with their grandchildren.

Robert Stewart ('70 Bus. Admin., '72 M.B.A.) is vice president of marketing for Sierra Pacific Resources.

Mike Hambelton ('71 Ind. Tech.) was named 2007 Apple Citizen of the Year for his dedication and leadership in the Washington tree fruit industry.

Keith Petersen ('73 Hist.) is the Idaho state historian and assistant director of the Idaho State Historical Society. His review of *Bunion Derby: The 1928 Footrace Across America* is included in the "New Media" section of this issue.

Sue Abitz ('75 Ed.) would like to organize a reunion of residents from Scott Hall who lived there from 1970 through 1975. Contact Sue Abitz at jsabitz@msn.com, or leave a message at 509-891-5655. Let's get together and reminisce!

» tracking



MATT HAGEN

What I've Learned Since College

An interview with Edward Heinemann—a life of horse sense

Ed Heinemann was just a freshman in the spring of 1936, when the students at Washington State decided to strike. A group calling themselves the Student Liberty Association wanted more freedom from the administration's puritanical social regulations, particularly those imposed by the dean of women, who set dress codes and early curfews.

Heinemann remembers walking on campus one May morning to see posters on buildings and doors announcing, "Strike." To his surprise, the faculty joined in, cancelling classes. In the wake of

the upheaval, the dean of women was dismissed, and the rules were gradually loosened.

Heinemann, who earned his degree in animal science in 1939, has seen a lot of WSU and Washington history through his long career in the horse racing industry. He was general manager of the Washington Thoroughbred Breeders Association in its earliest days and then director of the Washington State Racing Commission in the 1970s. He helped many Washingtonians get started in the business of raising good horses, and rubbed elbows of some of the state's most influential people, including 10 governors and every WSU president since E.O. Holland.

This spring Hannelore Sudermann visited with Heinemann at his home in Olympia to talk about life in the horse business.

Remember your roots: I grew up on a farm in Adams County that my grandfather homesteaded in 1889, [right] before Washington became a state. My mother had an eighth-grade education. And dad never graduated from high school. My folks did not have any money to send

me to school. So after high school, I worked for a year, picking apples, weeding. I worked in a butcher shop. Then Union Pacific Railway gave me a 4-H scholarship for Adams County. And then Sears Roebuck gave me another \$100. Back then tuition was \$10 a semester, so those scholarships went a long way.

Make sacrifices: I was working at the commons for my food. And I worked at the college farm. It paid 27 cents an hour. I pitched silage, I pitched manure, I bedded the stalls, I cleaned the barns, whatever came up. The greatest disappointment I had as a freshman was, I had so wanted to see Washington State play a football game, but on Saturday I was always out working on the college farm. I could hear the cheering. When I graduated in 1939, I got a job in Lincoln County working with the extension program



Students perform on their horses at the Hilltop Stables arena. The stables were established at WSU with help from the Washington Horse Breeders Association so students could learn the fundamentals of horse breeding, training, and sales. Photo courtesy WSU Manuscripts, Archives, & Special Collections.

with livestock and the 4-H club. We settled on \$1,700 a year, with the proviso that it be raised to \$2,000 after the first year. Then the war came along and changed all that.

Do your part: [Prior to the United States entering the war] President Roosevelt instigated the Civilian Pilot Training Program. A buddy of mine who was a deputy sheriff from Lincoln County, another fellow, and I drove to Spokane after work every evening, took our lessons out at Felts Field, did our groundwork at Gonzaga University, and got our pilots licenses. When I went in to sign up, they found out I was a pilot, [and] I became a flight instructor all through the war.

Look for love: I met my wife, Arlene, on a [set-up] date with one of my fraternity brothers.

We went to the Blue Bucket over in Moscow. This cute little thing came out of North Hall [Davis]. She looked just great. And she was a wonderful dancer. I just dated her solid that semester. But she left school after a death in the family. I met her again at an apple blossom festival in Wenatchee. After that I was driving across the state [to see her] almost every weekend.

Connections pay off: Gene Ensminger [head of the animal sciences department] came to WSU after I graduated. I don't know if Gene saw something in me, or what. One of the founding fathers of the Washington Thoroughbred Breeders, George Newell, wanted a field secretary to go out and work with people raising horses. He went to Ensminger who said, there's only one guy to recommend. And that was me. I was back at the farm. My dad had pleurisy and needed help. Newell came and found me and said, you're it. I helped with harvest at home and then started as the field secretary for Washington Thoroughbred Breeders on January 1, 1946.

Learn the business: They sent me to California and Kentucky. I was totally a country kid. I had a lot to learn. I had never seen a racing form in my life. They sent me to Northridge Farms in San Fernando Valley. I did everything from mucking stalls to learning about the breeding programs and grooming. They sent me to the Santa Anita racetrack, where the boss had a big box fairly close to the finish line. I had never seen a race before in my life.

Modernize: The early horse-racing business in Washington was the blind leading the blind. If I knew how much of a missionary I had to be, I don't think I'd have taken a job. We had too many of the Old West guys. Their way was, you breed Old Nell to Old Charlie, and you get a colt. You let the mare take care of him two years, then you get a rope and you try to break him. They were strictly cowboying. Another guy had a stallion in a 12-by-12 stall with a 20-by-20 corral outside that was piled four feet high with manure. One thing, you have to practice sanitation, or you get parasites and real problems.

Good people can have humble beginnings: On the other hand, I met some wonderful people. One family, I don't want to say their name, because I don't want to embarrass them, but there were five brothers nice as could be. After we looked at the horses, they asked me to supper, even though there were five kids to feed. I said no, but they

Michelle Saranovich ('75 Comm.) works at Marriott International in the information technology area. She visited the Pacific Northwest this winter.

