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WASHINGTON s t a t e m a g a z i n e

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22 :: The Home of My Family: Ozette, the Makahs, and Doc Daugherty

Perhaps the most remarkable thing about Ozette is the cultural continuity. Makahs had lived in Ozette for 2,000 years and probably much longer. The village had been abandoned for only 60 years, and many Makahs still went there to fish and hunt. One elder called the exposure of the longhouses by the storm " a gift from the past." by Tim Steury

32 :: Through the Garden Gate

Invasive species—plants, animals, and microbes—have been estimated to cost American businesses and taxpayers at least \$122 billion every year in damaged property, lost productivity, and control efforts. However, perhaps more costly in the long run is the damage done to natural communities. *by Cherie Winner*

42 :: A School in the Woods

Many of the children who visit IslandWood have never been to the woods. Some are afraid to try new things, to walk in the woods at night, to touch a slug or pull apart a wild mushroom. Now, they're as much a part of the place as the wildlife. *by Hannelore Sudermann*

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On the cover: Cannonball, or Tskawahyah, Island, Cape Alava, Washington coast. Photograph by Zach Mazur.



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first words

Landscape and Responsibility :: One evening in early December, a group of community and business leaders gathered in downtown Seattle for a reception for President Floyd, sponsored by Williams Kastner, Key Bank, and Macy's. It was a chance for the private sector to welcome Floyd, said Jessie Harris, a lawyer with Williams Kastner and a former ASWSU president, who helped instigate the event.

The motivation for such a gathering was simple, said Harris earlier that day, as we visited on the 46th floor of Two Union Square. Beyond our conference room was a glorious panorama of city, sound, and mountains. Williams Kastner, said Harris, not only has a strong practice in education law, but also a strong interest in diversity. I asked Harris how he got any work done with such a view before him.

That evening, President Floyd talked about the responsibility of Washington State University, as a land-grant university, to the citizens of Washington. As he spoke, I was reminded of all the opportunities for exercising such responsibility.

This past year saw the publication of two books of great significance to Washington, both published, to its credit, by the University of Washington Press. The first, *Landscapes*, is a collection of photographs by Seattle photographer Mary Randlett. Randlett's vision of our state is deep and timeless, reminiscent of Asian landscape painting. It's also an intriguing complement to the second book, *Archaeology in Washington*, by Ruth Kirk and WSU emeritus professor Richard Daugherty.

Every time I cross this state, I am awed anew by the immensity and diversity of its landscape. This past year, I've been similarly awed by the layers of time beneath this landscape's surface, drawn, through my introduction to Ozette and the history of the Makahs, deeper and deeper into the stories of this place.

Daugherty and Kirk, who interacted professionally for decades, married last spring in a Makah longhouse. Their work—she as a journalist and chronicler, he as our preeminent Northwest archaeologist—has enriched our knowledge of our state beyond description. Daugherty's graduate students are a who's-who of Northwest archaeology. Kirk has written nearly 30 books on natural history, archaeology, and history, many of them about the Pacific Northwest.

When I visited Ruth and Doc this past spring at their home in Lacey, they spoke of their careers and relationship with the state with an elegance and concision that comes only with the perspective of age. "The more we know about the state in which we have our dance with life," said Kirk, "the more invigorated and content and responsible we are."

It struck me that Ruth's dictum might serve not only as a definition of, but also as a mission statement for education, which is not a result, but a never-ending process.

Tim Steury, Editor

(3)

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NEWS from the WASHINGTON STATE UNIVERSITY FOUNDATION

Gates Foundation award to help Latino childcare providers increase literacy, quality of care

Hundreds of Washington children and their care providers will benefit from an expanded literacy project developed through Washington State University Extension, thanks to a recent \$967,000 grant from the Bill & Melinda Gates Foundation.

"The primary goal of the Literacy and Educational Pathways for Latino Child Care Providers project is to improve the educational advancement of Latino childcare providers and thus increase the quality of care for the children in their licensed family childcare environments," said Kay Hendrickson, Franklin County Extension director.

Hendrickson, along with a community coalition and a team of WSU Extension educators in Franklin County, began a pilot Spanish literacy project in March 2007 with seed money from Women Helping Women Tri-Cities Fund and Bank of America. The childcare providers meet after work a few evenings each week to learn how to write sentences, do basic math, and read stories in Spanish.

"I want to learn to read and write so that I can help the children that I have under my care," one participant wrote. Six months earlier, when she entered the program, she could not express herself in writing.

The expanded project at WSU Franklin County Extension will serve 40 childcare providers who are working on their primary and secondary educations. It will also allow 20 more providers to participate in Early Childhood Education instruction at Columbia Basin College, preparing them to earn the Spanish Child Development Associate National Credential. Additional instruction focuses on English language skills needed to continue early childhood education coursework.

Community partners in the Pathways project include Franklin County, Columbia Basin College, Benton Franklin Health District, Kennewick Division of the Department of Early Learning, Benton Franklin Head Start, Benton Franklin Community Action Committee, School's Out Washington, and individual community leaders.

"This is such exciting news," said Franklin County Commissioner Neva Corkrum. "If we can improve the quality of childcare our children receive, they're going to do better in school. It's a win-win for everyone."





Pathways participant Alejandra Contreras brings new learning to her job as a childcare provider.

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Captain Charles Cutlip '96 (left) and Captain Joshua Conant '01 currently at Victory Base Complex, Baghdad, Iraq.

Stealing thunder?

I thoroughly enjoyed the article on the fight for equity for women's athletics in Washington. And then I got to the end of the article where, in the red apple, I began to read about a match-up of WSC and UW athletic teams 100 years ago. Not until the second column did I realize that this was about men's football. What a letdown! Once again the men's athletics steal the women's thunder. The placement of that article on the same page as an article about the inequities that women's athletics had to battle (much of it because of football) was, to me, symbolic of the perpetuation of a male dominated culture that still doesn't "get it," and took away all my positive feelings about a wonderful, heartwarming article on women's sports.

Holly Barnes '96 Moscow, Idaho

Gems

In the winter 2007-08 edition (reading it while waiting for the Apple Cup to begin) I found two interesting gems. First, in the article "Field Camp 1957," reference is made to the "railroad." I believe the railroad referenced was the Camas Prairie RR, and if so, there is a WSU connection there. James C. Nelson, professor of (transportation) economics, did the economic study that resulted in its relocation rather than abandonment. Might be worth checking that out. Secondly, in the "In Memoriam," 1930's, I presume the John F. Bohler Jr. is in fact the son of J. Fred Bohler, and perhaps this should have been noted. This edition is particularly good.

Mark Street ('64 Polit. Sci.)

Climate of opinion

I enjoyed the article on climate change, "Time Will Tell." The prevailing feeling seems to be that humans are causing global warming through massive releases of carbon dioxide. However, some scientists see evidence in ice cores that suggests significant variability in atmospheric carbon dioxide concentrations before humans could have contributed. And the variability seems to follow temperature changes, rather than precede them. The debate goes on.

Brian Cieslar ('73 B.S. Agron.)

The interesting studies by Rick Gill and Dave Evans (WSM, winter 2007-08) could be repeated a follows: consider that the atmosphere consists 78% (by volume of dry air) of N₂, and 21% (by volume of dry air) of O2. Internal combustion engines suck in ambient air to provide O₂ for the oxidation of hydrocarbons, producing energy and emitting CO₂ and H₂O, plus a whole variable mix of partially oxidized hydrocarbons and CO, depending on the proper tuning of the engine. However, N2 is sucked into the internal combustion engines as well, and is oxidized and emitted as water-soluble NO_x molecules. To play with imaginary future increases of ambient CO₂ without supplying proportionate increases in emitted water-soluble NO_x molecules produces erroneous results: plant-available N as the limiting factor to plant growth in these studies is an artifact that can be corrected.

Another fact puzzles me about the obsession with CO_2 as a greenhouse gas: molecular weights of CO_2 (76 amu), O_2 (32 amu) and N_2 (28 amu) indicate that CO_2 is the heaviest molecule in ambient air and predominates where it counts: around green vegetation. A forgotten greenhouse gas? Water vapour! Oh, and a joyful article showing my Ph.D. (1968) advisor, Dr. Jack Rogers, who provided guidance and emotional support during my studies in the Department of Plant Pathology. I am full of admiration for professors who survive academia and continue to do what they love in retirement!

A.A. Loman ('68 Ph.D.) Calgary, Alberta

The article "Time Will Tell" left room for the thought that global warming, or climate change, may not be all bad. Higher CO₂ content in the air and warmer temperatures could increase yields in the growing of food crops.

Let us pray that another grave mistake not be made, like President Nixon and the world's leaders' outlawing of the use of DDT. That resulted in the deaths of millions of people and caused long-term illnesses for other millions from malaria.

The proposed drastic changes in the release of CO_2 by industries would cost hundreds of billions of dollars, which could much better be used to lift the third-world countries out of hunger and poverty.

Worldwide rules should be based on facts, not on unfounded theories. Man is still not able to control climate.

> Manley Kjonaas ('42 Chem. Engr.) Indianapolis, Indiana

Warriors past and present

I would like to congratulate Hannelore Sudermann on her excellent article about Jerry Sage and his "Band of Cougars" in OSS. I have been trying to get the Pullman Chamber of Commerce to consider installing plaques in the downtown "Walk of Fame" to honor these guys, without success (or response) so far. In pursuit of this, I've been researching the Stalag Luft III experience from the many books published on the subject. Hannelore's article is therefore very timely from my perspective.

> John Wolff Earth & Environmental Sciences

We were fortunate to have met Elmer Harris '42, the last of the OSS Cougars. He passed away in October. —Editor

I received a postcard from WSU in the mail that had a mini WSU flag. Pictured (*above*) is Captain Charles Cutlip '96 and right is Captain Joshua Conant '01. Both are currently at Victory Base Complex in Baghdad, Iraq. BTW, I just received this month's email about Apple Cup. Turns out the lieutenant sitting next to me on Camp Liberty went to UW. Poor guy.

Joshua M. Conant '01 Captain, Military Intelligence JIDC Liaison Officer to MND-Baghdad "Quando omni flunkus moritati"

About those pears . . .

Your excellent article on pears was sweet and juicy. I wanted to inform you that the developer of the Red Bartlett pear was my father, A.D. MacKelvie of Zillah. He patented Max-Red Bartlett about 1946. I'm enclosing some newspaper articles that may be of interest. Dad attended WSC for one semester about 1914 and resided in Ferry Hall. I graduated from WSU in 1947, and both of my sons are WSU grads. Look for red pears in the market!

> Art MacKelvie '47 Spokane

Correction

Which side of the border was that? In "Pears," we mistakenly gave Washington's Okanogan County British Columbia's spelling (Okanagan).



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» panoramas



The orphan flower

by Cherie Winner :: In a Washington State University greenhouse, on the roof of Abelson Hall, dwells an orphan. Sheltered by a translucent plastic tent that diffuses the sunlight, drenched in water that keeps the air heavy with moisture, a semitropical plant called *Gasteranthus atratus* unfurls its crinkly, dark mahogany leaves. Once a year or so it puts forth cream-colored, vase-shaped flowers. It doesn't seed, however. Whether it needs another member of its species or a particular insect or bird to pollinate it isn't known. For now, it simply grows, and waits.

Gasteranthus atratus is an orphan, because its home no longer exists. The species was discovered in the mid-1970s in an isolated patch of forest in the high mountains of western Ecuador. A few years later, the forest—the only place the plant had ever been found—was leveled and converted to agricultural use.

"It may not have a place in the wild any more," botanist and doctoral student John Clark says of the unfortunate plant. The only reason *Gasteranthus atratus* survives at all is that the scientists who first found it brought back live cuttings in addition to their usual haul of dried specimens. With its unusual leaves and pretty flowers, it was a good prospect as an ornamental houseplant. WSU's orphan grew from one of those original cuttings. Clark brought it with him when he came to Pullman four years ago from the Marie Selby Botanical Gardens in Florida, which has a vigorous research program focusing on orchids, bromeliads, and gesneriads, the family *Gasteranthus* belongs to.

Clark and his advisor, Eric Roalson, are exploring the genealogy of gesneriads all over the world. It's a daunting task. The family is incredibly diverse, with about 3,400 species already identified. That's almost as many species as in all the families of mammals combined (about 4,300). Along with diversity, the family has a high rate of endemism—many species have a small home range and are found nowhere else. They live on PHOTOILLUSTRATION COURTESY SMITHSONIAN INSTITUTION MARIE SELBY BOTANICAL GARDENS

a single archipelago or island, or even a single mountaintop or river valley. Because such sites are usually isolated from similar sites nearby, the residents of neighboring places have evolved along their own paths over time, producing the stunning diversity we see today.

Much of that diversity is at risk, says Clark, because species with small home ranges are especially vulnerable to habitat loss. And despite their shared genetic history and similar habitats, different species of gesneriads are not interchangeable. If one species disappears, it can't be replaced simply by transplanting a close relative from another site.

"This biodiversity came about over an incredibly long period of time, long before we were part of this ourselves, and because of that, it's not something that we have the capacity to recreate," says Clark.

He and Roalson tease out the genetic links among family members by comparing DNA

» panoramas

sequences of dozens of species from each of several geographic regions. They hope their analysis will reveal how the species are related, why they are where they are, and eventually, what the complex family tells us about the bigger picture of how life on earth evolved.

They already know that some gesneriads in Australia and nearby islands are more closely related to gesneriads in South America than to those in southeast Asia. That relationship can be traced to ancient times, when the continents now known as Australia and South America were close to the Antarctic land mass. The Asian land mass, thousands of miles to the north, had very different species of gesneriads. For the past 50 million years or so, the northwarddrifting Australian continental plate has been bumping up against the Asian plate, bringing the two historically distinct life zones into close proximity. The interface zone where they meet is a dazzling natural laboratory of evolutionary processes.

In coming years, Clark hopes to survey islands in the region, most of which he expects to host their own endemic species of gesneriads. Time is short, though. Exploding human populations and development claim more of the specialized habitats and their native species every year.

"That interface zone can be better understood by looking at these organisms," says Clark. "But if we don't have those individuals, or as many of those individuals as possible, the puzzle becomes increasingly incomplete."

He's frustrated by the scarcity of funding for field surveys, which arguably cost less per unit of valuable information than almost any other form of research. Clark can mount a month-long biodiversity survey anywhere on earth, including travel, equipment, supplies, and field assistants, for \$15-20,000. Even though he uses high-powered molecular techniques to work out the family's history, Clark says he still needs information that can only come from "down and dirty" fieldwork-firsthand knowledge of the soil, setting, microclimate, neighboring plants, helpful and predatory animals, and everything else that comprises the ecosystem that is the natural context of the plant in question.

"If a species isn't doing what it's supposed to in its native habitat, what good is it? What does it serve?" says Clark. In its natural home, *Gasteranthus atratus* had been a key part of a unique ecosystem. Now, he says, it's not extinct, exactly, but its place in the world has become metaphoric: it's a puzzle piece, a clue to the history of its family.

Meanwhile, the orphan's tale continues. In the 1990s a new survey team found *Gasteranthus atratus* living in a small forest near its original home. That might have been reason for hope, but unfortunately, the second forest was not protected from development and has likely been cleared. With the rarity of field surveys, says Clark, we may never know whether the species still survives in the wild, or fully appreciate what we've lost, if it and the natural communities it was part of have disappeared.

"Subtleties sometimes have a much greater impact than we once thought," he says. "And that's what these species are. They're subtleties. But they're important, because it's an infinitely intricate puzzle that they're a part of—and we don't have all the pieces."

Vanished places: Silver Lake and The Tanglewood

by Trevor Bond :: Imagine having a campus lake to skate on in the winter or, in fairer seasons, to picnic by. Washington State College had one: a small man-made pond in the area now occupied by Mooberry Track and the Hollingbery Field House. Officially called Silver Lake, it was informally known as Lake de Puddle.

Silver Lake became part of the College in 1899 as part of six acres purchased for \$275. The school used the low-lying area to carve out a 1.6-acre water feature. Our earliest photographs of Silver Lake, such as those in President Bryan's *Historical Sketch of the State College of Washington*, show the pond bordered on the east by a few shrubs. Not long after, Professor Balmer from the School of Forestry directed the transplanting on the site of some 6,000 trees and shrubs. Over the

years, these plants grew into a dense thicket called The Tanglewood. A rustic wooden bridge and a series of private paths completed what must have been a lovely retreat. According to William Stimson, if students wished to meet secretly for a little "fussing" or kissing, they chose Silver Lake and the privacy afforded by The Tanglewood as their main romantic retreat.

We can further glimpse the importance of Silver Lake from "A trip though Cougarville," a charming series of charcoal drawings and captions published in the 1926 *Chinook* yearbook. "In the spring and fall we have tennis and golf and in the winter skiing and skating. Silver Lake, over there on the border of the field, freezes over every year, providing a fine place for our winter sports. An occasional hole in the ice adds variety and interest without being dangerous. No one has ever been known to drown in Silver Lake."

As the tour continues, we see an image of The Tanglewood and its rustic bridge. "This little bridge over the lake adds the note of rustic beauty desirable in the humblest of country clubs. Unlike other little rustic bridges, it does not sag with the weight of many small boys with fishing poles, for no fish pollute the waters of Silver Lake. It is used purely for ornament and to furnish water through which the sophomores may drag the freshmen in their annual tug-of-war... Need I mention the manifold uses to which an oasis such as this is put in a college town? It serves as an outdoor auditorium and a scene of many Cougarville revels as well as fulfilling its humbler duty as general picnic grounds and strolling park."

Unfortunately, the "proper atmosphere" of Silver Lake occupied precious space bordering the College's athletic facilities. If ice skating and strolling along the lake sound idyllic, practicing football and other sports outside in the snow does not. The demise of Silver Lake and The Tanglewood came in the late 1920s with the creation of the Field House, the financing of which came through student fees. In fact, you can see the contract for its construction in Manuscripts, Archives, and Special Collections, signed by the dashing student-body president, Ed Murrow.