Richard Stearns ('75 Elec. Engr., '89 M.S. Elec. Engr.), Portland, Oregon, is a principal electrical engineer at the Bonneville Power Administration. He recently received the Eugene C. Starr Technical Achievement Award for his work promoting energy efficiency and safety. He has been at BPA for more than 30 years.

Prudence Miles ('77 Ag., Ed.) is director of equal opportunity and affirmative action at the University of Washington. She is former assistant director of affirmative action and equal opportunity at Oregon State University.

Thomas F. Meyer ('78 D.V.M.) will join the American Veterinary Medical Association's executive board in July. During his six-year term, he will represent the western district of the United States. He and his wife, Jean ('78 D.V.M.), co-own a mixed-animal practice in Vancouver, Washington.

Donald Nevins ('78 Arch.) is a principal architect with DDM Group, which has been awarded the program management for a \$600M retail and office complex near the Los Angeles International Airport, as well as master planning and program management of a 300-acre redevelopment project in Los Angeles that includes a proposed NFL stadium. Don is also a co-founder of SunCore Inc., which has secured Series A funding to launch solar products worldwide. The company will be headquartered in The Irvine Spectrum in southern California.

Robert G. Wolfe ('78 Bus.) is actively involved with the WSU College of Business National Board of Advisors and International and Global Initiatives. He is a partner at Northwest Venture Associates in Seattle.

1980s

Sharon Sellers ('80 Psych.) received the 2008 Communicator of the Year award from the National Council of Marketing and Public Relations (NCMPR), an organization for PR and marketing professionals who work at two-year colleges. She is communications and marketing director at Edmonds Community College.

John Cushen x'81 is the vice president of marketing at SilverCrest Properties, a provider of senior living communities in Minnesota.

Richard Bauscher ('84 Ed.D.) received the 2007 Superintendent of the Year Award from the Idaho School Superintendent's Association.

Kenneth Boulton ('84 Mus.) is a classical pianist and assistant professor of piano at Southeastern Louisiana University. He was nominated for a Grammy Award in 2007 for best instrumental soloist performer. A review of his two-CD set, *Louisiana: A Pianist's Journey*, is included in the "New Media" section of this issue.

Tom Moore ('87 Comm.) has formed Mooreshots Direct, Inc., a full-service advertising agency in the Tri-Cities. Moore spent over a decade in TV in the Tri-Cities, most recently with FOX 11.

Laura Kast ('88 Psych.) was named 2007 Elementary School Counselor of the year by the Idaho School Counselor Association. She has worked at Ponderosa Elementary School in Post Falls, Idaho, since 1999 and has been the school counselor there for the last eight years.

Fred Squicciarini ('88 Psych.) is agency director/sales manager for the Rochester Financial Group/MetLife in Rochester, New York. He also owns Rochester Powder and Chrome, a custom powdercoat and spray chrome shop.

Will Ludlam ('89 Polit. Sci.) joined Rocky Hill & Kowlton, an international public relations firm based in New York. He is executive vice president and general manager of the Northwest offices in Seattle, Spokane, and Portland.

Dan Nelson ('89 Hist.) has just published *Day Hikes around Mount Rainier*, one of a new series Nelson created with The Mountaineers Books to replace the venerable 100 Series.

Scott Shaw ('89 Ed.) is director of sports medicine at San Jose State University.

1990s

Todd Kurth ('91 Sport Mgmt.) is pharmacy benefit director, western region, at The Segal Company, Tempe, Arizona.

Jeff Moylan ('91 Comm.) retired from Naval service in 2006. His most recent post was at the Naval Air Station on Whidbey Island.

Stephen ('93 Engl.) and **Nikole (Brower)** ('96 Apparel, Merch.) **Thomas** welcomed their second child, Grant Jamison, on February 10, 2008. Their eldest son, Garrett Nicholas, is four.

Amy Scott Durocher ('94 FA, '97 M.F.A.) is user interface designer for Adobe Systems in Seattle. Amy and her husband, Patrick, welcomed their first child, Luca, in 2006 and are expecting their second child in September 2008.

Michelle Anderson ('95 Polit. Sci., Comm.) joined the Tampa office of Fisher & Phillips LLP, where she will be responsible for labor and employment cases. She received her law degree from Loyola University in New Orleans in 2007.

Ian Ivey ('95 Bus.) joined The Leadership Institute, Arlington, Virginia, as director of communications. Ian maintains an active trademark law practice part-time. He lives in Herndon, Virginia with his wife, Karen.

Jess C. LaNore ('95 B.F.A.) is CEO of the Alpha Kappa Psi Foundation, America's largest professional business fraternity.

Robin Mullins ('96 Crim. J./Soc.) and her husband, Keith, welcomed their second child, Kaden Slade Mullins, on September 13, 2007. Robin is on leave from her third-grade teaching position in Rockwall, Texas.

Courtney Cooper ('96 Bus. Admin.) recently opened Cooper Jacobs Real Estate Services (www.CooperJacobs.com), a full-service real estate brokerage serving Seattle and suburbs.

Tirsit Asfaw ('97 Microbiol.) is finishing a residency in obstetrics and gynecology at New York University and will begin training in urogynecology and pelvic reconstructive surgery at University of Pennsylvania July 2008.

Matt Drew ('97 Comm.) has accepted a position with Robertson Wood Advertising in Las Vegas, Nevada, as account management supervisor.

Greg Duncan ('98 Hist.) has released a new CD, *Greg Duncan Quintet: Unveiled*, on OA2 Records, a Seattle-based label. Music from the CD has been played on radio stations throughout the country, and the album has been highly praised by *Chicago Jazz Magazine*. For more information, visit www.gregduncanmusic.com or www.oa2records.com.

Denver Morford ('98 Geol.) owns the Barry Chevrolet dealership in Ephrata, Washington. The dealership has just given out its 300th Cougar license plate.

Chadd Cripe ('99 Comm.), a reporter for the *Idaho Statesman* in Boise, Idaho, co-authored *Blue Magic*, a book about Boise State football and the team's victory in the 2007 Fiesta Bowl.

insisted. You know, they lived in a sod house. But from that family came some great jockeys.

Take your opportunities: My work finding horses for Washington owners started with an Italian fellow in Tacoma named Frank Magrini. He loved the races and had a few cheap mares. I agreed to look for a horse at auction for him. He said, "I put \$20,000 in your bank account, buy me a good mare." I smoked the mares over pretty good, I found one I liked. I got the mare for \$17,500. I called Frank. He was real happy. He said, "Can you buy me another mare?" He said, "I put another \$10,000 in your bank account." So I bought one for \$5,700. The next one, she turned out to be a terrific mare. The foal she had in her belly at the time ended up winning \$131,000 for Frank.

Stick to your guns: After leaving the Washington Thoroughbred Breeders in the 1970s, I became supervisor and director of racing for the Washington Horse Racing Commission. I had that job for four and a half years, until it came to a sudden end when Dixie Lee Ray was governor. It started with some horsemen in the Spokane area who were very unhappy with the fact that I said, "We live by the rules." They were concerned about medications that might be given to horses that would show in the tests taken after the races. A couple of them came up to me and said, "Why don't you slack off a little?" I said I couldn't do it.

I got my news at 11 o'clock at night. We had a commission meeting in Yakima, and I got a call at my motel. "Can you come over?" I walked in and sat down and said, "What's this about?" The commissioner said, "We want your resignation." I asked why. They said they wanted a change. Well, what can you say? Within three days I had offers for jobs in New York, Kentucky, and Oregon. I didn't want to leave the Northwest, so I went with Oregon. I was there until I retired.

Give back: At the time I was with Washington Thoroughbred Breeders and the racing commission, a group of us purchased Hilltop Stables [a facility for WSU's equine program], gave it to Washington State University lock stock and barrel. We stocked it with horses. Mr. Boeing gave them Porters Might. A banker from Leavenworth gave them an Arab mare. A wealthy farmer from Pullman gave them an Arabian. A quarter-horse breeder gave them a quarter horse. We had short courses, we had horse shows, we had tremendous turnout. It's too bad that's gone now.

Know your place in history: Horse racing in Washington is coming of age pretty much now. At least I was instrumental in going through the growing pains. In my day we were scratching to hold the nickels together. Now they're throwing the dollars around.



COURTESY SAM HAM

Sam Ham

The adventures of

by Haly Ingle :: The first time Sam Ham '74 was in the Galapagos Islands, he took a two-foot-long telephoto lens to capture nature up close. He was thrilled when, on a hike with a graduate student, he came across a stunning brown Galapagos hawk. Ham raised his camera, aimed, and discovered he was much too close. "I had to back up practically 50 yards to get it in focus," he laughs, noting how "up close" nature in the Galapagos can sometimes be.

Ham, a natural resources professor at the University of Idaho, has been bumped by sea lions while snorkeling, has watched nesting sea turtles from a few feet away, and has stepped over a blue-footed booby who set up house on a trail. This place, which has impacted so many people, has been impacted by Ham as well.

It started in 1998, when Lindblad Expeditions contacted Ham about finding a fundraising strategy to help preserve the wildlife park. So he took a seven-day cruise to interact with the tourists and experience it for himself. A communication psychologist, he tries to understand pathways and mechanics in communication that can influence people: how they think, feel, and if given the chance, behave. He calls this "making a difference on purpose."

After the cruise, Ham had to quickly pull together a presentation for Lindblad, as well as

for the president of Charles Darwin Foundation, the superintendent of Galapagos National Park, and marketing and public relations people. He suggested replacing the cruise ship's baby grand piano with a wildlife interpretative center. He also urged sending educational material to visitors before they even left their homes. All of his



JOHN BAYLES

ideas were aimed at educating people about the Galapagos before, during, and after their trip.

Then came the critical question: if we make these changes, how much can we expect contributions to increase? Sam hadn't thought of that. So he pulled out of the air, "30 percent, I think we can get a 30 percent increase."

The cruise line did what Sam suggested, right down to replacing the baby grand. But when the donations came in, the contributions hadn't increased by 30 percent, but by more than 250. The donations helped wildlife agents on the two largest islands eradicate the feral goats and pigs that were threatening endangered tortoises and sea turtles.

A 1974 graduate in forestry management, Ham returned to Washington State University for his master's degree in forestry and range management (wildland recreation) in 1978. He went on to the University of Idaho to complete a Ph.D. in forestry, wildlife, and range sciences.

Although Ham came to the Inland Northwest to attend college, it turned out to be a permanent move. "It was too good to leave. We find it stunningly beautiful," Sam says. He and his wife, Barbara ('73 Fine Arts), like to lure big horned owls into their yard using tape recordings of live owl calls.

While the Palouse is home, Ham has worked in over 40 countries. He even taught himself Spanish to further his international work. "I wanted to save species, and there are more species in Latin countries than anywhere else in the hemisphere," he says.

Now at the University of Idaho, Ham teaches courses in communication theory applied to natural resource management, wildland resource

conservation, and international issues in nature conservation. He is the author of *Environmental Interpretation: A Practical Guide for People with Big Ideas and Small Budgets*, and has published more than 350 articles.

"Had I gone to school anywhere else, I don't know what I would be doing. I guess it's fate. I'm doing what I'm supposed to do," says Ham. Richard Shew, a WSU professor in forestry and ranch management, validated Ham's direction: to get people to love nature as much as he did. Shew was also interested in communication and the art of interpretation. But it was William Catton, one of the world's first human ecologists and a WSU sociology professor, who taught him about sustainability.