Silver Lake is the most fondly remembered spot on campus that isn't here anymore. The 1.6-acre man-made lake and The Tanglewood park that surrounded it were covered over in the late 1920s to make room for the Hollingbery Field House and an adjoining track. Images courtesy WSU Manuscripts, Archives, & Special Collections.



10



Closing minds: How layoffs can be bad for business

by Hannelore Sudermann :: One of the best ways to kill a worker's creativity is to tell him his job is on the line.

Tahira Probst, an associate professor of psychology at Washington State University Vancouver, has explored that notion through a combination of laboratory experiments and field studies at businesses and schools in western Washington. She was able to prove that workers who believed their jobs were in jeopardy lacked cognitive flexibility.

Her study on job loss was published in the *Journal of Occupational and Organizational Psychology* in 2007.

Workers whose jobs are in danger are less healthy and happy. That's been common knowledge for years, says Probst. Countless studies have looked at job insecurity and its negative effects on employee health and morale. But businesses fo-



cused on the bottom line don't really care about those results, she says.

Those same studies also show that workers under duress can be more productive. Businesses often cite a desire to make a company "a more lean, mean thing that's more adaptable or flexible" as a reason for layoffs, says Probst. With that in mind, she wondered if the businesses aren't really creating circumstances that do the opposite. With the help of colleagues at University of Puget Sound and Wright State University, Probst designed and implemented a set of surveys and studies to test her hypothesis that unhappy workers are less creative. "I wanted to look at something that was more directly relevant to the organizational bottom line," she says.

Probst, 36, is one of the younger members of the experimental psychology faculty. She came to WSU in 1998 straight out of graduate school with a Ph.D. in industrial organization psychology. She found she enjoyed looking at attitudes and behaviors of people in the workplace. "It was all the interesting things about psychology, but it was also the applied nature of the work," she says. Since joining WSU's faculty, her studies have included job insecurity and underreporting of accidents, addressing psychosocial problems at work, workplace diversity, and matching management practices to the national culture. What she discovers can help businesses to change their own behaviors to get the desired results from their employees.

When designing this particular study, Probst noted that a large share of the American workforce has experienced layoffs in recent years. In 2000 and 2001, for example, 43 percent of U.S. organizations had layoffs. She also noted that little has been done to examine creativity, long-term productivity, or counterproductive workplace behaviors.

For her laboratory experiments, the psychologist tapped into the WSU student population. One hundred and four Vancouver students took part in a two-hour exercise in which they were hired as copy editors for a mock newspaper. They were given detailed explanations of the job, benefits, and compensation. Then they were given stories to edit and, to invest them in the job, were rewarded for good work with lottery tickets to win real money at the end of the day.

Half way through the experiment, some of the students received an urgent memo stating that 50 percent of them would be laid off. They were told that the decision would be based on performance and that those who were dismissed would have to return their lottery tickets and spend the rest of the experiment filling out paperwork. At this point, the group was given a problem-solving task, which they were told had no bearing on their jobs.

"It's a classic creativity assessment called the 'candle task," says Probst. The test was developed in 1945. Participants are given a box of tacks and a small lighted candle, which they are told to attach to the wall so that no wax drips on the floor. The solution is to affix the tack box to the wall and set the candle inside it. Those in the layoff group had greater difficulty completing the task, says Probst. In fact, 55 percent of them couldn't find the solution. By contrast, only 35 percent of the control group members, none of whom were threatened with layoffs, failed to find the solution. That difference in performance was evidence that the layoff group had lost some cognitive flexibility.

For the field study, Probst focused on 144 employees from five organizations, including two schools and a dental clinic. She had no problem finding businesses where employees felt their jobs were at risk. "Job insecurity is so widespread, we really didn't have to look," she says. The elementary school, for example, had recently suffered severe budget cuts and had to reduce its workforce through early retirements and forced layoffs.

Probst was especially interested in workers in education and medicine, because these are jobs that require a high level of creativity. When a teacher tries to help students understand concepts, for example, she may have to come up with three or four different ways of explaining things, tailoring her explanations to meet different learning styles, says Probst.

One of the assessments was of the worker's ability to see relationships between various ideas. An example was "Broken...Clear...Eye." The correct answer is "Glass." The workers who said they felt they were in danger of being laid off missed the answers more often. Probst's study revealed that those who said they felt their jobs were most at risk also had the lowest scores on the creativity test.

:: continued page 18

cougar **baseball**

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2/22	Creighton	3:30 p.m.	4/11	Arizona State *	5:30 p.m.
2/23	Creighton	2:00 p.m.	4/12	Arizona State *	2:00 p.m.
2/24	Creighton	Noon	4/13	Arizona State *	Noon
2/29	Wright State	3:30 p.m.	4/22	Gonzaga	5:30 p.m.
3/1	Wright State	2:00 p.m.	4/25	San Jose State	5:30 p.m.
3/2	Wright State	Noon	4/26	San Jose State	2:00 p.m.
3/7	Kent State	3:30 p.m.	4/27	San Jose State	Noon
3/8	Kent State (DH)	Noon	5/3	Oregon State *	5:30 p.m.
3/9	Kent State	Noon	5/4	Oregon State *	2:00 p.m.
3/20	California *	5:30 p.m.	5/5	Oregon State *	Noon
3/21	California *	5:30 p.m.	5/23	USC *	5:30 p.m.
3/22	California *	Noon	5/24	USC *	2:00 p.m.
3/25	Gonzaga	5:30 p.m.	5/25	USC *	Noon
4/4	UC Davis	5:30 p.m.	* Pacific-10 Conference games		
4/5	UC Davis (DH)	2:00 p.m.	All times Pacific and subject to change		
4/6	UC Davis	Noon			

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ODE TO A TEA SET by Hannelore Sudermann :: photos by Chris Anderson

A HANDCRAFTED STERLING SILVER TEA SET, its long rectangular surfaces modern in design, gleams from its perch on a bookshelf in an apartment high above Seattle, the home of the man who designed it.

The simple geometry of the set's four serving pieces and tray belies the years of effort that went into its creation.

The same is true of another of architect Phillip Jacobson's projects—much larger in scale than the tea set—the emerald-hued, glass-encased Washington State Convention and Trade Center just a few blocks east of the apartment.

The retired director of design at TRA Architecture and Engineering in Seattle, Jacobson has had a hand in crafting close to 35 years' worth of Pacific Northwest structures. His influence can be seen in the King County Aquatics Center, the subway stations of the downtown Seattle Metro project, the 1982 renovation of Wegner Hall at Washington State University, and the biological science building at the University of Washington, where he was on the faculty from 1962 until 2000.

But all those projects were long-term endeavors. He found more immediate outlets for his creative urges by designing furniture, light fixtures, jewelry, dishware—and tea sets. "Designers get frustrated when they develop an idea and they don't see it until six or seven or, in one project, 11 years later," he says. "These other projects were realized more quickly, a kind of instant gratification."

Last fall Jacobson's small pieces were exhibited at the Nordic Heritage Museum in Ballard. The show coincided with the release of *Elegant Explorations*, a book about the more intimate realm of Jacobson's design life. In October, we met at the museum to look at some of the architect's jewelry, fixtures, and furniture, and to talk about how, in creating them, he could play and explore with form and materials.

Jacobson's father was a carpenter who became head of experimental production at Lockheed and, later, at Boeing. He also either built or extensively remodeled every house in which the Jacobson family lived.

Though building had always been a part of Phillip Jacobson's life, he hadn't thought much about design until he spent time in Japan as a serviceman during the post-war occupation. He was awed by the castles and shrines of the country. "It was my first time seeing really formal architecture, of the kind we didn't have in Seattle." The long history of the Japanese culture and the drama of the buildings kindled an interest. When he returned home in 1948, Jacobson enrolled at WSU and soon after signed into the architecture program.

This was a time of tremendous Bauhaus influence both at WSU and at schools throughout the country. The German school of architecture, design, and art was home to a movement that blended

ODE TO A TEA SET

the fine and applied arts. The result was an approach to architecture and functional design—often of furniture, dishes, and appliances—that emphasized beauty of form. In the 1930s, the Nazis drove many of the influential Bauhaus members out of the country. Architects and designers like Walter Gropius, Mies van der Rohe, and Marcel Breuer fled to the United States, where in the ensuing years they played leading roles in the architecture scene.

"I tell people, 'Once you get into the Bauhaus, it's hard to find the door out,'" says Jacobson with a wink. "The fact is, once you're educated in that kind of ethic of design, it's very difficult to change. You could apply that to me. I still believe very much in that basic kind of approach to design. It has come in and out of favor since I was educated. But it had an indelible influence on me."

The WSU program was rigorous, and only about a third of the architecture students in Jacobson's class finished. In his senior year, Jacobson met Effie Galbraith, a fellow student who had just returned from a summer program in Oslo. She urged him to change his plans of going directly to work after graduating. "I think she was trying to get rid of me—you meet this guy and then you suggest that he go to Europe?" he says. "Really, she knew it would be good for me." Immediately after graduation, Jacobson left Pullman to spend a week exploring Chicago, followed by another week in New York. Then he boarded a boat for England, where, as a Fulbright scholar, he would study urban planning at the University of Liverpool.

The next summer he explored Europe from Norway to southern Italy, visiting the actual structures he had previously viewed only as images projected from black-and-white slides in his WSU classes. The buildings he saw, both ancient and modern, brought history to life for him. "It was the richest year of my life," says Jacobson.

The year he returned home, he married Effie and went to work for the John Maloney firm in Seattle. His first building was a service structure for Boeing Field. It was a good job, but Jacobson was lured away by the prospects of designing larger projects in more urban settings.

His first major project in Seattle came in 1958, while he was working for TRA: a women's dorm at the University of Washington. Touches of his design work are on everything in McCarty Hall, down to the combination bookshelf/lights and the knockers on the RAs' doors.

"That year and a half in Europe, and seeing these modern buildings, many of them in the Nordic countries, gave me the idea that I could do that," he says. "The urge to design is so strong in architects, you'll take the opportunities that are available, and you design them as best you can."

Faced with a lack of suitable and affordable lighting, Jacobson started designing his own. He worked with the Seattle Lighting Fixture Company in the 1950s to create mass-produced metal and welded-acrylic fixtures for schools and churches. By the 1970s he was creating rectangular welded-

Jacobson's creative influence can be seen in the geometry of many well-known public buildings in the Puget Sound region. *Left to right*: The Washington State Trade and Convention Center, the King County Aquatics Center, the Washington State Department of Highways Building. Photos courtesy Phillip Jacobson.







Clockwise from top left: Jacobson played with primary forms in three pendants that he designed in 1994; Jacobson and his wife, Effie '52; a welded acrylic table lamp designed in 1975; the yellow gold pendant is one of a series Jacobson designed in the 1980s; Jacobson sits on a black leather modular sofa he designed in 1974.



acrylic table lamps. And he's still designing. Some of his most recent pieces, wall sconces and a pendant dining lamp, were completed in 2003.

Jacobson began thinking about jewelry design while studying in Europe. It is perhaps the venture most removed from creating buildings, but the architect has managed to connect the two through design. In one series of pendants made of white gold, coral, and stone, he explores the primary forms of triangle, circle, and square. He experiments with natural forms, as in the "peas-in-their-pods" clusters of pearls set in yellow gold in an ensemble that includes a necklace, bracelet, and rings. He also plays with man-made forms, using vehicle fins and engine grills as starting points for designing pendants.

Most of these more personal creations went to friends and family.

All the while, Jacobson and the architects at TRA, together with his UW colleagues and students, were shaping and defining architecture for the Pacific Northwest. Projects included the 1970 University of Washington Aerospace Research Lab, the King Tut Exhibit in 1978, the preservation of the Tacoma Union Station, the Seattle Ferry Terminal, SeaTac Airport, even Jacobson's family home in Laurelhurst, which was lauded by *Sunset Magazine* in the 1970s for how well it fit into a difficult, narrow site.

It would be hard to say which buildings are his most significant. But among his small projects, his crowning achievement is probably that silver tea set.

Many architects have made tea sets, in part because they enjoy the design challenge of creating something of beauty that has very specific functional issues, says Jacobson. Because of its design and its exclusive use of solid sterling silver, his tea set was particularly complex and expensive. He spent a long time developing the idea, even creating one piece out of illustration board to get a feeling for the shape and scale.

To build it, he turned to a husband-and-wife team who had graduated from art school at the University of Washington. Over two and a half years, the three worked to bring into being what the architect had imagined. The result is a study of rectangles in the form of four eight-sided pieces—a coffee pot, a tea pot, a sugar bowl, and a creamer, each covered by a pyramidal lid surmounted by a perfect open cube. The set sits atop a black tray framed in silver. While each piece is beautiful in itself, together they resonate. Grant Hildebrand, one of Jacobson's UW colleagues, wrote that they seem "an almost surreal metaphor for some scaleless futuristic city or, equally, some yet-undiscovered ancient monument field."

The project was ultimately a gift to Effie.

The set represents all that Jacobson is about: taking a classic notion or form as a platform for imagining, testing, and exploring. The result, whether it's as big as a building or as small as a sugar bowl, is something useful and beautiful. \otimes

» sports



Lag

Track and field champion Berard Lagat '01 with his wife, Gladys Tom '00, and son, Miika, in Pullman last December, when he received a WSU Alumni Achievement award.

by Hannelore Sudermann :: On his first morning back in Pullman, world track and field champion Bernard Lagat '01 pulled on his running shoes and said a quick goodbye to his wife, Gladys Tom '00, and son, Miika.

It was 8 a.m. and about 19 degrees outside. But the morning was clear, and there was plenty of Johnson Road to share with the 17-member Washington State University cross country team.

After years of training in Arizona, Kenya, and, more recently, racing in Athens and Osaka, returning to his old jogging route was like visiting an old friend, says Lagat, who came to WSU in December to be publicly honored by the University's athletic department. The twolane country road brought back memories of a time when he knew he could be fast enough to compete against the world's best, but was still preparing himself to do it. "I think I ran there more than anybody else," says Lagat. "I used to drive there by myself four times a week."

On this frigid morning he made note of everything. "I remembered the landmarks for a mile, the second mile, the third mile," he says. "It was really awesome being back there."

The whole cross country team stuck with him for 10 miles of the run. Only one student made the extra loop, finishing the full 15-mile workout with Lagat, and chalking up a few memories of his own.

Lagat, who grew up in Kenya, had his choice of colleges. Harvard wanted him. So did Ole Miss and Fairleigh Dickenson in New Jersey. But the decision to come to WSU was easy. His running coach in Kenya knew coach James Li, and Eric Kamau, his training partner from Kenya, was here. "I felt really comfortable making my decision here," says Lagat. "It suited me very well."

In 1996, before he left Kenya for WSU, he just missed a place on the Kenyan Olympic team by a whisker. It was the first time Lagat realized that he could be a world-class runner. "So when I came here, I was looking past college. My focus was the 2000 Olympics," he says. Pullman was the place to train, learn, and prepare.

"I got the best out of the place," he says. In addition to pursuing a degree in management information systems, he became a key runner for both the cross country and track and field teams. "It is an amazing experience training in a place like Pullman," he says. The hot weather, the cold weather, the snow and wind. "You might even feel depressed at some point, but it makes you so tough," he says.

Reminiscing at a reception in his honor at Beasley Coliseum, Lagat pauses to glance up at a video of one of his NCAA races. In it he's yards ahead of everyone else, but keeps glancing back as he heads to the finish line. I ask him what he was thinking at the time. "I loved my teammates," he says. "I knew I would win. I was looking back to check where they are. I was not tired. I was thinking, hey, I'm having fun."

During his NCAA racing career, his WSU coaches were asking him to run two, and sometimes three, events at a meet. Though he would have done his job with just one race. Lagat was often willing to compete in the 800-, 1500-, and 3000-meter races. "Part of being on a team is to contribute to the team to win," he says. His contributions were recognized in 1999, when he was named Pac-10 athlete of the year. That doubling, and sometimes tripling, of events helps him even now to understand his limits and appreciate how one race can prepare him to go faster in another.

Though he left WSU in 2000 to compete in the Sydney Olympics for Kenya, he came back to finish his degree, a promise he made to his parents. And to start his life. He had long admired fellow student Gladys Tom, but while they were both student athletes she wouldn't go against athletic department policy and date a fellow athlete. But once he was a pro runner, the rule was moot. "I waited a year and a half," he says. "I had to understand. She was very professional about her athlete status."

They had their first date at a Mandarin restaurant in Pullman, he says. It was followed by a few more at places like Pete's and Denny's. "You have to remember, we were students," he says.

While Tom earned her master's degree in human nutrition, Lagat finished his business degree. Then he went on to race professionally. In 2004 he won an Olympic silver for Kenya. In 2005 he became a U.S. citizen, and last summer he won golds in the 1500 and the 5000 at the IAAF World Championships of Track and Field in Japan.

Lagat and Tom were married, and in 2006 welcomed Miika into their family. They now live in Arizona, where Lagat can train at high altitudes and be close to his coach, James Li.

Though he's in full training for the 2008 Olympics in Beijing, he is also taking some time to travel and return to his roots. In the fall he brought his small family to Kenya to visit his parents. And this winter he stopped to visit his first American home, in Pullman. "It feels great to be back," he says. "I have so many memories here." 巜

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"I hope that people look at it in the big picture," says Probst. "Yes, [with lay offs] productivity goes up in the short term, but probably not in the long term. And pretty much every single other possible measure you can look at related to job insecurity is going to have a negative effect. Safety gets worse. Creativity gets worse. And ultimately product quality gets worse," she says. "How could this possibly be good for an organization?"

A new life for Winnie



by Haly Ingle :: Though she's only three, Winnie the grizzly bear has already seen some rough times. Her mother left her last year. And when hunger

drove her into a Yellowstone campground, park service employees did their best to haze her and scare her off. Eventually she was trapped and moved miles away. But after she found her way back to the campgrounds—twice—she was carted off to a concrete den 600 miles from home.

As the newest, and wildest, member of the Bear Center at Washington State University, Winnie is struggling to adjust to a different life.

Winnie's story started in the summer of 2006, when she was trying to put on enough fat to survive the winter. To her delight, and to the dismay of Yellowstone service employees, she discovered bacon grease in the waste hose of a camper trailer. Her fear of people wasn't strong enough to keep her from those tasty camper calories, and she started appearing regularly in the Lake Village and Fishing Bridge developed areas.

Although she wasn't too young to be on her own, she wasn't an adult yet either. Having discovered food at Lake Village and a nearby campground for government workers, she wasn't going to give it up easily. In the massive Yellowstone National Park, Winnie had chosen her home.

Joy Erlenbach, a senior majoring in wildlife biology, was volunteering at Yellowstone last summer. She spotted the young bear while walking back to her trailer from the bathroom. While she was delighted to see her first wild bear, she knew the sighting wasn't a good thing. If Winnie persisted in coming close to humans, she would have to be destroyed. "A fed bear is a dead bear," the park service tells thousands of tourists every summer.

This was Winnie's second summer for campground appearances. Bear managers at the park had been hazing her away from human enclaves by firing cracker shells and rubber bullets. "They were trying to get her to learn to be a natural bear," and use her fear to break her of her attachment to human food, says graduate student Jennifer Fortin, who spent her last two summers in Yellowstone observing bear behavior—although not Winnie's—for her doctoral research.

"People don't realize ... [that] as big as they are, grizzly bears are scaredy-cats," says Lynne Nelson, College of Veterinary Medicine, whose research involves studying hibernating bears at the Bear Center. Bears are motivated by fear and food, she says. Their nature is to run away when they come in contact with humans. But once they become habituated to humans and human food, they can become dangerous. Winnie was blamed for eight instances of property damage. For reasons of public safety, she had to go.

That's when Charlie Robbins, director of the Bear Research, Education, and Conservation Program, accepted her into the Bear Center. In late August Winnie was caught in a culvert trap that had been baited with a quarter of an elk. Once inside the trap, she was calm, and remained so for the 12 hours it took to drive her to Pullman, says Fortin, who made the trip with her. When she arrived, she was sedated, so Robbins and his crew could take off her collar and ear tags so she could be weighed. At 146 pounds, she was seriously underweight. She might not have survived another winter in the wild.

Then she joined nine other grizzlies at the Pullman facility. "She's like a college freshman; she doesn't have any friends," says Robbins. Winnie had a hard time adjusting.

Though she hankered for human garbage, she was still frightened of people. And her nature made her nervous of the other bears. She trembled for several days after arriving.

Now she seems more fierce than fearful. While I interview Nelson at the Bear Center, Winnie reaches her paws through the wire grate window and announces herself with a low growl. She is just 18 inches and a gate away, and her growling intensifies.

She's just trying to scare us because *she's* scared, explains Nelson, noting that most of the other bears in the facility have a level of comfort around humans and don't behave that way.

Winnie is struggling to adjust to life in captivity and to the other bears at the facility. When they're not in their pens, they have a run, as well as access to a two-acre grassy meadow in which to ramble. In order to get time in the yard, Winnie will have to learn to follow commands and return to her pen when called. After first being taught to fear humans, and now required to trust and obey them, it's no wonder the young bear is confused.

But some things are working. The bear center employees have introduced Winnie to another young female named Oakley, and they seem agreeable to one another. At her age, it's normal to have a friend, but not to get along with everyone. "It's like high school cliques," says Robbins.

With a diet of commercial pellets and the occasional treats of fruit and honey, she has gained 100 pounds. Now that she's healthy and settling in, the Bear Center crew are hopeful their newest charge will adapt and learn. Grizzlies learn faster than dogs, says Nelson. This could be because problem solving and creativity are necessary for survival in the wild. They can even learn a task by watching another bear do it. Sometimes all it takes is one try, says Nelson.

Winnie, who started hibernating in late October, will become a key member of the Bear Center, helping students and scientists better understand ursine behavior. She'll also be put to work, participating in nutrition studies and furthering the research of students like Fortin.

"Luckily for her, she's young," says the student. "She'll learn to trust us and know that it's OK to come to people." *K*



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in season

T A S T E O F H I S T O R Y

by Hannelore Sudermann : Methow Valley, best known for its miles of Nordic skiing and other outdoor recreation, has developed a new note, one that lands it in Seattle's culinary scene. The rare heritage grains from Sam and Brooke Lucy's Bluebird Grain Farms have found their way onto the menus of some of the city's eateries.

Two histories intertwine in this story—the history of farming in a secluded mountain valley, and that of a cereal that once fed both kings and common Roman soldiers.

The grain, called farro, or emmer, is a primitive wheat that retains its outer hull. One of the first cereals to be domesticated in the Fertile Crescent, it was cultivated throughout the Stone Age and the Bronze Age in Asia, Europe, and North Africa. Today it's found in just a few fields in northern Italy and Ethiopia.

Farmers abandoned emmer after 4,000 BC in favor of common wheat, which has no hull and is much easier to mill.

But among those who continue to grow emmer, it's prized. "In Italy there's a whole cuisine based around it," says Sam Lucy, who recently opened his farm near Winthrop for a pubic tour. "It's ground and used like polenta, it's made into flour for bread, or you can find it in pasta."

Emmer came to the United States in the 1800s to be grown for animal feed because of its high protein content. Acreage devoted to the crop peaked in 1900, when farmers in the Dakotas tried it. But it likely never made it to the remote Methow Valley until the Lucys introduced it.

Sam moved to the valley about 15 years ago and found work with a local farmer. He also created a job for himself doing rangeland restoration. It was the combination of jobs that got Sam Lucy has found a niche farming heritage grains in the Methow Valley. He and his wife, Brooke, run Bluebird Grain Farms, where their most popular product is emmer, one of the first cereals to be domesticated in the Fertile Crescent

him thinking about growing specialized organic grains on some of the valley's neglected farmland. His wife, Brooke, a Wenatchee native and avid Nordic skier, was willing to build a life there. "I like what I'm doing," says Sam, standing in one of his fields and turning to look at the Cascade Range. "And as you can see, it's not the worst place in the world to work."

About a decade ago, the Lucys formed Bluebird Grain Farms and started growing rye, heritage wheats, and flax. They found a niche market among local customers, and developed a healthy Web and mail order business for people hungry for whole and fresh-milled organic grains. "It is one of the only farms in Washington producing flour for our Washington markets, and the only one milling right on the farm," says Marcy Ostrom, director of the WSU Small Farms Program. The farm came to her attention when she found a bakery in Wenatchee using their flour. She contacted the Lucys to learn more about their efforts and successes. Then she organized the public tour of the farm in October to demonstrate how small farms can succeed in producing crops for in-state consumption.

She wanted farmers and students to learn from the Lucys and tour through their granaries. These are large, traditional wooden structures that the Lucys say are better than metal silos for storing grains, because the wood can breathe, allowing moisture to escape, rather than condensing inside. Taking their business to heart, the couple has built their mill and storage structures just a few feet from their home near the small town of Winthrop.

The acres they farm lie on properties just a few miles away. On one site, the land belongs to several families with second homes in the valley. These often absent owners share their farmland with the Lucys, knowing that no pesticides or synthetic chemicals will go into the soil and that Sam will keep the weeds at bay.

While other heritage grains brought them steady business, the Lucys found that emmer is their most popular product by far. They were pleased with the yield, the nutty taste, and the



high nutritional value of the grain, says Brooke. It also seems to be less problematic for people with wheat allergies, she says. "Their timing is great," says Ostrom. "There's a revival of interest in ancient grains and alternative wheat crops, especially for people with food allergies and nutritional interests."

In 2006, the couple took their emmer to the Seattle Farmer-Chef Connection, a King County event with a number of sponsors, including WSU Extension and the WSU Small Farms Team. There it caught the attention of several reputable chefs who put it on the menus of restaurants like The Herbfarm in Woodinville and Lark in Seattle. At Lark this winter it was served as a whole grain farro with chanterelles and caramelized parsnips.

While they enjoy the reputation they're building on the culinary scene, the Lucys are just as pleased with their local customers, including East 20 Pizza near Winthrop, and Local 98856, a restaurant/plantstand on the Methow Valley highway. They love being able to go out for pizza and knowing that it's made with flour they grew and milled, says Sam.

The couple splits the duties of the farm. Sam takes on the bulk of the fieldwork, and Brooke handles the sales, Web site, and marketing. They sell several versions of their emmer online—as fresh-milled flour, as cracked cereal, and as a whole grain, as well as their rye, flax, and wheat.

With these rare and unique grains, the Lucys literally are offering Washingtonians a taste of history. **K**







The HOME of MY FAMILY: Ozette, the Makahs, and Doc Daugherty





by Tim Steury :: photos by Zach Mazur

THERE'S A WELL-KNOWN PHOTOGRAPH taken by Native American chronicler Edward Curtis in 1915 of a Makah whaler. Dressed in an animal skin, the man is longhaired and wild. He had indeed been a whaler, as had generations of his people. But still, the photograph is a memory of a time already past. Curtis provided Wilson Parker with a hide and a wig to replace the European clothes the Makahs had adopted long before. In spite of Curtis's fiction, however, there is much to be learned from Wilson Parker, the man in the photograph. As is always the case with a good myth, there is a deeper truth that lies beneath the surface story.

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The HOME of MY FAMILY: Ozette, the Makahs, and Doc Daugherty

Parker is Sharon Kanichy's great-great-grandfather, she tells me as we talk in the Makah cultural center in Neah Bay. Kanichy '01 was born in February 1970. That same month, a powerful storm blew in off the Pacific, eroding the bank above the beach at Cape Alava, on the Olympic Coast, revealing something remarkable.

"All we knew was there was a burial site," says Ed Claplanhoo of the buried longhouses revealed by that February storm. Claplanhoo '56 was Makah tribal chairman in 1970, so it was he who got a phone call the first Saturday in February, from a hippie schoolteacher, as Claplanhoo describes him. A dubious character, says Claplanhoo, which is why he didn't take the fellow seriously when he tried to warn Claplanhoo that "people" were getting in the "house" and taking "artifacts." Claplanhoo knew everyone in Neah Bay and knew everyone who owned artifacts. He'd heard of no problems.

But the fellow persisted. The next Sunday, the same phone call. "Mr. Claplanhoo, they're still taking artifacts out of the house."

"So I said okay," says Claplanhoo, "I'll tell you what, you come to my house at seven o'clock tonight and we'll talk about it."

What Claplanhoo heard from the hippie schoolteacher finally got his attention, once he understood the "house" was not in Neah Bay, but at Ozette, at Cape Alava. Twenty miles south of Neah Bay, reachable only by boat or a four-mile hike from the nearest road, Ozette was one of five traditional Makah villages. Ozette was ancient, far older than any of the Makah stories or songs remembered. It had been abandoned only in the 1920s, when the federal government forced the last remaining inhabitants to move to Neah Bay so their children could attend school.

The next morning, Claplanhoo convened the tribal council to discuss the matter. It happened to be an unusually beautiful and calm day for February, so one of the council members offered to launch his speedboat. Claplanhoo told them to investigate and to invoke the Antiquities Act, if they found anyone retrieving artifacts.

When they returned to Neah Bay that evening, both the investigators had hats full of artifacts they'd confiscated from people digging at the site.

The next morning, Claplanhoo called Richard "Doc" Daugherty, who had been an archaeologist at Washington State College. He and Claplanhoo met in the early 1950s. He had been the freshman class advisor, and Claplanhoo the class treasurer.

"We had a lot to talk about," says Daugherty of Claplanhoo.

Daugherty grew up in Aberdeen, on the southern Olympic Coast. Following World War II, during which he'd served as a blimp pilot in the North Atlantic, he returned to the University of Washington. In the summer of 1947, he and a colleague from Berkeley surveyed archaeological sites in Oregon, Washington, Idaho, and a bit in Montana. But his true love was the coast.

Although archaeologists had completed some ethnographic studies, of the Quinault, for example, and had acquired some knowledge of village sites, by the late 1940s a systematic survey of coastal archaeological sites had yet to be done.

Daugherty convinced the chair of the anthropology department at University of Washington to provide funds for him to spend a summer surveying archaeological sites along the Olympic coast. She came up with \$900 and a university vehicle. With his wife and daughter, Daugherty set out from the mouth of the Columbia and worked his way up the coast, exploring beaches and bays, questioning residents about possible Native village sites, making it as far as La Push that first summer. He continued the next summer, at the end of which he'd identified some 50 sites along the coast. But even then, Daugherty recognized that Ozette was "extraordinary."

The problem was, all the money for Northwest archaeology at the time was directed to the interior. Dams were going in, and money was flowing from the Corps of Engineers and other sources to salvage archaeological sites before they were flooded. But there was no money for coastal exploration.

By the mid-1960s, Washington State University was the powerhouse of Northwest archaeology. Daugherty had helped build an extraordinarily innovative department, defining how archaeology would be done from then on. He and others in the program realized that truly understanding the rich ancient culture of the Northwest required more than traditional archaeological expertise. Before there were specialized subdisciplines within archaeology, they hired a geologist to interpret the geological context, a soil scientist to make sense of the layers of soil they would descend through, a zoologist to understand the animal remains of the rich middens—scientists whose names would become legendary in Northwest archaeology. Dozens of graduate students provided both physical and intellectual labor. It was a magical time.

Actually, says Daugherty, it was a madhouse.

Amidst it all, in spite of the urgency of projects in eastern Washington, Daugherty was determined to return to the coast.

With WSU geologist Roald Fryxell, Daugherty won a National Science Foundation grant for a field school study in 1966-7 of the Ozette site. They excavated a deep trench from the present high-tide line 200 feet up the slope. What they found by the end of the 1967 field season indicated that the site was richer than Daugherty had imagined.

Radiocarbon dating placed the oldest trench deposits at 1,600 years old. Deposits on top of Cannonball Island, just offshore, were over 2,000 years old. Artifacts included harpoons, whistles, combs, gambling pieces, and carvings. Whale bones were prevalent all through the deposits.

Then they started finding the really interesting stuff. A wet part of the bank revealed perfectly preserved cedar rope and fragments of mats and baskets. These things don't normally occur in such sites, as they decay rapidly under normal conditions.

What these findings would confirm was Makah oral tradition that a mudflow had swept over Ozette, burying houses. The wet, oxygen-free condition created by the 10-foot thick clay of the ancient landslide had enabled objects to remain perfectly preserved beyond the wildest dreams of archaeologists. What lay beneath them, the archaeologists were starting to realize, was an American Pompeii. Only this was better than Pompeii. Rather than mere impressions in volcanic ash, the things buried by the mudslide were intact.

But summer was over, the money had run out, and Daugherty and the others were called back to eastern Washington by the discovery of



the Marmes rock shelter and its skeletal remains, which were threatened by the rising waters behind the Lower Monumental Dam. Daugherty and Fryxell closed the Ozette site, realizing it was far too valuable to disturb except through a full-scale, very expensive exploration.

But now a February storm had moved Ozette from wishful thinking to urgent. Daugherty agreed to meet Claplanhoo at the Ozette site that Sunday. What he found there left Daugherty no choice but to reopen the site before storms and looters destroyed any more. A canoe paddle. Wooden halibut hooks. A harpoon shaft. House planks. What had been revealed by the storm defined the next 11 years of their lives.

It appears likely from the geological and historic record, that on January 26, 1700, an earthquake of magnitude 9 shook the water-saturated hill above Ozette. There was no escaping the resulting mudslide. Sudden and massive, it buried five longhouses, destroying them—but also preserving the broken complexity of those households and their reflection of Makah culture beneath wet, oxygen-free clay.

"ONE OF THE NEAT THINGS IS, we lived here year round," says Paul Gleeson ('80 Ph.D.), as we stand on the beach below Ozette. Jeff Mauger ('78 Ph.D.) and Gleeson were assistant directors of the field camp that grew up at Ozette when Daugherty was off raising money to keep the place going. He wrote his dissertation on the wood technology of the Makahs as revealed by Ozette. Gleeson is now head of cultural resources for Olympic National Park.

As a result of their year-round occupation, "What we discovered is the winter storm patterns."

Ozette was occupied for at least 2,000 years for good reason. Winter winds, Gleeson and the other hardy year-round archaeologists discovered, were out of the southwest. But as you move farther and farther

up the beach—to this point, he says, standing below Ozette—the area is protected from wind and waves. Additional protection from winter swells is provided by the rock shelf that extends 1,800 feet out from the beach. Cannonball Island, a tall sea stack that you can walk out to at low tide, provided an impregnable defense against enemies.

It is also an excellent place to beach a whale. One of the main things the Ozette excavation confirmed was that the Makahs had long been whalers. Whale bones were everywhere throughout the dig, often blocking excavation. Whale accounted for three-quarters of the faunal remains recovered from the site. But the Ozettes did not live by whale alone. They also ate fur seal and sea lion, salmon, halibut, lingcod, elk, waterfowl, and many kinds of shellfish, as well as salmonberries, huckleberries, salal berries, and elderberries.

Gleeson worked on the site in 1966 and wrote his master's thesis on it. He then took a job at the University of Tennessee, but Daugherty invited him back to Ozette in 1971. He would spend the next 10 years, off and on, at the site, running the summer school, filling in with Mauger for Daugherty. In 1972-3, he was at the site for 14 months straight. By then a whole new village had grown up at the site to house and feed everyone.

The village had a water system and 24-hour electricity, provided by a generator flown in by helicopter. Senator Henry Jackson had asked the Marine commandant at Whidbey Island for helicopters, which not only flew in supplies, but also flew artifacts to a laboratory and storage facility that had been set up in Neah Bay.

There was a dining hall and a full-time cook during the summers, feeding as many as 55 people. Winter crews would shrink to 10 or 12 people.

The crew would take two days off during the week, so they could be working when the public came to visit over the weekends.