A tour guide and ranger in the summers of his college years, Ham was first chief naturalist of Whitman County parks. He also designed and built the amphitheater at Kamiak Butte as a student in 1974.

"I love nature and wanted to make a living that way," says Ham.

Last year, Sam Ham received the William C. Everhart Award for his contributions in environmental interpretation and communication, a cap to a long career of supporting and protecting great places in nature.

WSU Alumni Association's

Achievement award winners

From the CEO of Boeing to the founder of Olympia's Oysterfest, Washington State University's Alumni Association has found many worthy and interesting graduates deserving of recognition for their accomplishments and contributions to WSU and their greater communities. Here is a list of the WSU Alumni Achievement Award Winners from the past two years.

2007

Richard B. Ellingson '75, president of the Food-service Equipment Distributors Association and advisory board member of the WSU School of Hospitality Business Management, has enriched the lives of numerous WSU students.

Shaikh M. Ghazanfar '62, '64, '69, professor emeritus at the University of Idaho, an expert

2000s

Kristin Kemak ('00 F.A.) is executive director of the Clarkston Chamber Board of Directors. Previously, she did sales and community relations work for Beamers Hells Canyon Tours.

Laina Michelle Diamond ('01 Comm.) married Jed Michael Silversmith on July 1, 2007, in Seattle. The couple lives in Washington, DC.

Tim Triesch ('01 Soc. Sci.) is senior geographic information system analyst with the Pacific County Department of Public Works, South Bend.

Kenneth Engelhardt ('02 Hist.) received his master's degree in teaching from Heritage University in Toppenish.

Traci Buck ('02 Bus. Admin.) is the business manager for surgical services at Sacred Heart Medical Center in Spokane. She moved into the position after receiving an M.B.A. in April 2007.

Erin (Walker) Simmons ('02 Polit. Sci.) married Ryan Simmons in Olympia September 2007. They reside in Seattle, where she is a contract lobbyist for Martin Flynn Public Affairs.

Brian DuBois ('03 Bus.) has announced the arrival of future Cougar Mason Guy Dubois, born January 24, 2008.

Bernadette Flynn ('03 Comm.) is marketing director for HAPO Community Credit Union, Richland.

Patricia Heasler ('04 Bus. Admin.) is a financial advisor for UBS Financial Services, Kennewick. Heasler recently earned an M.B.A. Previously, she worked for Northwest Public Radio and served on the Washington State Gubernatorial Centennial Committee.

Richard Robbins '04 and **Jennifer Nelson** '07 were married February 11, 2006, in Wilkeson, Washington.

Jeff Griffin ('05 Ed.) is the assistant general manager of the Missoula Osprey professional baseball club, a Pioneer League affiliate of the Arizona Diamondbacks. The Osprey were named the nation's top short-season organization in 2007 by Baseball America.

Greg Holmes ('05 Mech. Engr.) and **Meredith Cossano** ('05 Biol.) are engaged to be married July 2009 in Seattle.

Aileen Hoy ('06 Hum.) has been elected to the National Committee of Emerging Green Builders, representing the western region of the country. She will serve a two-year term.

Amy Trang ('06 Comm.) is a business reporter in St. Cloud, Minnesota. She also writes for *ROI Central Minnesota Magazine*, a publication of the *St. Cloud Times*.

Carly DeVries ('07 Soc. Sci.) is working in human resources at the Salish Lodge and Spa in Snoqualmie.

Adam Donohue ('07 M.A. Mus.) was featured in the October 2007 issue of *Jazziz* magazine, one of the top jazz publications in the world. A recording of his composition, "Obfuscato" was included on a CD of music distributed with that issue. Donohue now lives in Greensboro, North Carolina, where he performs and teaches music.

IN MEMORIAM

1920s

Al Couch ('29 Elec. Engr.), February 10, 2008, Langley, Washington.

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1930s

Lillian Lewis Sperry ('33, 96, December 3, 2007, Spokane.

Polly Burke ('34 Home Ec.), 97, February 2008, Spokane.

Alice A. Large ('34 Engl.), 96, Morgan Hill, California.

Thomas Carlyle Jones ('35 D.V.M.), 95, December 9, 2007, Santa Fe, New Mexico.

Georgia Rae "Jo" Camp x'36, 94, November 19, 2007, Spokane.

Varney T. Cornwell x'36, 94, February 14, 2008, Portland, Oregon.

Barbara Bird ('37 Soc.), 94, November 3, 2007, Seattle.

Janet Claus ('37 Home Ec.), 91, December 27, 2007, Anacortes, Washington.

Robert T. Claus ('37 Ag.), 93, fall 2007.

Olive Lucille Hoffman x'37, 92, December 23, 2007, Clarkston.

Emil Kramlick ('38 Chem.), 92, January 7, 2008.

William R. Chorlton ('38 Bus. Admin.), October 29, 2007.

J. Raymond Lindquist ('38 Chem.), November 2007, Largo, Florida.

Jack A. Morris x'38, 89, November 22, 2007, Black Diamond.

Chester Moss ('38 Pharm. and Chem.), 91, October 27, 2007, Good Hope, Georgia.

Shirley Maida Fish Jantzen ('39 FA), 90, September 2, 2007, Vacaville, California.

Orville Johnson ('39 Phys. Ed.), 95, January 20, 2008, Bremerton.

Kathlyn Mary Hackett McGuire ('39 Hist.), 90, November 5, 2007, Yakima.

1940s

Stanley Aspend Dodson ('40 Econ.), 90, January 19, 2008, Seattle.

Aubrey Ison ('40 Bus. Admin.), 91, March 28, 2007, Palm Desert, California.

William Stadelman ('40 An. Sci.), former faculty, December 1, 2007, Frankfort, Indiana.

Edith Indiana Tucker x'40.