The HOME of MY FAMILY: Ozette, the Makahs, and Doc Daugherty

In spite of the four-mile hike in to the site, thousands of people visited.

Daugherty was adamant that the work be accessible to the public. He believed that if the public was paying for archaeology, they should be able to visit and participate in the revealing of our collective history.

Greg Colfax, a Makah artist and fisherman who grew up in Neah Bay, was a teenager when the dig began.

"I went down there and was looking around," he says. "They said 'you can come down here. Makahs are welcome."

So Colfax went to Seattle, bought himself a backpack and sleeping bag, and lived in the new Ozette for the summer.

"It was the home of my family," he says. "I'd come back home and tell my grandpa about it. He'd say, 'You're going home, boy.' He had a lot of Ozette stories. He lived down there. He hunted out of there, hunted fur seals."

Makahs had lived in Ozette for 2,000 years and probably much longer. The village had been abandoned for only 60 years, and many Makahs still went there to fish and hunt. Many had lived in Ozette, or had parents or



In the summer of 1948, with his wife and young daughter, Richard

Daugherty began working his way up the Washington coast, interpreting a proud story of a beautiful land.

grandparents who had lived there. One elder called the exposure of the longhouses by the storm "a gift from the past."

When the archaeologists would find something they couldn't identify, says Colfax, "they came back to Neah Bay and talked with the old folks.

"What did you use this for? What is this? That's a game. That's a paddle. The kids were playing games by where the fish were hanging and kept the birds away."

There was much occasion to confer with the elders, as the contents of the three longhouses eventually excavated were incredibly diverse and plentiful. According to *Archaeology in Washington*, coauthored by Daugherty and Ruth Kirk, "By the time the excavation closed in 1981, the printout for the site listed 40,000 structural remains varying from entire support posts and beams, wall planks, and roof planks to fragments as small as splinters; uncounted wood chips and other debris; a million animal and bird bones and shells; and 55,000 whole artifacts and pieces of artifacts ...; catalog entries ... enumerate 1,434 arrow shafts; 103 bows; 110 harpoon shafts; 629 halibut hooks and hook shanks; 324 canoe paddles; 840 wooden boxes; 112 wooden bowls; 46 game paddles; 1,160 wedges; 579 whetstones; 30 iron blades (the metal probably from disabled ships that drifted across the Pacific from the Orient); 1,000 baskets (half of them intact); 80 tumplines; 41 cedar-bark harpoon sheaths; 13 looms."

Three houses. And this is just a partial list. What it reveals is an extraordinarily complex culture. The numbers do not indicate the beauty and artistry of many of the items, even the most mundane.

The artifacts also reveal a rare glimpse of coastal culture in general. Nearly all coastal native technology before European contact was based on wood. As it decays so quickly, a wet preserved site such as Ozette offers extraordinary insight into that technology.

Wood, of course, was also the construction material for the longhouses themselves, built of long cedar planks up to three feet wide.

Canoes of all sorts—whale-hunting canoes, seal-hunting canoes—were carved from whole cedar trunks. Canoe accessories, the paddles, bailers, storage boxes, were all wood.

Stopping briefly on the trail down to Ozette, Gleeson, who wrote his dissertation on the wood technology, speaks with wonder and excitement of co-worker Jan Friedman's first realization decades ago of how the Ozette people made the wedges they used to split the cedar planks.

The wedges were not made from harder inland yews, but rather from local spruce, assumed to be much too soft for such a use, even with cedar. What Friedman finally realized, Gleeson explains, spreading his arms like spruce limbs to demonstrate, is that they used the compression wood, the denser wood that makes up the bottom of the limb, which makes it possible for a limb to span seemingly impossible distances.

The expertise and knowledge the Makah had gained from centuries of observation and experimentation were revealed throughout the houses. Carving knives were made from beaver teeth embedded in a wooden shank. Mussel-shell harpoon blades and elkhorn barbs were swathed in cherry bark strips.

Another fortuitous gift was the fact that portions of the longhouses were workshops, with tools and other household objects in various stages of production, thus giving Gleeson and others an unprecedented opportunity to understand the manufacturing process of many of the artifacts.

A FREQUENT VISITOR to the Ozette site was Ruth Kirk, who, often, with photographer husband Louis, documented much of Northwest archaeology and natural history, including, eventually, Ozette.

"I first went out in 1966," says Kirk. "I already had many Makah friends."

What attracted Kirk to the enterprise was the interdisciplinary effort, all focused on one question. That, and the powerful sense of camaraderie. "There's something about working in dust and mud," she says. "The Ozette people were like family."

Kirk wrote, with Daugherty, the most comprehensive account of Ozette, *Hunters of the Whale*, a book for juvenile readers. She published the book in 1974, not even halfway into the whole expedition. Still, it captures beautifully the complexity and wonder of the site, also expressing an approach and attitude she stated recently. "The more we know about the state in which we have our dance with life, the more invigorated and content and responsible we are."

The author of nearly 30 books, many about the Northwest, Kirk often wrote about and collaborated with Daugherty. After their respective spouses died, Kirk and Daugherty married, in a ceremony in a longhouse at Neah Bay.

{ Wet-site archaeology }

The two extremes of archaeological sites are wet and extremely dry, says archaeologist Richard Daugherty. "That's where you get your preservation—and in between it all goes to hell." He laughs, but that's about the gist of it.

Wet-site archaeology potentially offers the best preservation, as was the case with Ozette and other sites on the Olympic Peninsula, such as another WSU excavation at Hoko River, and the ongoing excavation at Squaxin Island, near Olympia. But wet-site excavation is very expensive, requiring special techniques both for excavation and preservation.

At Ozette, the mudslide that buried the longhouses also preserved them because of the resulting oxygen-free conditions. Many of the artifacts recovered from Ozette are much the same as they were when they were buried. Once they're exposed to oxygen, however, they begin to get brittle and disintegrate. So everything that came out of the excavation immediately went into a preservative bath of polyethylene glycol. The chemical forces the water out of the artifact and solidifies it.

Getting the delicate artifacts out of the slide in the first place provided the initial challenge. Most of the wet site was excavated hydraulically. The Ozette archaeologists pumped seawater at various pressures for different stages of excavation. Initial clearing was with high pressure. Once artifacts started to show, lower-pressure garden hoses were used to clean and remove the artifacts.



 Above: Ed Claplanhoo '56 was tribal chairman of the Makahs when a February storm exposed the village that helped confirm much of the tribe's oral history. *Below:* Paul Gleeson '80 Ph.D. was assistant director of the Ozette project and worked at the site off and on 1971– 81. He is now head of cultural resources for Olympic National Park.





Roof planks opened to a sunny day circa 1900 offered James McCurdy a rare opportunity to photograph a Makah longhouse interior, normally too dark for available-light photography. The relatively simple exterior of a longhouse belies the complexity of Makah life and technology. Courtesy Museum of History and Industry, Seattle.

The HOME of MY FAMILY: Ozette, *the* Makahs, *and* Doc Daugherty



JANINE BOWECHOP was a little girl when the Ozette longhouses were unearthed. She is now the executive director of the Makah Cultural and Research Center, as well as the Tribal historic preservation officer. As we talk at the center in August, she worries that it will rain tomorrow, the beginning of the annual Makah Days. The school gym, where the dancing usually occurs, is being renovated, so the dancing will have to take place outside.

Bowechop must have guessed that I started out with the premise that the Ozette dig revived Makah culture, which I believed before I knew anything about the Makahs. I had long since abandoned that notion; nevertheless, Bowechop politely, but firmly, makes sure that I am disabused of such a misperception.

"The Makah were not fading away before the excavation," she begins. "The Makahs would not have stopped singing family songs, wouldn't have stopped preserving the language if it weren't for the excavation."

Apparently satisfied that her point has been made, she talks about what the 11-year excavation did do. It drew young people into "the process of excavating our past. They learned the science of archaeology."

The experience was one of acceleration, she says. By visiting the site, and living with its presence, and working with the artifacts, many learned much about Makah fishing and hunting technology and ritual in a short period.

"It was an intensified learning process," maybe generating more meaningful questions than would have arisen otherwise. "But I would never go so far as to say that it caused a revival of Makah culture."

As unique as the Ozette excavation was in so many ways, it also stood apart, at least from more traditional archaeology, in that nothing from the site left the Makah reservation. Everything discovered there is either displayed here in the cultural center or stored in the state-of-the-art storage warehouse. The museum is expertly curated and beautiful, the artifacts mesmerizing. One would assume that there was occasional friction, as was often the rule in earlier Native archaeology. But Bowechop attributes a large share of credit to Daugherty for the project's success with the tribe.

"Doc Daugherty was brilliant with PR," she says. "He knew to create relationships among the whole tribe, not just work with two or three people. He knew he had to connect with a wide range of elders."

She turns now to Paul Gleeson. "Paul knows as much about Makah prehistory as anybody. He's the perfect person to be working for the park. When it comes to cultural resource management, I think the Makahs and the Olympic National Park have a better relationship than you might see across the whole country. So much of it has to do with the time he [Gleeson] spent at Ozette."

SHARON KANICHY, who was born the month of the auspicious storm, now teaches history at the high school in Neah Bay.

"Growing up, I thought, well, Ozette was this archaeological dig. I didn't realize it was this great find. I didn't realize it was a temporary deal. I didn't realize the impact on fishing rights for all the Indians of Washington. It was just a part of my life."

But now, as a history teacher, she marvels at the added dimension to the history of her people and of Washington.

"I teach Washington history," she says. "Kids will see something [from Ozette] in the textbook, and they'll say, oh look, that's in the museum." \otimes

Above, *left to right*: Janine Bowechop is executive director of the Makah Cultural and Research Center in Neah Bay. Sharon Kanichy (*back row, right*) teaches high school history in Neah Bay. She was born the month of the storm that exposed Ozette to the world.

For more photos of Ozette and Neah Bay, visit *Washington State Magazine* Online, wsm.wsu.edu.

Interpretations of a culture

The archaeological wealth of the Ozette dig produced an extraordinary nine doctoral dissertations and many master's theses. The titles of the dissertations suggest just how much the site had to offer:

The prehistoric uses of wood at the Ozette archeological site. Janet Friedman. 1975. :: An archaeological survey of Makah territory. Edward Friedman. 1976. :: Basketry from the Ozette Village archaeological site. Dale Ross Croes. 1977. :: Shed roof houses at the Ozette archaeological site. Jeffrey E. Mauger. 1978. :: Ozette woodworking technology. Paul F. Gleeson. 1980. :: Shell middens as cultural deposits. Gary Charles Wessen. 1982. :: Ethnobotany of the Makah and Ozette People, Olympic Peninsula, Washington (USA). Steven J. Gill. 1983. :: Mammals and fish in the subsistence economy of Ozette. David R. Huelsbeck. 1983. :: Spatial patterns and cultural processes in three northwest coast longhouse floor middens from Ozette. Stephan Richard Samuels. 1983. A Sense of Place

And the

THROUGH

THE

GARDEN

GATE

by Cherie Winner :: illustrations by Kooch Campbell

Plant invaders—non-native species that grow out of control—cost the American economy more than \$122 billion a year. Most of them don't get here by accident or mischief, but by invitation: we bring them here to beautify our yards. S JANE STRATTON ('72 Fine Arts, Education) strolls along her rows of snapdragons and blanket flowers, she scuffs a fleshy, ground-hugging plant.

"I don't know what that is, but it's all over," she says.

Stratton runs Sunshine Crafts, a business that offers a u-pick garden, subscriptions for a weekly vase of fresh flowers, and arrangements of dried flowers. Her two-acre plot just outside of Pullman brims with gladiolus, daisies, peonies, and more.

Like all avid gardeners, Stratton has encountered her share of aggressive plants that don't stay where she puts them. About 10 years ago she planted a silvery *Artemisia* she thought would be lovely in dried arrangements.

"As it got time to harvest it, I noticed it growing everywhere along the roadsides," she recalls. "And I thought, why did I plant this to begin with? It is pretty, but it just self-seeded. It's been really hard to grub out."

Now Stratton is a lot more careful about what she buys, and she keeps a close eye on her living inventory. Any plant that starts spilling out of its assigned space gets a swift correction.

"That's the key," she says. "A little elbow grease can go a long way in the beginning, rather than trying to stop this stuff once it's already established."

Richard Mack ('71 Ph.D. Botany), an ecologist at Washington State University, visited her garden soon after the *Artemisia* episode and became a big fan.

"She told me what she did, and I thought, gosh, this is exactly what needs to be done. This is extraordinary. I was really struck by her conscientiousness in taking something out of there that looked like it was going to jump the fence," he says.

Mack has devoted his career to understanding how plants that aren't native to a place "jump the fence." In his view, Stratton is on the front lines of an all-out war against botanical invaders.

While the military metaphor might seem alarmist, the scale of the intrusions, and the dam-

age they do, meet any reasonable criterion of "invasion." A 2000 study by researchers at Cornell University estimated that invasive species—plants, animals, and microbes—cost American businesses and taxpayers at least \$122 billion every year in damaged property, lost productivity, and control efforts. More subtle, and perhaps more costly in the long run, is the damage done to natural communities. Invasive species crowd out natives, mangle food chains, increase fire frequency, and speed erosion. They are the main factor in the decline of nearly half of our threatened and endangered species.

The kicker to this tale is that most plant invaders didn't get to the United States by accident. Some were imported as potential forage or other crops, but the vast majority are ornamentals. We brought them here not to feed ourselves or our livestock, but to beautify our yards.

The same thing has happened all over the world. During the past decade, Mack has been asked to review biosanitation protocols written by the governments of India, China, and Taiwan, all of which are struggling against current invasions and are anticipating more, as expanding trade and improving infrastructure help alien species reach new territory. Everywhere he goes, the pattern is the same: plants imported to beautify gardens or parks jump the fence, run rampant, and disrupt native plant and animal communities in profound and sometimes dramatic ways.

A few years ago, for example, Mack found himself atop an elephant in India's Corbett National Park. He'd been invited by conservation officials there to consult with them about lantana (*Lantana*), a sprawling shrub from South America that has escaped cultivation and now clogs hundreds of thousands of acres of open woodlands with impassable tangles of floppy branches. As their elephants waded through the snarl, Mack and his hosts spooked a leopard.

"The poor cat was trying to get out of our way and flee, and he was having all the difficulty in the world," recalls Mack. "He couldn't spring. It was the most unnatural movement for a leopard that you can imagine. Normally he could have been out of there lickety-split. Instead, I was on this elephant, looking down, and here was this guy body-surfing over the lantana, trying to get out."

What dollar value do we put on a leopard's ability to spring?

NVASIVE PLANTS may be "weeds," says Mack, but the two terms don't mean quite the same thing. A native plant that thrives in roadcuts, burned forests, or vacant lots might qualify as a weed but is not an invader; it prepares the ground for other plants and then recedes to low population levels when its job is done.

"When we talk about invasive species, we're not concerned with native species which have always played some colonizing role in these ecosystems," says Mack. He's also not concerned about non-native plants that become naturalized without harming their new neighbors. Most of our food crops are non-native, for example, as are forsythia, lilac, and other garden standbys.

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"People just assume that whatever happens in their yard isn't going to affect what happens in the rest of the world," says urban horticulturist Linda Chalker-Scott. "They tend to think there's some sort of magic barrier... There is a property line, but plants don't respect that."

Mack estimates that about 100 of every 1,000 species that are introduced will become naturalized or self-sustaining beyond the garden gates. Of those, one or more will likely become a serious problem. That sounds like the odds are on our side, but the dizzying pace of global trade means that humans are no longer just another "natural" dispersal mechanism for plants, akin to birds and wind. People in every part of the world bring into their homelands thousands of alien species every year. And as our current struggles show, a single invader can do tremendous damage.

One of the most intriguing aspects of invasive plants is that they rarely tip their hand early on. They muddle along in or near the garden for a few years or decades, before they establish self-sustaining populations. Then, after another lag, they burst out in full assault mode. Most of the species we're battling in the Pacific Northwest were introduced in the region 100 to 130 years ago.

"We're dealing with a biological phenomenon, which means that it doesn't change linearly over time," says Mack. Their populations grow very slowly at first, then explode in a logarithmic growth curve. He compares this pattern to the rapid spread of an epidemic. "Just as problems with human disease often go undetected, or at least unattended to, until it's too late, the same thing is true of these organisms... And that actually leads to why these problems tend to get out of hand: the public and the policymakers don't pick up on the danger until it's virtually too late."

Whether a species will reach the population explosion stage depends on whether it can reproduce well enough to nudge its numbers up to the point when compound growth kicks in. Small populations just can't gain traction, even in a favorable habitat. That's because of stochasticity, a scientific term for chance events. Stochasticity might be demographic—none of the members of a population leave offspring—or environmental—a summer hailstorm wipes out the whole population.

"A small immigrant population has almost no chance of persistence, even if it can tolerate the basic parameters of the environment, simply because of these random events that occur," says Mack. He contends that we aid and abet potential invaders by protecting them from destruction by stochastic events. We water them during dry spells, shelter them from cold and wind, and nourish them with fertilizers. We even add more individuals if the original population struggles. As we cushion the random blows of nature, we enable a small, vulnerable population to put out more and more offspring, expanding its numbers to the point that it *can* survive those stochastic events.

Even so, there must be something about invasive plants that makes them invasive. We coddle all of our garden plants, yet only a few jump the fence. Some of the warning signs are obvious. A plant that readily spreads and puts out a lot of seeds, with little encouragement from the gardener, is probably bad news. Melissa Smith, a graduate student in Mack's lab, is trying to develop more precise measures of invasive potential. She's evaluating several species of bamboo for their ability to thrive in inland northwest forests and become invasive in our region. One, golden bamboo (*Phyllostachys aurea*), has already invaded parts of Florida, Texas, and Oregon.

"Some of these species have piqued people's interest with how vigorously they grow in the introduced habitat," says Smith. "And then some are completely benign. It would be nice to be able to differentiate between the two."

She's measuring traits like drought resistance and how efficiently the plants photosynthesize under a forest canopy. Doing multiple tests is important, says Smith, because she doesn't want to wrongly condemn a species as a likely troublemaker. If a plant scores as potentially invasive on all five of her tests, "then I could effectively say to some ruling body, 'Look, this plant does all these things under all these conditions, which other plants do that have proven to be invasive, so we probably shouldn't let this in, or we should do so judiciously."

Over the years, research by other scientists has pointed to predictive features such as the number of seeds produced per year, tolerance of a wide range of conditions, and close kinship with another species that has already become invasive. All of those measures are cause for suspicion, says Mack, but unfortunately, none of them is a sure sign that a species will jump the fence—and lack of such features is no guarantee that it won't.

"This is one of the perplexing things about biology," he says. "It's not mechanics or physics... the behavior of one [species] doesn't necessarily predict the behavior of another."

Despite the difficulties, he thinks it's critically important to find *some* way to evaluate invasive potential. If we don't, our only option is to wait for an invasion to happen, and then scramble to fight it and remedy the damage it's done. That's been our usual approach so far, resulting in what Mack calls a huge "hidden tax" we don't even realize we're paying.

"We don't know how much of a bill we're actually paying for having shrugged our shoulders over the last hundred years or so," he says, "and we're dealing with a lot of pests that, had they been dealt with appropriately early on, wouldn't be problems now." NE OF THE MOST common strategies for guarding against botanical invasions is to let the habitat defend itself. In general, the harsher the climate, and the less it resembles an invading plant's native range, the less likely it is that the invader will gain a foothold. Kappy Brun, grounds supervisor for WSU, says most of the plants that cause major headaches on Washington's balmy west side behave just fine in Pullman, because the colder winters and drier summers here keep them in check. She combats stubborn patches of Japanese knotweed, but for the most part, she says, invasive species aren't a big concern on the Pullman campus.

Smith is reluctant to trust ecological mismatch to protect an area from invasion. Before she came to WSU to study with Mack, she worked as an interpretive ranger with the national parks system. All the parks she worked in, all across the country, had one problem in common.

"The biggest threat that I saw with our parks was just how badly we were losing the fight against invasive species," she says. "And that's universal. I even worked in a park in Alaska, and there's so many problems up there. Which is funny, because—it's *Alaska*! You wouldn't think invasives would be a problem there."

She recalls one species, white sweet clover (*Melilotus alba*), that had taken up residence on the silt outwashes from glaciers. Its long, strong roots have stabilized the gravel and sand so much that instead of forming shallow, braided streams that shift with each season, the water now cuts deep channels. That one species of plant has changed the hydrology of a river system.

"It's mind-blowing," says Smith. "You wouldn't think that you'd have such problems in Alaska. It's got all these parameters that say that very few things should survive at all. But something did manage to get in there."

Whether eastern Washington is more or less vulnerable to invasions than the west side depends on which species are introduced, says Mack. Summer droughts might make the Palouse less susceptible to invasion by trees but much more susceptible to invasion by annual plants that set seed before the drought begins each year. Even trees and large shrubs can make inroads, if they find pockets of milder habitat along streams or in other sheltered spots, or if the plants themselves adapt to habitats they previously couldn't abide.

Mack says he's seen too many cases of unexpected outbreaks to give a thumbs-up to plants that have proven to be invasive elsewhere. He keeps an eye on suspect plants locally, such as a tamarisk tree (*Tamarix*) growing in a front yard not far from the Pullman campus. It's easy to see why people plant tamarisk: it's gorgeous. Its frothy foliage and airy plumes of pink or white flowers make it look like an oversized asparagus plant. But it has a well-earned reputation as a destructive invader. Tamarisk moves salt from deep underground into its leaves (hence its other common name, salt cedar). When the leaves fall at the end of the growing season, all that salt ends up on the soil surface. Few other plants can tolerate it. Throughout the southwestern United States, tamarisk has displaced native riparian plants and lowered the water table enough to affect hydroelectric power generation. In recent years, some strains of tamarisk have evolved enough frost tolerance to allow the plant to invade areas farther north. It has made incursions into the Moses Lake drainage, the Hanford reservation, and elsewhere in eastern Washington.

Yet Washingtonians face no real obstacles to buying and planting tamarisk. That tree near campus wasn't smuggled in, and it's not tucked away in a hidden corner of the yard. It was probably bought at a local nursery, at least one of which has carried tamarisk in recent years.

Recognizing the marketplace as a major entry point for dangerous plants, in 2001 a group of horticulture professionals and scientists launched an effort to enlist nurseries, landscapers, and gardeners in the fight to keep invaders out. They developed voluntary codes of conduct regarding species known to be invasive. The St. Louis declaration, as it is known, includes such common-sense guidelines as "Plant only environmentally safe species in your gardens" and "Consider removing invasive species from plant collections." The Washington State Nursery and Landscape Association has signed on, as have Monrovia, one of the nation's largest wholesalers of ornamental plants, and the University of Washington. WSU hasn't considered it yet, although grounds supervisor Brun says it sounds like a good idea.

The pledge has been a tough sell with some nursery owners who foresee a loss of revenue, if they stop carrying these plants. That may be a legitimate concern, although replacing invasive plants with well-mannered ones would seem to present new marketing opportunities. Many plant vendors simply argue that they should be able to sell anything they want, regardless of the damage it will inflict and what it will cost all of us to deal with it later.

"In my opinion there should be repercussions for that," says grad student Smith. "We shouldn't be allowed to plant something or proliferate something that's costing land, that's costing money, that's costing energy and resources. That's a pretty big deal in my book."

Of course, nurseries wouldn't carry these plants, if there weren't customers who wanted to buy them. Most gardeners tend to think more

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about a plant's beauty and ease of cultivation than about its future behavior. We *want* plants that thrive with little attention, that produce lots of flowers and quickly fill in those empty spots in the yard.

Linda Chalker-Scott, urban horticulturist at WSU's Puyallup Research and Extension Station, thinks gardeners are the key to cutting off the influx of invasive horticultural species. She recalls that several years ago, few retail outlets carried much in the way of native species. Such plants just weren't in demand. Now many nurseries carry a large selection of native and locally adapted plants, because the demand is high. Likewise, she thinks gardeners could shift nursery inventories away from invasive plants and toward the many noninvasive alternatives that are available.

"I'm not going to be a plant cop," she says. "I would never venture to tell someone that they shouldn't plant something. But usually if they learn of a good alternative, they're receptive."

Plenty of information on alternatives is available (*see "What you can do," page 40*); but the continuing use of invasive species in landscaping suggests that many gardeners and plant purveyors either haven't seen it, or have seen it but don't care. Mack is frustrated by what he views as widespread indifference to biological invasions, especially compared to the frenzy evoked by other issues that so far have cost much less in terms of economic and environmental damage.

"I'm just struck by which issues the public picks up on and really is willing to follow through on," he says. "If we had people as worked up about invasive species as they are about GMOs [genetically-modified organisms], then we'd be a lot further down the road. People are much more concerned if you slap a radiation sign on something, than if you simply wrote, "This is an invasive species' and you hung that on the plant in the nursery. Why is that? I'm just struck by the incongruity of it."

Chalker-Scott thinks it's not indifference so much as a disconnect between personal actions and larger effects.



Non-native species arriving in a new territory may die out quickly or survive (top half of graph), depending on the size of their initial population, how well they adapt to the new habitat, and whether we encourage their growth. Eventually some immigrants become naturalized, living and reproducing without human help. After years or decades, a few naturalized species begin to grow out of control (bottom of graph), leading to a full-blown invasion. "People just assume that whatever happens in their yard isn't going to affect what happens in the rest of the world," she says. "They tend to think there's some sort of magic barrier ... There is a property line, but plants don't respect that."

It's now mid-January, the season of dreams for snowbound gardeners. The winter plant catalogs have arrived, with their promises of care-free

ROGUES GALLERY Turn *your* yard into a beachhead! Try one of these beauties, all proven invaders in the Pacific Northwest.



GOLDEN BAMBOO (Phyllostachys aurea)

Find out what everyone's been complaining about! This ideal hedge plant will grow fast enough to screen out the world in just one year. Whack it, burn it, douse it with herbicide It takes a mowing and keeps on growing!



BUTTERFLY BUSH (Buddleja)

AKA butterfly slayer! If you've had it up to here with swallowtails, mourning cloaks, and other fluttery showoffs, this is the shrub for you. Butterflies love the flowers, but their caterpillars can't eat the leaves. No food—no caterpillars—butterflies gone. Problem solved!



WHITE BRYONY (Bryonia alba)

Who says gardeners in dry climates have to do without? This stunning climber has already earned the honorary title "kudzu of the inland northwest." Plant now, and in a few years reap the bonus, as dead trees draped in bryony vines add visual interest to your winter landscape.



LANTANA (Lantana)

What more can we say about the plant that has taken over much of India, Australia, and Indonesia? Lantana's glossy leaves and showy flower clusters offer all the botanical beauty you'll ever need—a good thing, since you'll never have to plant anything else once this vigorous grower stakes a claim in your yard!

THROUGH THE GARDEN GATE growth and never-ending blooms. Among the offerings are butterfly bush, golden bamboo, English ivy, lantana, and silver lace vine. Mack sighs.

"Unfortunately, this isn't a problem that's going away anytime soon. As I tell my students, this is a growth industry."

For more about invasive species, visit *Washington State Magazine Online*, wsm.wsu.edu.









your cozy scene. **SILVER** (or Chinese) **LACE VINE** (*Polygonum auberti*) Have a race with your neighbor—Whose shed will disappear first? Lace vine is the top climber we've ever carried, absolutely the champion at gobbling up trellises, fences, and structures up to the size of a 1-1/2 story house. Want a little shade on your patio? Plant one of these, sit back, and listen to it grow.

TAMARISK or SALT CEDAR (Tamarix)

This beauty is also a beast!! Ideal for displacing pesky native plants from streamsides and riverbanks, tamarisk is absolutely essential for owners of waterfront properties who are tired of living on the beach. Its coarse roots loosen the sand and hasten erosion, giving you the chance to test whether your homeowner's policy really does cover damage from wave action.

{ What you can do }

Find alternatives to common invasive species at www.greatplantpicks.org and www. invasivespeciescoalition.org/GardenPlants/Garden%20Wise/document_view.

Check the Washington state noxious weed list at www.nwcb.wa.gov.

Ask your local extension agent about plants of concern in your area and opportunities to help eradicate invaders. In Washington, start at ext.wsu.edu/locations.

Invite an expert to talk with your organization about invasive plants. Check with county extension offices, or contact Richard Mack (rmack@wsu.edu) or Linda Chalker-Scott (lindacs@wsu.edu) of WSU, or Sarah Reichard (reichard@u.washington.edu) of the University of Washington.

Ask your local nursery to adhere to the principles of the St. Louis declaration. See www.centerforplantconservation.org/invasives/findingsN_html.

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by David Wang

MEDITATIONS on a STRIP MALL

Why has architecture become an exercise in stage set building?



A Sense of Place

ON THE PRAIRIE WHERE I LIVE arises a strip mall. It looks like it belongs on the French Riviera: turrets and arches, awnings, balconies with wrought iron railings ...

Well, I've never been to the French Riviera, but in this ignorance is my point.

The everyday buildings we build around us want to be anything but everyday. They want to be stage sets of Somewhere Else. And their proliferation seems to suggest that everywhere we Americans go, we want to be Somewhere Else. Getting up in the morning on the Moran Prairie, where the deer and the antelope used to roam, we have our cereal, and then we must drive by Something Mediterranean on our way to Washington State University's Riverpoint campus in Spokane.

It is an irony that *the* hot topic in teaching architectural theory these days is "sense of place." Faculty write about it. Students stress over it. Academic conferences are held on it. What is "sense of place," or it's near cousin: "sense of community?" Whatever these mysterious substances are, search the history of architecture, and you'll find that past cultures did not fret about these matters. One reason is because they *had* sense of place. It never occurred to them to go looking for it.

It is only we—we in our postmodern, poststructuralist, post-this and post-that culture—it is only we who wonder where sense of place as gone,

like a set of keys we misplaced some time ago, but only recently came to realize it is no longer among our belongings.

Our loss of sense of place—and our frenetic architectural attempts at creating stage sets of places (albeit Somewhere Else kinds of places)—may be part of the price we have paid for allowing our relationship to nature to be substituted by technology *understood as nature*. The French sociologist and legal scholar Jacques Ellul was the first to proffer this discernment. In past cultures, he writes, people used tools—by which Ellul generally meant hand-tools—to relate to nature. It was always a tenuous negotiation: nature was treated with the deference it was due, because, to put it in colloquial terms, it's bigger than the both of us.

Consider those old house-raisings of yesteryear. Trees had to be felled, and the wood dressed; folks worked together to dig the foundations, erect the frame, nail on the roof and siding. Come mealtime, they cooked, gave thanks, and ate together, while their children frolicked on the grass. Ellul would call such a house-raising a *technical operation*; it takes place on the stage of nature, with human-scale tools wielded in accord with human-scale limitations. And in process, and over time, a community achieved the sense of belonging not only with their locale, but also with one another.

Nowadays we have New Urbanist towns—dressed up to look like New England towns of yesteryear—erected almost overnight on acres

{ MEDITATIONS on a STRIP MALL Why has architecture become an exercise in stage-set building?

and acres of land shaped by bulldozers and earthmovers. Rather than a technical operation, Ellul calls this a technical *phenomenon*, in that it is like an impersonal act of nature itself, unmediated by human concerns—at least not by human concerns on the scale of individual identities.

Such is the stage set of the new "old" town center at the Kentlands, a 352-acre New Urbanist community in Maryland. The Kentlands didn't come about by neighbors pitching in. Quite the contrary: one commentator has called it "a new town in seven days." Only overwhelming technological force can make something like this—this stage set—possible. It is a technological phenomenon, in Ellulian terms.

And there is tremendous confidence that these overnight technological phenomena can create sense of community. Says Elizabeth Plater-Zyberk, a leading proponent of New Urbanism, and designer of the Kentlands: "By providing a full range of housing types and workplaces ... the bonds of an authentic community are formed.... By promoting suitable civic buildings, democratic initiatives are encouraged and the organic evolution of society is secured." The audacity of this claim is breathtaking; it amounts to nothing less than a prediction that the right stage set will bring about the right sense of community.

Whenever I travel the country, I make it a point to go visit New Urbanist towns like the Kentlands, because they are uniformly hailed in the architectural literature as places having sense of community. I would ask people on the street—if I could find them; often it takes a two-income couple working long hours Somewhere Else to afford the sense of community a place like the Kentlands offers—I would ask them questions. For instance, I asked a grandmother who had just moved to the Kentlands from New York City, "Do you own a car?"—this, because New Urbanist theory emphasizes sidewalks and discourages auto traffic as a way to achieve sense of community. "Well, I started out without a car," she said, "but I got one in about a month. You really do need a car to get around ..."

I asked a young couple in Laguna West, a New Urbanist community south of Sacramento, whether they take the train to get to where they need to go—this, because New Urbanism promotes mass transit as another way to achieve sense of community. "Well, we've heard something about that, but the nearest train stop is the next exit north on I-5."

Why has architecture become an exercise in stage set building? It is a serious question, because architecture always expresses in physical forms a culture's deepest yearnings. Prior to the Industrial Revolution, those deep yearnings were *transcendental*. Whether it was Greek ideals of perfect proportion, which produced the Parthenon, or Christian ideals of heaven, which produced Notre Dame Cathedral, architecture emerged when communities strove to express transcendental values in physical forms.

The Industrial Revolution replaced yearning for the transcendental with yearning for the *natural*. Was man part of nature? Or should he create a new nature with the Machine? John Ruskin, bemoaning the impersonality of the Machine, famously said that a building can only be happy if it is carved by happy carvers. And the young Frank Lloyd Wright, more accepting of the machine, designed his Robie House in Chicago to resonate with the horizontal and wide-open spaces of the American prairie. Meanwhile, the Modernists wanted to totally substitute nature with the Machine. And they were very successful: today's glass and steel boxes in urban jungles all over the world are the fruit of their gospel.

But from the transcendental, to the natural, to ... what? Well, to the *virtual*. Today's communal yearning is for the virtual, spurred on not by an industrial revolution, but by a cybernetic revolution, the total consequences of which are still hard to imagine. Far from laboriously carving stone—happy or otherwise—far from tediously drawing pictures of buildings with ink on linen—as Wright did—architects today are waltzing through the spaces of their buildings in "virtual reality." They can make those buildings simply appear and disappear on their computer screens.

So why not make them appear and disappear in "real" life? Why not dress up a strip mall to look like a Mediterranean villa? Just send a tornado of bulldozers in there and—poof!—the French Riviera appears on Spokane's South Hill.

And disappear? Well, do you remember what happened to Seattle's Kingdome? Boom! Just like that, they blew the Kingdome to kingdom come. It was part of a trend. Starting with Baltimore's Camden Yards, cities all over the United States blew up (perfectly functional) old sports stadiums—just to build new stadiums *disguised to look old*. Yes, we want stadiums with wrought iron fences, small-town eateries, bleachers evoking the Little League parks of our memories. Can't make that happen with the Kingdome, that concrete monstrosity? Simple. Just blow it up. Make it disappear. That's the way it is with architecture in an age of the virtual.

But here is the dilemma: Yearnings for the transcendental and yearnings for the natural all resulted in various kinds of senses of community. The funny thing about yearning for the virtual is that, by definition, sense of place is always Somewhere Else.

Just around the corner from the Mediterranean strip mall on Spokane's Moran Prairie is another strip mall that recently—poof! appeared. It's something Medieval and Something Swiss Chalet—and all of it on Something Steroid. One of the most prominent features of the façade is an archway bisected by a column in the middle. That is one of the fiercest gestures of medieval design, evoking disruption, brute force—the bow with the arrow cocked, ready to let fly and kill.

Behind that fierce façade is a coffee shop; I think they also sell wraps. I know, because I put my armor on and went in there, and asked them a few questions ...