Weden Parkhurst Humphrey ('41 D.V.M.), 91, October 21, 2007, Camarillo, California.

Roy Earling Fritch ('42 Ag.), 90, November 25, 2007, Snohomish.

Annette Meinhart x'42, 87, retired staff, December 25, 2007, Spokane.

Eleanor Minka Smith ('42 Home Ec.), 88, California.

Selmar Jay Monro x'43, 86, February 5, 2008, California.

J. Wayne Tyler ('43 Gen. Ed., Premed.), 77, March 5, 2007, Kennebunkport, Maine.

Stanley W. Thiel ('44 Zool.), 86, January 31, 2008, Mattoon, Illinois.

Maxine R. McAuley ('46 Hist.), 83, January 14, 2008, Yakima.

Annette Currie x'47, 82, December 17, 2007, Everett.

Rosa Dahl ('47 Home Ec.), 93, November 5, 2007, Bakersfield, California.

Claude Vincent Laws x'47, 81, November 14, 200.

Gloria G. Schill ('47 Hist.), 83, December 13, 2007, Portland, Oregon.

Don Hughes ('48 Mus. Ed., '61 Psych.), 85, November 14, 2007, Sunnyside.

Wendell H. Oliver ('48 Wildlife Biol.), 83, October 19, 2007, Toppenish.

Arthur F. Peterson ('48 Elec. Engr.), 86, October 22, 2007, Lakewood, California.

Bruce Rutherford ('48 Elec. Engr.), 82, retired physical plant director, April 16, 2007, Pullman.

Mary E. Smith ('49 Home Ec.), 81, October 7, 2007, Colorado.

Jack D. Neal x'56, 79, January 3, 2008, Spokane.

1950s

Edwin V. Salmi ('50 Elec. Engr.), November 3, 2007, Santa Clara, California.

George M. Thue ('50 D.V.M.), 97, September 21, 2007, Shoreline.

Charlotte Azelia Tochtermann ('50 Sp. Com.), 79, February 7, 2008, Bellevue.

Guy Robert Bishop ('51 Arch. Engr.), July 15, 2007, Mesa, Arizona.

Roy C. Burke Jr. ('51 HRA), 75, October 11, 2007, Clarkston.

Bob Hulbert ('51 Ag. Econ.), 81, January 9, 2008, Mount Vernon.

Leonard L. "Tom" Thomas ('51 Gen. St.), 88, December 10, 2007, Madison, Wisconsin.

John Charles Van Deursen ('51 Ed.), 79, January 5, 2008, Queen Creek, Arizona.

Dolores Bryant ('52 Lib. Arts.), May 28, 2007, Golden, Colorado.

Rufus James Pederson ('52 Sp. & Hear. Sci.), 2008.

Frank Ramos ('52 Pharm.), 78, November 20, 2007.

on Islamic studies and culture, and a major advocate for higher education, is actively involved in engaging students.

Dale F. Stedman '49, Washington State transportation commissioner, has been dedicated to shaping the transportation industry in the state of Washington.

Richard Small '69, owner and founder of Woodward Canyon Winery in Walla Walla, has greatly impacted the Washington wine industry and is an inspiration to future Washington State winemakers and students alike.

Richard Oltman '52 is founder of Olympia's "Oysterfest," an event that draws thousands annually and promotes the Washington State seafood industry.

Mike Utley '84, a former NFL athlete and founder of The Mike Utley Foundation, an organization dedicated to finding cures for spinal cord injuries (SCI), has been an advocate for many suffering from paralysis.

Senior Regional Director of Development, California

Washington State University Foundation

Senior Regional Director of Development, California, WSU Foundation (Administrative Professional, FT, Permanent, 12-Mo). This person will be a key member of the WSU Foundation Capital Campaign team, working from California. Required: A bachelor's degree AND six years of progressively responsible experience which includes three years of full-time professional fundraising experience and at least two years in an institution of higher education. Demonstrated success in proposal writing and submission, evidence of ability to plan and execute a fund drive (i.e. responsibility for a project from conception to realization), demonstrated success in face-to-face solicitations of gifts of \$25,000 or more, **OR comparable experience.** A master's degree in a related field may be substituted for up to one year of the required experience. Screening begins May 3, 2008. For position description listing all qualifications and application process, visit www.hrs.wsu.edu/employment/FAPvacancies.asp (Search #5005). Contact Marilyn Johnson, PO BOX 641925, Pullman, WA 99164-1925, 509-335-7954, marilyn_johnson@wsu.edu. EEO/AA/ADA



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Bernard Lagat '01, a two-time world-champion runner who earned the title of "the fastest man on earth," has brought distinction to the WSU athletic department and the University as a whole.

2006

Jeff Gordon '71, owner of Gordon Brother's Winery in Pasco and the first president of the Washington Association of Wine Grape Growers, is recognized for his leadership and service to his profession, community, and alma mater.

Gladys Jennings '48, the first woman of color to receive a master's degree from WSU, has been steadfastly dedicated to the University's efforts to provide educational opportunities to students of color.

Jon Whitmore '67, '68, president of Texas Tech University, is recognized for his leadership and advocacy of higher education.

Scott E. Carson '72, president and CEO of Boeing Commercial Airplanes and executive vice president of the Boeing Company, has actively supported educational opportunities in the WSU community.

Stephen D. Bernard '76 is dedicated to the continuity of Holocaust education through the instruction and enrichment of students in the Central Valley School District and beyond.

Stanley R. Boyd '78, former vice president of sales and marketing for The Fairmont Hotel in San Francisco, has been a leader in the hospitality industry.

Kiutus Tecumseh '72 has shown steadfast commitment to the Native American community in New Mexico.

Roger J. Duprel '61 has been an advocate for student-athletes and continuously supportive for alumni.