For the first time in architectural history, what a building looks like on the outside can have nothing to do with what it does on the inside. Why? *That*, I think, should be a hot topic for teaching architectural theory. Because architecture always expresses a culture's deepest yearnings.

David Wang is professor of architecture at WSU's Spokane Interdisciplinary Design Institute.

For more on New Urbanism, visit *Washington State Magazine Online*, wsm.wsu.edu.



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A Sense of Place

Island Wood

school

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WOOdS



BAINBRIDGE ISLAND is only a half-hour's ferry ride from downtown Seattle yet for children growing up in urban King County, its forests of fir, hemlock, and alder are a world away.

There's a place here just for them. It's an environmental educational facility, where, this week in October, a hundred sixth-graders from Evergreen Elementary in Silverdale have come for a four-day program.

But a few days after their arrival, no voices greet visitors to the compound, only a fresh bloom of oyster mushrooms on a fallen log. Over at the dining hall a stray raincoat in the entry is the only sign of life. The honey-colored, salvaged-wood tables are cleared. A winding path through the trees leads to a wood-and-glass classroom building. Here too, the seats are empty, the place deserted.

The children who arrived in yellow school buses at the beginning of the week have all vanished into the 255-acre sanctuary called IslandWood. They are wading at the edge of Mac's Pond as they hunt for macro-invertebrates with small nets, or taking the spine trail through the trees down to the estuary. A few, after touching a banana slug, have stopped midway across a swaying metal suspension bridge to gaze down into a ravine. And another batch has wandered into the organic garden for their first taste of raw cranberries.

They've been outside all day despite the rain. But they'll be back at the compound for dinner.

At the main center, a slender woman of about 50 in a black fleece jacket and blue jeans, her hair pulled back and caught with a clip, slips gracefully through the door. Two employees don't spot her coming in. She's not one to demand attention.

This is Debbi Brainerd, philanthropist and founder of IslandWood, and until recently chairwoman of the nonprofit's foundation board.

The idea for IslandWood crystallized in 1997, when Brainerd '79 and her husband, Paul, founder of the Aldus Corporation and head of his own nonprofit organization, were newly married. They chose to build their home on Bainbridge and had found nine acres on the south side of the island. Still, when the realtor called to say 1,100 acres of forest nearby would soon be divided into 20-acre parcels and sold off, the couple had to look.

"We were just curious," says Brainerd, recalling the Sunday when she and Paul visited the site. "We parked our car at the entrance and walked up an old logging road." A five-point buck stepped out of the

brush just in front of them. "It just sort of grabs you for a moment when this buck walks out and stands there staring at you," says Brainerd.

magical places

WHEN DEBBI BRAINERD was a little girl, her family spent weekends in the woods. They had a small cabin on Whidbey Island, where Brainerd and her younger sister and brother had their share of outdoor adventures. In the fall and winter, her folks would sleep on a fold-out couch, while the children would spread their sleeping bags under the kitchen table. In the summer, the children slept outside.

"We went there as often as we could," says Brainerd. "My deepest memories are connected with that tiny one-room cabin."

A few weeks after she visited the Bainbridge Island property, an idea coalesced in Brainerd's mind: At least a portion of the land could be preserved and turned over to children, so they could capture the same kinds of magical experiences Brainerd found in the woods when she was a child.

She started thinking about children growing up in urban communities, often with no connection to the natural world. "I thought we could build a school in the woods where kids could come and learn about the natural and cultural history of Puget Sound," she says.

But that would need a good plan, community support, and money.

The Brainerds are no strangers to big projects, education, or the environment. Two years before, Paul, who grew up in the forests of southern Oregon, had started the Brainerd Foundation, a nonprofit with a mission of safeguarding the environment and building public support for conservation.

After graduating from Washington State University with a degree in clothing and textiles, Debbi landed a job with Nordstrom, where for 12 years she worked in community relations and special events. The job gave her strong ties within the Seattle community. But an itch to learn more about the natural world sent her back to school, this time at the University of Washington, where she earned a degree in molecular and cell biology.

Tying together her interests in science, education, and the environment, the thought of turning the Bainbridge Island site into a nature-based educational facility became a full-time preoccupation for Brainerd. She started researching the feasibility of the project, and worked with the Washington State Department of Education to decide if what she imagined was what Washington school children needed. She found that no one was serving children from schools in low-income neighborhoods.

The Brainerds bought the property for about \$5 million and set about raising five times that amount to bring IslandWood to life.

nature deficit disorder

AT THE TIME Debbi Brainerd was imagining how this property might serve children, teachers and naturalists in the Northwest were noting how disconnected children have become from the places where they live.

A century ago most children had parks, yards, and vacant lots to explore, and an intimate connection with the outdoors, says David Gruenewald, a professor of education at WSU and editor of the book, *Place-Based Education in the Global Age*.

Now schools are islands in their own communities, where security guards watch the doors, and children are cut off from the world outside.

"Schooling as an institution has developed a set of rules and routines that pretty much exclude meaningful community involvement," says

> Debbi Brainerd '79 has turned 255 acres on Bainbridge Island into a place where urban schoolchildren can play, learn, and explore in the natural world.





Gruenewald. "You go into any school, and what are kids doing? They're in classrooms doing worksheets."

In 1998 the Pew Charitable Trusts funded a study called "Closing the Achievement Gap." The study showed that children who were taken outside the classroom and had hands-on experiences in place of reading and lectures improved their academic performance.

It is a state mandate in Washington that students at all grade levels receive instruction in conservation, natural resources, and the environment, but there isn't funding for it. And when the environment does become an area of study, it's often a far-off notion, like saving the rainforest, says Gruenewald.

Children today are also kept from nature by scheduled supervised play, television, and video games. For this generation, parks and woods are scary places. They don't play outside, and have very little opportunity for independent exploration.

In the introduction to his book Gruenewald talks about how our society is losing its roots by the mere fact that our youngest members aren't encouraged to connect with their communities and environments. When individuals are not tied to their communities, things start to suffer—the wildlife, the ecology, even public issues and politics, says Gruenewald.

Using terms like "extinction of experience" and "nature deficit disorder," the experts describe a situation in which children's lives are largely out of balance. They have no independence, and the activities they do take part in don't allow them to use all of their senses at the same time. "...what we desperately need, if the society is to persist in the face of climate change and every other challenge to survival, is a strong sense of our more-than-human neighborhood," writes Robert Michael Pyle in his essay "No Child Left Inside." The way Brainerd saw it, many of the children she encountered in King County never really had the opportunity to see or develop an understanding beyond a 12-block radius. "They don't have a perspective of how the world or the greater environment is really responsible for supporting their every day in terms of the food on the table or the water they drink," she says.

nature studies

IT'S ABOUT 9 A.M. at IslandWood, and the members of the Pond group have eaten their breakfast and donned their rain gear. Out on the trail they gather around their leader, a graduate student named Katie Frickland. She's armed with a backpack loaded with a first aid kit and water bottles, and has a walkie-talkie hanging on her belt.

"Let's do our cheer," she says, hoping to warm them up. "P. O. N. D. Light to the bottom so we can see," they shout together. With a pond, you can see to the bottom, Frickland tells us later.

She has the kids shut their eyes and asks them about the hike in the woods they took the night before. "Did anyone see the moon?" They all raise their hands. "Did anyone hear the wind?" More hands. "Did anyone feel scared?" One girl lifts her hand high above her head. Frickland takes note. The instructors at IslandWood strive to make the outdoors less frightening. A brief solo hike in their first days here gives the children a chance to be alone in the forest, if only for a few minutes.

"Each week kids get on a ferry, some of them for the first time in their life. They take this boat on this adventure. Half an hour later they're no longer in the urban center where they live," says Ben Klasky, IslandWood's executive director. "They're here, and they're scared, because they think a bear is going to get them."



Every morning the children step outdoors and find meadows to explore, a bird blind to inhabit, a tree house to climb...

For many of these kids it's the first time away from home for more than one night, the first time they've heard a frog croak. "It's way beyond camping," says Windy Tuttle, a parent chaperone from Silverdale who is visiting IslandWood for the second time. "I've been watching these kids come out of their shells. And they take something home about where they live and their environment and how to take care of it when they leave."

There are no bells, no swapping off from one classroom to another. Every morning the children step outdoors and find meadows to explore, a bird blind to inhabit, a tree house to climb, a bog, a lake, and trails galore. And at night they sleep in cozy bunks, each with a private window that looks out to the trees.

Each child receives a field journal, a workbook for recording animals they discovered, plants they've identified, and the changes in the weather. They learn animal tracks, how to identify scat, and whether the organisms they find in the soil and the water are tolerant of pollution. They learn how to tell a sword fern from a maidenhair.

They also learn greater ecological lessons. The Pond group heads to a meadow to meet up with two other groups for a game of "owls, mice, and seeds." The children take turns being owls, mice, or seeds to see what happens when one population outgrows its food supply. Besides an opportunity to run and scream, the game gives them a view of population ecology.

They learn to rely on each other. After lunch, the children of the Pond group stop on the trail for a game called "car wash," which encourages them to step forward and be described by their classmates. As a boy steps into the center of the circle, a girl says to him, "Even though you're quiet, most of the time you have great ideas." He beams.

As the Pond group disappears into the trees, the Ravine group comes out of the woods into a sunlight-filled Port Blakeley cemetery, a public site tucked into the southeast side of IslandWood's acreage. The children have notebooks, and paper and charcoal to take rubbings of the gravestones. The exercise is designed to give them a sense of the history and cultural make-up of the community over the past century. Judy Batschi, another parent chaperone, watches in awe. "Do you see that boy over there," she says, pointing to a small guy named Jacob who is earnestly taking notes from a headstone. "He has his teacher astounded. He doesn't talk in class, but out here, he really participates."

After the exercise, the children gather around their group leader at the edge of the cemetery and sit among the graves. Jacob waves his hand to tell the group that he discovered some tombstones written in Japanese. That spectacle of children opening up at IslandWood is a weekly event, according to Brainerd, who has witnessed it a few times herself.

opening up

"A LOT OF PEOPLE learn better in a less restrictive environment," says Gruenewald. "It serves everyone to have deep experiences in a natural environment where there is room to explore and discover."

That need for experiences in a natural environment was a focus for Brainerd and her team, as they worked on the educational component for the school. They reviewed the 1998 Pew study and noted how handson learning and an understanding of environment, community, and natural surroundings could improve learning. Attendance improved and discipline problems diminished, when children took classes that utilized the outdoors. "The study helped shape IslandWood's educational philosophy," says Brainerd. "Our mission is really being a model for the way effective learning should be happening," she says. "If we could create a model of the way learning happens and the teachers ... could see their kids have

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this transforming experience ... we knew we could be more than an environmental education center."

Brainerd and her team decided to open IslandWood at the lowest possible cost to participating schools, so that children from low-income communities could attend. On average, schools pay \$25 per student for the four-day experience. The rest is covered through scholarships and donations. Donors, like REI, also contribute supplies, including water bottles and rain gear, since many of the students arrive without them.

After meeting with local focus groups, historians, teachers, and children, asking what they thought about the project and what it would need, Brainerd traveled around the country to look at other examples of outdoor school experiences, taking the best ideas and learning from their mistakes.

Then, returning to the Northwest, she took on the hard task of leading hundreds of potential donors on two- to three-hour tours through the IslandWood site. "Debbi has a rare and amazing combination of skills," says director Klasky. "People tend to be all heart or all logic and strategy. She's got both."

For IslandWood, it was a winning combination. According to the conventional wisdom, most donors like to give to an established program, something with a history. "We started with an idea, a dream," says Brainerd. "We had no history."

Many bought into her vision anyway. In fact, the list of donors, including the current board of directors, reads like a who's-who of the Puget Sound region, including corporate names like Starbucks, Amgen, and Boeing. Among the earliest supporters and influences were well-known philanthropists Jeannie Nordstrom and Nancy Nordhoff.

Brainerd considers Nordhoff a mentor, since the older woman had set up her own nonprofit writer's retreat for women on Whidbey Island a decade earlier. "That process of being open to the spirit of the land and what you hear and feel, I had had," says Nordhoff. "It was very easy for me to do the same thing with Debbi at IslandWood."

It was a wet day when Brainerd took Nordhoff to the site. "There were very few trails then," says Nordhoff. "We jumped logs and had to bend underneath branches."

"It's a beautiful piece of property," she says. "You can't help but know the strength of the land would have an affect on the humans who visited it." And she trusted Brainerd's ability to realize the dream. "I'm sure she had no idea what she was in for with the amount of details and decisions and all the stuff that goes into building," says Nordhoff. "But she has a good sense of judgment and could pick a team right away that produced something beyond what even she imagined."

The architects from the Seattle-based Mithun firm camped on the property to get a sense of what the children would see. They also asked children what they wanted. The results include a tree house, a raft for the pond, and windows for every bunk.

They wanted to create structures that taught environmental lessons. Many of the building materials are sustainable, salvaged, or recycled. The buildings are designed to capture natural light, yet offer shelter from summer sun. One of the buildings has a composting toilet. The floors in the three sleeping lodges are covered with rugs made of recycled material, and 50 percent of the hot water in the showers is heated through a solar water system.

Today the education program serves more than 3,000 children and their teachers and trains 20 graduate students year. On weekends private organizations and families can use the facilities.

"At the start of all this, I hadn't imagined it would be so big," says Brainerd.

Children from Evergreen Elementary reach into a sunflower for seeds. For many, it's their first time harvesting food they will later eat.



When the school opened in 2002 "there was some nervousness," she says." "Would it be exciting enough for the kids? The educational experience—would the teachers feel they really benefited?"

Debriefing the teachers after the first few sessions, the IslandWood team learned the outdoor program was doing more for the children than any other experience away from their home school. "They told us there was nothing that compared," says Brainerd. "There was nothing that was of the caliber of what we were doing."

The first year went well. By the second year, the school was full. By the third, IslandWood had a waiting list. Now demand is so great IslandWood has to turn schools away. An expansion project to accommodate 40 more children each session is in the works.

Graduate students enrolled in a 10-month residency make up the teaching staff. They live in dorm-like lodges in a corner of the property and tap into the expertise of the permanent faculty, many of whom have doctorates in education and environmental studies. On alternate weeks, each graduate student is assigned a group of no more than 10 children.

On the weeks they're not leading a class, the students spend their time studying and taking courses to prepare them to be schoolteachers or to work in some other area of environmental education. The week before our visit, Katie Frickland studied ways of relating the needs of individual students with the needs of the group. "This week I can put what I learned into practice," she says. "I can see immediately if what I'm trying works."

To prepare the children for their week, an IslandWood liaison meets with the visiting classes at the beginning of the year to help the local teachers align their curricula with what they will encounter on the island. When the children go home, IslandWood helps the classes develop community projects using what they've learned at the school in the woods. Some children start recycling programs. And others are replacing invasive weeds in their neighborhoods with native plant species.

homework

IT'S NOT JUST the children who will apply what they learned at IslandWood. Now that the school is successful and has two new board chairs, Brainerd is stepping away.

She'll be taking what she learned about planning, creating, and fundraising to the Bloedel Reserve, a wildlife sanctuary on Bainbridge, just a few miles away. She was invited to chair a community board there to find ways to make the reserve more self-sufficient.

But her heart will stay with IslandWood, where she found a way to populate the wilderness with minimal disturbance to the environment. "There's something magical about being in the woods," she says. "We have all these built, contained, man-made natural worlds like aquariums and zoos. But that's not enough. The kids that are here have their eyes opened in a way that they'll never be opened in a built world."

Toward the end of their third day in the woods, the Pond group comes across a charred tree trunk alongside the trail. They swarm around it, reaching inside it to blacken their fingers. Their leader, Kaitie, uses her fingertip to draw a black line on each of her cheeks. The children follow suit. Some paint on moustaches, goatees, and thick black eyebrows. A few just smear the soot on their faces.

A mere three days ago these children were new to these woods. A few of them were afraid to try new things, including walking in the woods at night and eating pie made from a real pumpkin, not out of a can. They had never touched a slug or pulled apart a wild mushroom. Now, after walking nearly every acre of IslandWood, they're as much a part this place as the wildlife. \otimes



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CLASS NOTES

1930s

Louis Manus Sr. ('32 An. Sci, '47 Ph.D. An. Sci.) celebrated his 100th birthday with friends and family at his nursing home in Lynnwood.

Helen Dare Rose ('37 Math.) and her husband, Ralph, moved from Riverside, California, to Poulsbo to be close to their son's family. They enjoy visiting old friends and watching the Cougars.

1940s

Myron D. Calkins ('42 Engr.) received the Presidential Leadership Award from the American Public Works Association. The award is given only on rare occasions.

Harold Wilfred Hill ('42 Ag.) is retired from farming but still lives on the ranch in Goldendale.

Ellen E. Keatts ('42 Home Ec.) has moved to an advanced senior citizens home in Lewiston, Idaho, with her husband, Wayne, and is enjoying the care and meals provided there.

Joseph Erak ('47 Bus. Admin.) keeps in touch with his college roommate, **Dave Abbott**. They have never missed a Cougar home football game since 1957. Erak is retired from AT&T and lives in Seattle.

Carol Morris Reardon ('48 Engl.) is enjoying her retirement in Dudley, Massachusetts. In her past travels, she found WSU alumni in unexpected places, including Japan in the 1940s and China more recently. She's looking forward to her 60th class reunion in 2008.

1950s

Dennis Godfrey ('51 Gen. Stud.) spent 35 years in the Hollywood office of Kodak's Motion Picture Film Division. He retired 21 years ago and is enjoying the vacation with his wife, Donna, to whom he has been married for 54 years. He enjoys playing the fourstring banjo and lives in Camarillo, California.

Carol Morgan Severin ('51 Recreation) recently completed her second term as president of the East Bay Regional Park District board of directors. The district is the largest regional park district in the United States. She is retired from San Francisco State University after 41 years of teaching.

Richard Oltman ('52 Mil. Sci. & Tactics) was awarded the WSU Alumni Achievement Award. He founded Olympia's Oysterfest 26 years ago to promote the seafood industry in Washington. Oysterfest has contributed \$500,000 in financial awards for local students.

Clifford Phibbs ('52 Zool.) received the Minnesota Medical Association's Minority Affairs Meritorious Service Award. As a retired surgeon and a former member of the MMA's Minority and Cross-Cultural Affairs Committee, he has encouraged the use of mentoring to support minority youth in careers in medicine.

James Bradley ('53 Soc. Stud.), Orting, is a retired Air Force pilot, retired college administrator, past president of Orting Lions and Eagles, and has served as parade coordinator for the Daffodil Festival. He is married to Marilyn and has four grown children.

Donald Kittleman ('56 Bus.) is CEO of Sterling Financial Services Corp. in Walnut Creek, California. His youngest daughter, Holly, has joined the business as president.

C. Robert Swanbeck ('56 Zool.), Shafter, California, has been a board-certified M.D. for more than 53 years. He has traveled the world, was an officer in the MENSA Society, and looks fondly back at his time as a star athlete at Clarkston High School.





What I've Learned Since College

An interview with Johnnetta B. Cole– anthropologist, author, activist

Johnnetta B. Cole launched her career as an educator and activist at Washington State University in 1964. While in Pullman, she taught anthropology, helped found the Black Studies Program, and served as the program's first director. In 1970 she was named Outstanding Faculty Member of the Year. After leaving Pullman, she held a number of teaching and administrative positions at several East Coast schools. In 1987 she became the first African American woman to be president of Spelman College, the country's oldest college for African American women. In 1992 Cole landed in the national spotlight as a cluster coordinator on President-Elect Bill Clinton's transition team for education, labor, and the arts and humanities. She later moved to Bennett College for Women, where she is now president emeritus and chair of the board of directors of the Johnnetta B. Cole Global Diversity and Inclusion Institute.

In December Cole returned to Pullman to deliver the fall 2007 commencement speech. She discussed the value of looking back in order to go forward, and counseled that with education comes the responsibility to be active in one's community and in society.

During her visit, she sat down with Hannelore Sudermann to do some of her own looking back, reflecting on what she learned at WSU in the 1960s.

I GREW UP in the days of racial segregation, Jim Crow-ism. I grew up fundamentally in the South in a black community. That time **in the 1960s in Pullman, Washington, black folk were hard to find**. And yet because it was a period of such activism, we began to bring black students and other students of color to WSU.

It was a time of heightened political activism, and I found myself exactly in the middle of all that. At the same time that we were activists, expressing our opposition to the war in Vietnam, to the absence of diversity at WSU, I think we also had a sense of what we wanted in a positive way. I remember very often in the 1960s saying SHELLY HANKS

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it's one thing to be against something, but what are you for?

In those days of the '60s there really was a community that I think stood for wanting a particular way for people to respect each other, to **cross the lines of diversity**. Someone very important to me in those early days was Elaine Zakarison, who at that time was the head of the YWCA. Her husband, Russell, was a farmer. For me growing up in the South, not having any idea what a wheat farm would look like, to get to know that family was indeed to cross all kinds of lines of difference. We have remained friends over all of these years.

I also remember Al Crosby, a [former history] faculty member here and former [WSU] president Lane Rawlins[, a young member of the economics faculty at the time]. These are individuals that I may not see for years and years, but the connectedness is still there. I'm very proud of some of the students that I worked with at WSU. I think about Ernest Thomas, who everybody called "Stone." He's president of a community college now. And Rutledge Dennis, who went on to find a career in sociology. It wasn't just a time of being in opposition, it was also a time of being very, very clear [about] a dream that we wanted to fulfill.

The coming of more black students had a natural influence on the creation of black studies. As people are present, they want history and herstory to, in some way, reflect who they are. Up until the 1960s, the mid-'60s, the American curriculum, certainly kindergarten through the 12th year and into post-baccalaureate study, was what I like to call grounded in the three W's. The curriculum was fundamentally Western, it was Womanless, and it was White. And so a movement was afoot, not only to talk and to struggle for civil and human rights in the society at large, but to say that the academy, the university, had a contribution to make. To study not some of the world's people, but all of the world's people.

This wasn't something that the administration just said "Oh, we've been sitting here waiting for you to come along, you faculty and students, and just do it." No. This was about struggle. This was about convincing not just the administration, but the faculty at large, that this had academic merit. That you could not teach white students well if they were only learning about themselves. Clearly the presence of more black students and what was going on in the nation at large contributed to the administration and faculty agreeing to do this. I don't have the exact history and herstory straight, but I do know that **WSU was one of the first universities in the United States to begin a black studies program**. What converged was certainly what was going on in the larger society around issues of civil rights and black power, and what was fermenting on a college campus. As these came together, the point of connection was black studies. It then began to influence the creation of Hispanic studies, of women's studies, of Asian studies, and Native American studies. I think WSU should be pretty proud of its contribution to all of that.

When I left Pullman I took away a deepened sense of what a college and a university have a responsibility to do. It was my first formal teaching job. It happened at a time when I was able to see so much of the best and so much of the challenge of the academy. I saw that while faculty are trained in the world of the mind and should be open to new ideas ... sometimes the faculty is the least ready to change.

I was able to see, as I lived in this community, the possibility of what Dr. King described as the "beloved community." A place where, regardless of the differences of race or gender or religion or class, ... individuals really could come to respect and to celebrate each other. I was certainly able to see that change can happen.

We were a small group, but we did make change. Yes, we did some things that were sometimes, by the more conservative members of the WSU community, considered radical. I went to jail with my students, for example. While we may have been viewed as a bunch of radical faculty and students, you have to ask yourself, where would the academy be today if we had not spoken up?

Kathleen Sayce

Keeping a heritage alive

by Eric Apalategui :: Wieldingloppers, Kathleen Sayce cuts through brambles smothering a parcel in the heart of historic and otherwise tidy Oysterville on southwest Washington's Willapa Bay.

Between a leaning red alder and a mangled Sitka spruce, Sayce ('78 M.S. Bot.) opens a narrow trail through native bittersweet, salmonberry, and red elderberry plants. With verve, she hacks invasive ivy and blackberry vines. In the center

1960s

Duane H. Freeman ('60 Ed.) and his wife are opening Rough Ride Antiques in Las Vegas, New Mexico. Cougars are especially welcome.

Marvin Entel ('61 Ed., '67 M.A. Ind. Tech.), a general contractor, has been involved in restoration of buildings in Uniontown, including the Sage Bakery, the Dahmen Barn, the Old Bank Building, the Cougar Café, and the Churchyard Inn, which his wife, Linda, operated from 1994 to 2005. He retired from Farmer's Insurance in 2005 and now lives in Clarkston.

Bob Bell ('66 Civ. Engr.) recently celebrated his 35th year in business at F. Robert Bell & Assoc., an Anchorage-based engineering and surveying firm with projects throughout Alaska as well as in Korea and Russia.

J. Eric Schuster ('66 Geol.), a geologist with the Washington State Department of Natural Resources, is the author of a 1:500,000-scale geologic map of Washington State. The map won the 2005 Map Publisher International Map of the Year award. It can be ordered through the Washington State Department of Natural Resources, Division of Geology and Earth Resources.

Kathleen Stensland ('69 Ed.) and her husband, Paul, traveled to Hawaii last summer and visited the father of classmate June Inazu Tateishi '69. They also saw Gary Yamamoto '69 and his wife, Elsie, and June Souza '68 and her husband, Kenneth. Stensland teaches kindergarten in the Tahoma School District.

1970s

Maris (Morris) Grobins ('70 Arch.) retired after more than 37 years in architecture. He has worked for architecture firms in Spokane, Tacoma, and Olympia.

Margie (Johnson) Reese's ('71 Speech) work in arts administration has led her to West Africa as a grants officer. She is helping to restore arts and culture programs in Nigeria and the West Africa region. She would love to hear from any Cougars in the area.

Gordon Greenwald ('72 Ind. Tech.) has retired after 34 years of teaching seventh- to 12th-graders at Hoonah City School District in Hoonah, Alaska.

Harold Bradford ('74 FA, '77 M.F.A.) painted the 8x153-foot mural at McCarran International Airport in Las Vegas. His work was featured in *Jet Magazine* on May 9, 2005. It also appears in the movie *Ocean's Thirteen*.

Rick Ellingson ('75 Bus. and Econ.) was awarded the WSU Alumni Achievement Award. He is a leader in the foodservice industry, and is vice president of Bargreen Ellingson in Tacoma. He serves on the WSU Foundation board of trustees and on the advisory board for the School of Hospitality Business Management.

Mark C. Paxton ('76 Zool.) was named Citizen of the Year by the Washington State Dental Association. For the past 10 years he has gone to Guatemala on nine-day surgical missions to treat patients with cleft lip and palate, burn victims, and those with craniofacial tumors.

Bill Gaines ('77 Elec. Engr.) was named director of Tacoma Public Utilities. He will be responsible for the general management and administration of the organization, which includes Tacoma Power, Tacoma Water, and Tacoma Rail.

Steve Okerlund ('77 Bus.) plans to retire from Trident Seafoods Corporation. He was COO and has been an integral part of the growth and success of this company.

(52)

Charlene (Crow) Shambach ('77 Nurs., '84 M.A. Child & Fam. Stud.) was named director of the Community Health Division at Snohomish Health District, which provides local public health care for 680,000 county residents.

Bob Guild ('78 Mktg.) has joined Robinswood Financial at Carillon Point in Kirkland as an investment advisor. He has nearly 20 years of experience in the financial services industry and specializes in retirement planning.

Barbara Ann Farnsworth ('79 Ed.) is in her 24th year teaching at Rogers High School in Spokane, where she works with alternative and high-risk students. She won the Chase Youth Award/Adult, and was recently inducted into the Rogers High School Walk of Fame. She has been a dual National Volleyball referee for 32 years.

Dan Layman ('79 Hotel & Rest. Mgmt.) was named director of dining services at Central Washington University. He owes it all to Prof. Denny Rutherford.

Scott Marshall ('79 Bus. Admin.) was named general manager of Ross Display Fixture Co. LLC. He has been with the company for 26 years.

Sheila McDougall ('79 Ed.) received a Master of Social Work degree from Eastern Washington University in June 2007.

1980s

Lawrence W. Flynn ('82 Comm.) conducts charity auctions all over the United States and helped raise \$23 million for charity in 2006. He is married and has two teenage children.

Ron Rowbotham ('82 Biochem.) is a clinical trials manager at the Cystic Fibrosis Therapeutics Development Network Coordinating Center of Children's Hospital in Seattle. In addition to his cystic fibrosis work, he has published numerous articles in the fields of breast and prostate cancer, urology, and laparoscopic surgery. He lives with his wife, Christi, and sons, Daniel and Sam, in Lake Forest Park.

Darrell W. Turner ('82 Arch.) has joined NAC Architecture as an associate in the firm's healthcare studio, bringing 25 years of medical experience.

Michael James Vanvoorhis ('82 Mech. Engr.), West Jordan, Utah, is an engineer with Bigelow Aerospace. He has designed rockets, incinerated chemical weapons, tested gyroplanes, and is now helping to build a commercial "space hotel."

William Craven ('85 Polit. Sci., '02 M.B.A.) was named vice president of business management and chief financial officer at Columbia Energy and Environmental Services, Richland.

Dru (Coursey) Miller ('86 Sp., '88 Sp. M.A.) lives in Boise, Idaho, with her husband, Jim, and daughters, Madison and Katelin. She is a speech pathologist in the Caldwell School District.

Kathleen Coleman ('87 Comm.) was named director for *The Spokesman Review*'s digital business operations and new product development in Spokane.

Victoria Guilfoil ('87 Vet. Sci.) was honored by the Oklahoma Journal Record as one of the "50 Who Make a Difference," Oklahoma Woman of the Year 2007. She was also awarded a \$5,000 scholarship to the Meinders School of Business at Oklahoma City University.

Donald M. Lionetti Jr. ('87 Bus. Admin.) and Julie Lionetti ('87 FA), Bellevue, celebrated their 17th wedding anniversary. Donald is an account manager for Microsoft's Federal Business and serves on WSU's Marketing Advisory Board. Julie is a flight instructor at Galvin Flying-Boeing Field. The Lionettis are WSU Benefactors. of the thicket she unveils shredded food wrappers, perhaps the plunder of black bears living on Long Beach Peninsula.

The science officer at ShoreBank Pacific, Sayce—sporting a sheen of perspiration and bug repellant—is no buttoned-down banker. She is the only working biologist or botanist at a commercial bank in the United States, says her boss, bank CEO Dave Williams.

Emphasize *working*; because even though Sayce is one of the Pacific Northwest's foremost experts on coastal plants, she'd rather be tromping through woods than planted in a laboratory. "I realized in graduate school [at Washington State University] that I like to do things that are very practical," she says. "I wanted the work that I did to make a visible difference."

Everywhere you look around the lush landscape of the lower Columbia River, Sayce is making a difference.

ShoreBank, which has an Ilwaco office serving nearby communities, concentrates on sustainable The bank also hires out Sayce as an environmental contractor. On this summer day, she and a contract geologist survey the Oysterville property for its owner. Their assignment is to map out the parcel's wetlands to determine the best place for a prospective buyer to build a home.

Marking off wetlands isn't a matter of tugging a measuring tape until your boots get wet. Water ebbs and flows with the seasons, the years, the generations. In the dry season, the line between upland and wetland is subtle, but there's evidence in the soils and the plants growing there.

On the latter, Sayce has few peers in this moss-draped landscape.

"She's 10 miles deep and 100 miles wide in her knowledge base," says Kim Patten ('83 Ph.D. Hort.), a WSU researcher and associate professor of horticulture who often asks Sayce to identify plants growing along the bay or in cranberry bogs. "I don't think there is a living soul who knows half what she does—a quarter, even."



lending, considering loan applications with a longterm view rooted in conservation and community as well as economics. Most banks don't track a client's environmental footprint, but Sayce monitors borrowers long after the papers are signed.

"If they're damaging the environment," Williams reasons, "they're not going to last very long." Before joining ShoreBank in 1998, Sayce's varied career included doing much of the early science on *Spartina alterniflora*, forming a foundation on which Patten and other partners built a strategy to eradicate much of the nonnative cordgrass, reopening Willapa Bay's vast mudflats to foraging shorebirds. BILL WAGNER

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Mike Utley x'88 was honored with the WSU Alumni Achievement Award. After Utley suffered a spinal-cord injury that left him paralyzed in 1991, he founded the Mike Utley Foundation, which is dedicated to discovering a cure for such injuries.

Lisa Teske ('89 Comm.) completed her first 26.2mile marathon on October 21, raising \$7,300 for the Leukemia & Lymphoma Society in honor of her father. The marathon was held in San Francisco.

1990s

Mark D. Jones ('90 Comm., '91 FA) has made the *Puget Sound Business Journal*'s "40 Under 40" list. Jones is president and creative director of Jones Advertising Inc.

Michelle (Lindal) Carroll ('92 Ed.), Edmonds, celebrated her 10th wedding anniversary with her husband, Joe, who is currently enrolled in WSU's M.B.A. program for engineers. They have three children: Jackson, 5, and twin 4-year-old girls, Annalyse and Julianne. She is an elementary-school principal in the Bellevue School District and would love to touch base with other '90-'92 Alpha Phi's and education graduates.

Kris (Lobb) Miles ('92 Mech. Engr.) and Peter Miles ('90 Mech. Engr.) celebrated Katherine Claire's first birthday on October 4, 2007.

Dottie Morris ('92 Psych.) is the associate dean for student learning at the School for International Training in Vermont.

Matt Kirsch ('95 Crim. J.) has accepted a position as systems coordinator with the U.S. District Court for the Northern District of West Virginia.

Leona (Beatty) Harrison ('96 Biol. Sci., '99 D.Pharm.), Snoqualmie, gave birth to a beautiful baby boy, Ace Harrison, August 2007.

Lisa (Evans) Bowen ('97 Crim. J.) and her husband, Chris, welcomed their first child, Addison Grace, May 31, 2007. Lisa is teaching eighth grade for Spokane Public Schools, and Chris is a supervisor at Northern Quest Casino.

Brian Ducey ('98 HRA) and **Melissa Ducey** ('98 Fin.) Atlanta, Georgia, welcomed their first child, Malana, April 2007.

Thomas W. Pitkin ('98 M.E.M. Engr. Mgmt.), Richland, is a consultant for the U.S. Department of Defense's ground-based midcourse defense program. He retired from Battelle and CH2M Hill Hanford Group in 2006 after working in New Orleans on the FEMA disaster relief project.

Chadd Cripe ('99 Comm.) has co-authored a book about the Boise State football program and its 2007 Fiesta Bowl victory. He covers Boise State for the *Idaho Statesman* in Boise.

2000s

Matthew Staples ('00 Biol.) has joined the Seattle office of Wilson Sonsini Goodrich & Rosati as an attorney in the firm's technology transactions group.

Robert J. Yamasaki ('01 Ph.D. Mol. Gen.) joined the intellectual property law firm Woodcock Washburn LLP as an associate.

Sarah Sullivan ('03 Hist. Ed.) and Michael Takayoshi ('03 Engl. Ed.) married on July 28, 2007.

Patricia Heasler ('04 M.B.A.) has joined UBS Financial Services in Kennewick as a financial advisor specializing in wealth management, retirement, and small business. She served in the Washington State Gubernatorial Centennial Committee and has worked in the transportation, construction, public relations, and publishing industries.

Aaron Lee ('04 Comm.) is working at John L. Scott in Lynnwood.

The Willapa National Wildlife Refuge also frequently taps Sayce's deep well of plant knowledge, manager Charlie Stenvall says. "She's always been able to give us information."

For instance, Sayce identified bog loosestrife, another invasive newcomer Stenvall hopes to eliminate. And just last year she confirmed a refuge biologist's sighting of pink sand verbena at Leadbetter Point—leading to a restoration

project half a century after the native dune plant was last noted in Washington.