David E. Miller '68 and **Robert E. Hull** '68, Seattle-based architects and co-founders of Miller/Hull Partnership, are leaders in Northwest architecture and beyond.

The Honorable **Sid Morrison** '54 has a long and distinguished history of service to WSU and Washington, having served in the U.S. House of Representatives from 1980 to 1992 and as a Washington State legislator, senator, and secretary of transportation.

Barbara Hyatt O' Rourke ('53 Engl.), 77, February 23, 2008, Kenmore.

Grace M. Towers ('53 Pharm.), 76, February 29, 2008, Everett.

Eldon E. Weeks ('53 Ag., '55 Ag. Econ.), 84, retired professor of agricultural economics, December 14, 2007, Olympia.

Dorothy Ann Gordon ('54 Nurs.), 78, January 19, 2008, Chelan.

John Harms ('54 D.V.M.), 87, January 29, 2008, Boise.

Patti Lou Leifeste ('54 Ed.), 75, January 6, 2008, Sunnyside.

John Alexander Murphy ('54 Civ. Engr.), 83, November 22, 2007, Auburn.

Frank Thornlund ('54 Pharm.), 76, January 16, 2008, Marysville.

I. Oliver Brown ('55 Ag.), 77, January 30, 2008, Moses Lake.

Elizabeth A. Raftery ('55 FA), 73, February 2, 2008, Longmont, Colorado.

Teddy Carlyle Beasley x'56, 74, January 30, 2008, Pullman.

Robert J. DeVleming x'56, 71, January 1, 2008, Spokane.

Joy Lutton Taylor ('56 Gen. St.), 72, February 16, 2008, Washington.

Jorge Weinstein ('56 Civ. Engr.), 74, May 2007, Lima, Peru.

Walter Pilkey ('57 Gen. St.), 2007, Charlottesville, Virginia.

Alfred Dale Brabec ('58 Engr.), 79, August 28, 2007, Puyallup.

Delmar Sisler ('58 Polit. Sci.), 71, October 11, 2007.

Robert J. Duncan ('59 For. & Range Mgt.), 82, September 17, 2007, Florence, Montana.

Gordon Eugene Hartley ('59 Psych.), 72, January 22, 2008, Washington.

Lynn McKinney ('59 D.V.M.), 74, January 12, 2008, Volcano, Hawaii.

1960s

Charles Capen ('60 D.V.M.), 71, March 2008, Ohio.

Roger A. Harder ('61 D.V.M.), 71, February 7, 2008, Spokane Valley.

Maxine E. Mackin ('63 Hist.), 66, October 25, 2007, Enterprise, Oregon.

Charles William Forman Ulm ('64 Hist.), 65, February 2008, Reno, Nevada.

Vincent Anthony Busam Sr. ('66 Comp. Sci.), 63, October 27, 2007, Palo Alto, California.

Alan Frederick Catey ('67 Mech. Engr.), September 30, 2007.

Caroline Engle ('67 D.V.M.), 78, February 2, 2008, Newberg, Oregon.

John D. Hedlund ('67 Wildlife Bio.), 61, February 10, 2008, Portland, Oregon.

Robert Quentin McKinney ('68 Ed.), 87, December 2007, Lompoc, California.

1970s

Linda Conant ('71 Phys. Ed.), 59, January 23, 2008, Lake Oswego, Oregon.

Arla Barkemeyer ('73 D.V.M.), 60, February 13, 2008, Dearborn, Montana.

Norman Yandt ('74 Arch. '75 B.A.R.), 55, January 7, 2008, Moscow, Idaho.

Michael Lewis Paluck ('75 Zool.), 56, January 7, 2008, Orcas Island.

James Forrest Bentley ('76 Food Sci.), 53, January 2008, Washington.

Brian Ross Jappert x76, 54, February 13, 2008, Seattle.

Stanley P. Heath ('78 Ph.D. Ed.), 82, November 30, 2007, Seattle.

Bruce David Lindoff ('78 Bus. Admin.), 53, February 2, 2008, Camas, Oregon.

Gary Radamaker ('78 Agron.), 53, natural resource sciences staff, January 24, 2008, Clarkston.

Lawrence "Larry" Stark ('78 Ph.D. Hist.), librarian and archivist for Manuscripts, Archives & Special Collections, February 4, 2008, Pullman.

Randal Simmons ('79 Soc.), 51, February 7, 2008, Los Angeles, California.

1980s

Naoki Kamiya ('82 Elec. Engr.), 48, January 8, 2008, Hillsboro, Oregon.

Valda Yee ('84 Bact., '86 B.Ph. Pharm.), 46, January 22, 2008, Honolulu, Hawaii.

Kris Kyro ('86 M.S. Psych. '89 Ph.D. Psych.), 46, December 20, 2007, Seattle.

1990s

Lynn Flaherty ('91 Nurs.), 60, March 11, 2008, Spokane.

2000s

Julie Ann Bernatovicz ('00 Psych.), 54, November 21, 2007, Vancouver, Washington.

Michelle Beyersdorf ('01 M.S. Engr. Mgt.), 34, February 11, 2008, Kirkland.

Peggy Lynn Fischer ('04 M.B.A.), 52, January 23, 2008, Vancouver.

Greg Hoofnagle ('04 Dig. Tech. & Cult.), 53, December 6, 2007, Vancouver.

Faculty & Staff

Beatrice Bunch, 84, retired staff, May 16, 2007.

Dorothy Anne Ettl, 63, retired faculty, January 13, 2007, California.

John A. Fork, 69, retired electrician, April 21, 2007, Pullman.

Warren S. Gramm, 87, retired staff, December 3, 2007, Spokane.

Marion Jacobson, 96, retired home economics staff, June 21, 2007, Spokane.

David Kahn, 55, College of Nursing faculty, February 26, 2008, Spokane.

Wayne Kirkendall, 85, retired electrician, February 20, 2008, Seattle.

Richard Mabe, 76, retired physical plant staff, June 19, 2007, Troy, Idaho.

Demeris E. Madison, 64, retired veterinary staff, December 21, 2007, Pullman.

Rowena V. Mingus, 80, retired library and bookstore staff, February 21, 2008, Clarkston.

Donald Pelton, 88, retired staff, January 21, 2008, Pullman.

Dan Posey, 57, facilities operations staff, June 22, 2007, Moscow, Idaho.

Clyde Riddle, 94, retired staff, February 21, 2008, Moscow, Idaho.

Geraldine Senter, 89, retired staff, January 14, 2008, Troy, Idaho.

Donise Shaw, 85, retired food services staff, February 20, 2008, Palouse.

Lois L. (Harlow) Shrope, 89, February 18, 2008 retired agronomy department staff.

James Whipple, 81, retired psychology faculty, December 5, 2007, Pullman.

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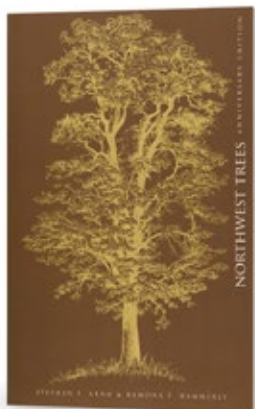
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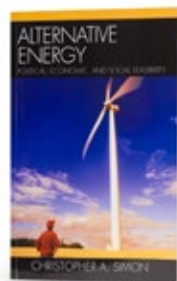
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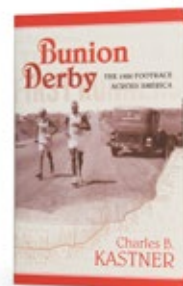
Northwest Trees *Steven F. Arno '65 and Ramona P. Hammerly* THE MOUNTAINEERS BOOKS, SEATTLE, 2007 :: *Review by Larry Hufford* :: Trees recall memories. Both thicken through the years, become storm-roughened, and may persist despite broken branches. We look at trees the way we look to memories as familiar waymarks in our personal landscapes. The new edition of Stephen Arno ('65 Forestry) and Ramona Hammerly's *Northwest Trees* offers to enlarge one's landscape of trees. The beauty of this book, with its insights and plucky facts, welcomes familiarity with trees. Reading *Northwest Trees* turns trees into sharper memories.

This is a two-hearted book, and Steven Arno's descriptions of the trees are one of its hearts. The text is vivid and places one in the woods. As I read, I wanted to walk, to feel bark, to slide leaves between my thumb and forefinger, and to feel the weight of seeds in the palm of my hand in order to experience Arno's stories. Ramona Hammerly's artwork is the second heart of *Northwest Trees*, drawing one through the pages of the book with utmost visual pleasure. Illustrations of leafless limbs silhouetted against sky, the sweep of branches in a tan oak thicket, or the outline of small sitka spruce on seastacks among many others provide emotive bridges to the places of trees. ❖



Alternative Energy: Political, Economic, and Social Feasibility *by Christopher A. Simon* '94, '97 ROWMAN & LITTLEFIELD, LANHAM, MARYLAND, 2006 :: *Review by Edward R. Meyer* :: Readers wishing to stay current on one of today's most important public policy issues—the transition from fossil fuels to alternative energies—would do well to pick up a copy of *Alternative Energy: Political, Economic, and Social Feasibility* by University of Nevada-Reno political science professor, Christopher A. Simon ('94 M.A., '97 Ph.D.). In this sophisticated, insightful, and well-written book on the current global push to adopt varying forms of alternative energy, from wind to solar, geothermal, hydrogen, and

beyond, Simon successfully meets his goal of "outlining the information needed by individuals [interested in] participating in the development of a sustainable community." Along the way he provides a compelling answer to a key question: why pursue alternative energy and fuels, and why now? ❖



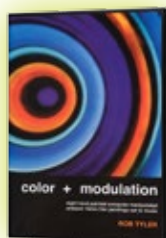
Bunion Derby: The 1928 Footrace Across America *by Charles B. Kastner* '81 UNIVERSITY OF NEW MEXICO PRESS, ALBUQUERQUE, 2007 :: *Review by Keith Petersen* '73 :: For generations, the 1920s have provided fodder for authors. The super-hyped sensationalism of those ballyhooed years seems a bottomless pool

of entertaining topics. The decade of Lindbergh, Valentino, Capone, and Ruth, of flappers, Mah Jong, crossword puzzles, and marathon dances, also produced the Bunion Derby, a marathon footrace across America. It is to his credit that Seattle author Charles Kastner ('81 M.A. History) not only uncovered this nearly forgotten story, but also that he treats it with respect, for it would have been easy to dismiss the derby as just another 1920s phenomenon, no more significant than flagpole sitting. ❖



Just Don't Get Sick: Access to Health Care in the Aftermath of Welfare Reform *by Karen Seccombe '85 and Kim A. Hoffman* RUTGERS UNIVERSITY PRESS, PISCATAWAY, NEW JERSEY, 2007 :: *Review by Jae Kennedy* :: Victor Sidel,

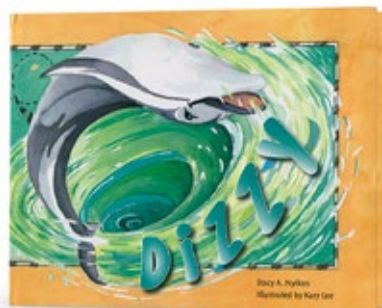
the co-founder of Physicians for Social Responsibility, observes, “statistics are people with the tears washed away.” *Just Don’t Get Sick*, a new book by Karen Seccombe (’85 Ph.D. Soc.) and Kim Hoffman, offers a litany of statistics about the plight of Oregon families who formerly received welfare benefits, but the tears glisten on these pages, thanks to skillful threading of the individual stories and observations of the study subjects. It’s a compelling and often gut-wrenching analysis of the frayed social safety net in 21st-century America. ❖



color + modulation
by Rob Tyler '96 www.vcr100.com, 2006 :: Review by Chris Bruce :: Rob Tyler’s animated films combine hand-painted film cells, computer manipulation, and atmospheric electronic music to produce a hypnotic come-hither based on changing, pulsing colors that riff off a primary

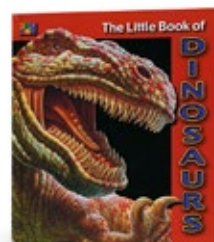
abstract shape to the music of Unrecognizable Now, Moksha Kusa, Carpet Music, In Support of Living, and Solar Marquardt. Although there is no indication that these films are meant for anything more than a DVD-scale viewing, Tyler’s films may recall (for those who *can* recall) psychedelic light shows of the 1960s, and would certainly work wonders as rave backgrounds. ❖

Recess at 20 Below
by Cindy Lou Aillaud '77 ALASKA NORTHWEST BOOKS, ANCHORAGE, PORTLAND, 2005 :: Review by George Bedirian :: Perhaps more than most books for children, Cindy Lou Aillaud’s *Recess at 20 Below* has its feet firmly planted in the real world. The reason for that, of course, is that it’s illustrated with the author’s own photographs of children at the school in Delta Junction, Alaska, where she teaches physical education. And it’s probably for that reason too that the book makes the most of what some might consider an unlikely subject—the way kids cope with sub-zero temperatures in the far north. ❖

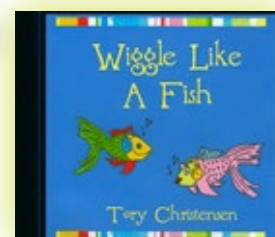
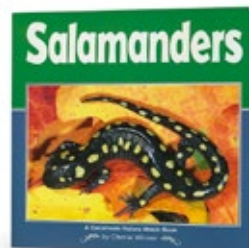


Dizzy by Stacy A. Nyikos; illustrated by Kary Lee '86 STONEHORSE PUBLISHING, TULSA, OKLAHOMA, 2007 :: Review by George Bedirian :: Meet Dizzy, a Pacific white-sided dolphin who romps through the pages of this book at a—well, at a dizzying pace. Aimed at a readership of three- to eight-year-olds, the story, such as it is, follows Dizzy through days spent flying among the clouds, high-diving, and “porpoising” frenetically about his watery world. ❖

The Little Book of Dinosaurs TWO-CAN PUBLISHING, MINNETONKA, MINNESOTA, 2005 :: **Salamanders** CAROLRHODA BOOKS, MINNEAPOLIS, 1993 :: **Everything Bird: What Kids Really Want to Know about Birds** NORTHWORD BOOKS FOR YOUNG READERS, MINNETONKA, MINNESOTA, 2007 all by Cherie Winner :: Review by George Bedirian :: Readers of *Washington State Magazine* will recognize Cherie Winner as the



author of numerous feature stories and an even greater number of shorter articles. Cherie has been the science writer for WSM since 2005—but she’s been publishing science-oriented books for children since 1993. Although she had spent the preceding years in the rarefied atmosphere of higher education, she had no trouble adapting her writing style to the needs of these children without any hint of condescension. ❖



Wiggle Like a Fish by Tory Christensen '01 PRODUCED BY MANUEL FERNANDEZ, RICHLAND, 2007 :: Review by George Bedirian :: It’s immediately apparent, as you listen to the 11 songs on *Wiggle Like a Fish*—all written by the performer—that Christensen’s mission is to exert as positive an influence on children as his father exerted on him. Song after song perpetuates values of self-esteem, good judgment, thoughtfulness, cooperation, courtesy, kindness, imagination, and love. ❖

❖ Read the **complete reviews** at wsm.wsu.edu





by Ben Herndon :: Jacob the Greyhound, a five-year-old dog belonging to a Washington State University Veterinary Teaching Hospital surgeon, is a regular blood donor at WSU. Because of his size, he's able to provide 450 milliliters, or about two cups, of blood for the treatment of other ailing canines.

One afternoon this winter we followed Jacob through the donation process. He was content to nibble dog snacks while the students led him, tail wagging, into a small room and prepared him for a blood draw. They lifted him onto a cushioned table, shaved a spot on his neck, and tapped into the jugular vein. He lay still while the students stroked him, talked to him, and worked the equipment, the same type of blood-donation equipment used with humans.

In order to give blood, a dog must weigh at least 60 pounds, be one to six years old, and be able to lie still for 10 minutes. Jacob, who easily meets these requirements, gives blood every two months or so.

The canine blood donor program has been in place at WSU since 1988 and has saved or prolonged hundreds of lives. Workers at the hospital perform blood draws twice a week under the supervision of veterinarian Jane Wardrop. The blood is usually separated into red blood cells and plasma. While most of the donations are used in the hospital, some are sent to veterinarians in the Spokane area.

Dogs can need transfusions for many reasons, including anemia, blood loss after an accident or surgery, liver disease, or bleeding due to the ingestion of rodent poison.

On this day, Jacob's donation went straight to a similar-sized yellow lab named Murray who has lymphoma and was waiting with his owner, Kelly Hightower, in another room.



To view a slide show of the donation process and pictures of Jacob, Murray, and their owners, visit *Washington State Magazine Online* at wsm.wsu.edu.

Donors bring hope—and wags



Suzanne Schreck

2002 Graduate (B.A. Business Administration, Marketing)

Communications Director, Marler Clark, Seattle, WA

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