Sayce, the daughter of a shellfish biologist, was born in Ilwaco, grew up in Ocean Park, and moved out of Pacific County only for college. When she was a child, the peninsula had 1,500 permanent residents. Now eight times that many people live on the fragile sand finger dividing serene Willapa Bay from the pounding Pacific Ocean, and the area is a magnet for tourists and second-home owners.

Though she's the last person to don a superhero's cape, Sayce is a guardian of the region's environmental and historic heritage.

Aside from her bank duties, she keeps tabs on native and invasive plants and shares findings on her *Columbia Coast Plants* Web site. She volunteers for the refuge's "friends" group, land conservancies, and native plant societies to protect ecosystems and educate people. She

joins citizen battles against damaging developments. She represents coastal communities on the board of the Confluence Project (www.confluenceproject.org), teaming with famed architect Maya Lin to commemorate the bicentennial of the Lewis and Clark Expedition with art installations along the Columbia River.

"I would easily use the word 'extraordinary' board member," says Jane Jacobsen, Confluence's executive director, who leans on Sayce for native plant restoration at project sites.

Although activities such as Confluence are meant to be visible, Sayce often shies from the spotlight.

"It's just sort of the way I operate," she says. "I'd rather work behind the scenes. It's kind of amazing what I can get done that way."



Clarence A. (Bud) Ryan, 76

A scientist who catalyzed excellence



Clarence A. (Bud) Ryan, one of WSU's preeminent scientists, died suddenly of a brain aneurysm in October. Ryan pioneered the study of the innate immune response of plants. Prior to his work, plants were assumed to contain protease inhibitors all the time, as a deterrent to being eaten. Ryan discovered instead that plants make the inhibitors in response to an attack. He further showed that an attack on one part of a plant sets off chemical signals that spur production of inhibitors throughout the entire plant. Besides his scientific renown, Ryan was well known around campus for his graciousness—and his ability on the basketball court. The following is excerpted from comments by College of Sciences dean Michael Griswold at Ryan's memorial service.

Bud started his research program by buying a bag of potatoes at the local grocery store. In succeeding years his laboratory discovered and reported on chemical signaling systems found

» tracking

in plants. The research was innovative. The concepts were breakthroughs. Because of these scientific achievements, Bud was elected to the National Academy of Sciences in 1986, the first WSU scientist to be so selected. Out of the hundreds of thousands of scientists in the United States, only a select few are members of this exclusive academy. His total list of honors and awards is remarkable, and he is one of the world's most cited scientific authors.

What has this meant to WSU? The scientific achievements of this one scientist have provided to WSU a measure of recognition and credibility that is difficult to quantify. WSU is currently regarded as one of the best places in the world to study plant molecular sciences, and we attract the best students and faculty in this area. Perhaps if Bud had not come to WSU, we would still have a good plant science program, but his presence and his reputation have catalyzed the excellence we currently have. All of us in research labs at WSU, even those of us not in plant sciences, know it is possible to emulate his success. That is what made him our hero—he showed what is possible.

Through all of these honors Bud remained humble and even somewhat embarrassed by the fuss. He told me that the most enjoyable recognition he received when he became a member of the National Academy was when



his basketball buddies from Colfax came and took him to lunch.

He also would bashfully tell the story of one of the times he was cited in a national publication. After some of his research papers were published about the capability of plants to protect themselves from attack by insects, Bud got a call from a reporter at the *National Enquirer*. Bud had no idea that the *National Enquirer* was a supermarket tabloid of questionable repute. Sometime later the *National Enquirer* published a picture of Bud Ryan, famed research scientist, holding his killer tomatoes.

Bud and I interacted in a number of nonacademic ways. In recent years Bud caught steelhead on my boat in the Snake River, and we spent a week in Canada fly-fishing for northern pike. For many years we met for lunch along with a ragtag group of faculty that solves the problems of the world and secretly runs the University.

What I remember most fondly is that Bud and I played basketball together three times a week. All of his noonball friends will remember the many times that Bud would "educate" a young hotshot student on the court. As time went by and Bud and I became the elder statesmen of noonball, we nearly always paired up and guarded each other. Sometime in the future someone will ask a trivia question about who was the highest scoring basketball player in WSU history. There will be only

> one right answer: Bud Ryan. We once estimated that over the course of his 40-plus years of noonball Bud probably scored well over 40,000 points—most of them over me.

> We shared a lot of other time together, including many years of meeting at the golf course at 6 a.m. I don't think Bud ever knew that the only reason I played golf was so I could spend that time with him.

> To many who knew him well, Bud's academic and athletic credentials pale in comparison to his credentials as a warm, caring, humble colleague and friend. He lived the concepts of "world class, face-to-face" and "trust and respect in all we do," before these words became a part of our WSU culture. His life touched the lives of many others in important ways. His great achievements, his noble character, his courage, and his important impact on WSU made him our champion, our hero. Our role now is to honor his life and his memory by following his example. *«*

EnRico Castelda ('06 Comm.) is a financial advisor with John Hancock Financial in Century City, California.

Erin Fuhrer ('06 Ag. Econ.) received the 2007 Washington State Conservation Commission's South Central Area Employee of the Year award.

IN MEMORIAN

1930s

Elizabeth Calhoun ('31 Ed.), 98, September 9, 2007, New York.

William (Bill) Munson Sr. ('33 Bus. Admin.), 96, August 23, 2007, Colfax.

James Skillin ('33 Bact.), 98, February 23, 2007, San Francisco, California.

Rudolph P. "Rudy" Jandl ('34 Bus. Admin.), 95, October 5, 2007, Bellevue.

George B. Thomas Jr. ('34 Math, M.A. '36 Math.), 92, October 31, 2007, State College, Pennsylvania.

L. Catherine Campbell ('35 Off. Admin.), 95, September 30, 2007, Newport.

Lucille M. Milbrath ('36 Home Ec.), 92, August 14, 2007, Corvallis, Oregon.

William R. Chorlton ('38 Bus. Admin.), 92, October 18, 2007, Portland, Oregon.

Joseph Own Gehrett ('38 Bus. Admin.), 90, March 20, 2007, Chevy Chase, Maryland.

Harold K. Pemberton ('38 Bus. Admin.), 94, March 23, 2007, Walla Walla.

Wayne A. Johnson ('39 For.), 91, November 9, 2007, Eugene, Oregon.

1940s

Logan Henry Jorgans ('40 Bus. Admin.), 92, November 3, 2007, Nez Perce, Idaho.

Lois June (Temple) Voldseth x40, 79, October 31, 2007, Billings, Montana.

Dana L. Cleveland ('41 Mus., '52 M.A. Mus.), 96, October 23, 2007, Pullman.

Floyd Coffelt ('41 Ag.), 87, November 24, 2007, Las Vegas, Nevada.

Carl H. Elling ('41 Zool.), 89, August 5, 2007, Tacoma.

Winnogene Foy ('41 Home Ec.), 88, August 18, 2007, Eugene, Oregon.

Hugh Charles Kirkpatrick ('41 Plant Path.), 89, September 20, 2007, Mill Creek.

Elmer Harris ('42 Polit. Sci.), 90, October 24, 2007, Edmonds.

Gordon H. Eichmann ('43 Mus.), 88, April 30, 2007, Boise, Idaho.

Jackson C. Richardson x43, 86, November 15, 2007, Kennewick.

Glen Waldemar Wells ('43 Mech. Engr.), 86, July 18, 2007, Phoenix, Arizona.

Ulysses S. "Uke" Famelos x44, 85, October 3, 2007, Hood River, Oregon.

Phillip Foraker ('44 Sp.), 85, December 2, 2007, Portland, Oregon.

Geneva May Carlson ('45 FA), 84, October 21, 2007, Spokane.

Frederick Riehle ('45 Hist.), 92, August 22, 2007, Wenatchee.

Mary Lee Adams ('46 Gen. Stud.), 82, August 21, 2007, Camano Island.

Maurice Henry Lundy ('46 Zool.), 83, October 7, 2007, Bellevue.

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Announcing the retirement of Steve Okerlund in November, Trident Seafoods Chairman & Founder Chuck Bundrant put it simply—"For the past 23 years Steve has been my right arm and my left arm. This company would not be where it is today without him."

Steve Okerlund accepted the position as Trident's CFO in 1984. It was his second career step after graduating from Washington State University in 1975. His degree in Business Administration, his personal integrity and his determination to succeed served him welland forged the success of Trident's fledgling seafood operation. He was promoted to COO in 1999 and in that position he provided oversight for all of the company's financial controls and operations, major acquisitions and asset additions. He performed a multitude of general management duties as well, focusing on Trident's various Alaska operations, spanning thousands of miles of coastline from Ketchikan to Bristol Bay and the remote Islands of Akutan and St. Paul. He could buy herring with cash on the fishing grounds in Norton Sound or hold his own in the corporate boardrooms of the U.S., Europe and Japan.

When Steve took the financial helm at Trident Seafoods, our sales revenues totaled \$13 million. Thanks to his dedicated watch our Seattle-based corporation remains 100% American owned and privately held, and we've grown to become the largest vertically integrated seafood harvesting and processing company in North America—with sales in excess of \$1 billion.

The thought of moving ahead without Steve's immediate presence, his abiding friendship and his level-headed counsel still troubles us a bit. So we wish him the best in his retirement and travels by offering this hearty and heartfelt salute: Go Coug!...but please, don't go too far.





Catharine O'Brien ('46 Soc.), 87, May 9, 2007, Wenatchee.

Roscoe K. Balch ('47 D.V.M.), 85, Tacoma.

George Carl Gudyka x47, 89, October 20, 2007, Lynnwood. Joan Jean McAlister x47, 80, August 24, 2007,

Warrenton, Virginia.

Harold Lincoln "Hal" Pringle ('47 Civ. Engr.), 91, September 26, 2007, Spokane.

Chester Timm x47, 80, October 25, 2007, Harrington.

Maxine Lanchester Brengan ('48 Home Ec.), 80, August 22, 2007, Seattle.

Joseph William Brunner ('48 For. & Ranch Mgt.), 83, September 22, 2007, Mill Creek.

Robert J. Martin ('48 Agron.), 91, May 26, 2007, Spokane.

George H. Crampton ('49 Police Sci., '50 M.S. Psych.), 80, September 24, 2007, Bend, Oregon. Charles Graham ('49 Pharm.), 79, October 3,

2007, Millis, Massachusetts.

Bernice E. Henry ('49 Soc.), September 2, 2007, Sublimity, Oregon.

Lora Jane (Curtis) Lafky x49, May 27, 2007, Benicia, California.

Norman Lowery ('49 Phys. Ed., '51 Ed.), 84, August 28, 2007, Everett.

Kenneth V. Setthe ('49 Ind. Arts.), 84, April 19, 2007, Bend, Oregon.

1950s

Robert Mims Benjamin ('50 Engl.), 81, October 1, 2007, Seattle.

Gene J. Rinna ('50 Bus. Admin.), 82, September 23, 2007, Yakima.

Edwin V. Salmi ('50 Elec. Engr.), 85, November 3, 2007, Santa Clara, California.

Feliscar "Goya" Berven ('51 Home Ec.), 80, September 21, 2007, Vancouver.

Leroy H. Jahnke ('51 Gen. Stud.), 87, July 7, 2007, Red Lake Falls, Minnesota.

Paul McCarthy ('51 Mech. Engr.), 79, May 8, 2007, Idaho Falls, Idaho.

John Alson "Jack" Wells ('51 Soc. Stud.), 83, October 1, 2007, Edmonds.

Arden Johnson ('52 Lib. Arts, '67 Sp. & Hear. Sci.), 77, October 12, 2007, Colfax.

Eugene Prince ('52 Ag. Mech.), 77, October 13, 2007, Olympia.

Dolores Ann Bryant ('53 Gen. Stud.), 79, May 28, 2007, Golden, Colorado.

Elwood C. Corulli ('53 An. Sci.), 77, October 5, 2007, Bellingham.

Robert Finnell ('53 Elec. Engr.), 77, August 12, 2007, Campbell, California.

Helen E. Freeman ('54 Bus. Admin.), 75, September 20, 2007, Bellevue.

Dwight Pool x55, 77, October 20, 2007, Gig Harbor.

Carole Sprenger ('55 Ed.), 74, September 22, 2007, Gresham, Oregon.

Donald Russell Nieland ('58 Bus.), 70, July 25, 2007, Bonners Ferry, Idaho.

Ronald C. Routson ('58 Ag., '68 Ph.D. Soils), 73, November 4, 2007, Benton City.

Leonard C. Aspinwall ('59 Bus.), 70, September 17, 2007, Bellevue.

1960s

Kenneth A. Williams ('60 HRA), 71, September 13, 2007, Seattle.

Thomas William Russell ('61 Engl.), 70, October 4, 2007, Redmond.

Merle A. Sande ('61 Zool.), 67, November 14, 2007, Seattle.

J. Ronald George ('62 Agron.), 67, July 1, 2007, Ames, Iowa.

Nancy Lou Christian ('64 Elem. Ed.), 65, September 14, 2007, Flowing Lake.

Diann Haslett ('64 M.Ed. Couns.), 67, August 7, 2007, Sunset Beach, California.

Dixie Davis Johansen ('64 Sp. Comm.), 65, November 2, 2007, Camano Island.

E. Frank Price ('66 Ed.D.), 84, November 15, 2006, Tacoma.

Melvin Sund ('66 For. & Ranch Mgt.), 64, October 2007, Port Angeles.

Robert Bruzas ('67 Phys. Ed.), 63, September 5, 2007, Bothell.



Carla Ann (Joy) Erb ('68 Rec.), 60, August 13, 2007, Seattle.

Dale Wayne Snell ('68 Mech. Engr.), 62, October 6, 2007, Seattle.

1970s

Carla Maulden ('70 Soc.), 59, August 3, 2007, Pasco.

Mary Ann Moen Goodrich ('71 Engl.), 58, September 28, 2007, Portland, Oregon.

Alvis "Al" Forbes ('73 Food Sci.), 56, October 1, 2007, Jackson, Wyoming.

Keith Schlatter ('73 Build. Theory & Prac.), 57, July 15, 2007, Bellevue.

John Michael Williams ('73 Mech. Engr.), 61, October 22, 2007, Tri-Cities.

Harlan E. "Hod" Moore ('79 Civil Engr.), 77, August 31, 2007, Anchorage, Alaska.

1980s Henry Lincoln Oliver ('83 Ph.D. Ed.), 77, June 8, 2006, Boise, Idaho.

1990s

Byron Preston Lyon ('99 Polit. Sci.), 31, October 21, 2007, Redmond.

2000s

Patrick Ira Linn ('03 Gen. Stud.), 51, August 14, 2007, Richland.

Craig Gmur ('05 Soc. Sci.), 24, November 3, 2007, Tucson, Arizona.

Faculty & Staff

Loretta B. Anawalt, retired writing and literature instructor, 73, August 30, 2007, Pullman.

Betty June Brewer, retired housing department staff, 82, August 27, 2007, Pullman.

Guynethia Buckley, retired business administration staff, 80, September 16, 2007, Pullman.

Harold Conner, retired from the College of Veterinary Medicine, 92, December 3, 2007, Medical Lake.

Sandra Haarsager, retired staff, 61, October 6, 2007, Moscow, Idaho.

Ervin Hindin, retired professor, 79, September 25, 2007, Pullman.

Harrold Brook Knowles, former physics faculty, 81, February 20, 2007, Oakland, California.

Eber Marsh, retired staff personnel, 84, July 19, 2007, Clarkston.

Graham S. McConnell ('37-'38 Pre-Med, '40 Absentia), former Student Health Services employee, 92, September 24, 2007, Spokane Valley.

Jon "Pat" McConnell, retired faculty, 79, December 2, 2007, Pullman.

Clarence "Bud" Ryan, retired professor, 76, October 6, 2007, Spokane.

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Salt Lick *by Brian Ames* '85 POCOL PRESS, CLIFTON, VIRGINIA, 2007 :: *Review by George Bedirian* :: Anyone familiar with Brian Ames's short stories knows that they explore the boundaries between everyday existence and the chaos that lurks beneath the surface of ordinary life. Although the characters in *Salt Lick*, his first novel, aren't quite the hapless individuals we often encounter in the stories, what the novel does share with the earlier work are Ames's concerns with the origins of evil and the way we respond to it.

But for all its seriousness of intention, *Salt Lick* is a thoroughly enjoyable read. Ames '85 is a gifted storyteller, and on that level alone, his novel delivers. In fact, it's a very funny book—like Joseph Heller's *Catch-22*, a prime example of black comedy.

During the War Women Went To Work BRISTOL

PRODUCTIONS LTD., OLYMPIA, 2007 :: *Review by Susan Armitage* :: Out of all the interviews, books, films, and commemorations about World War II, female voices have seldom been heard. This video, produced by Karl Schmidt '81, remedies that oversight. In it, more than 50 Washington women talk

about their service in the state's shipyards and aircraft factories. Their pride in their skills, recalled more than 60 years later, shines through these interviews.



New Poets / Short Books, Volume One Marvin Bell, Editor LOST HORSE PRESS, SANDPOINT, IDAHO, 2007 :: Review by Ron McFarland :: Perhaps the question one asks oneself sooner or later about this book is, which of these poems merit a second or third reading? For me, most of those would come from the 20 poems entitled, The Owl's



Ears, by Boyd W. Benson, who teaches English at WSU. "In my heart," Benson writes, "there is a little old lady," a spinster, a sort of spider-lady, but "deep down," he tells us, "she's as wild as the sparrowgrass."

Disturbance-Loving Species *by Peter Chilson*

MARINER BOOKS, NEW YORK, 2007 :: Review by Jeff Fearnside :: Peter Chilson's gripping new book, Disturbance-Loving Species, throbs with the life of Africa. Chilson recognizes that the best place-based writing is focused on people and their stories. Those in DLS are told



from the point of view of Americans who often burn with anger at the injustice they see and their inability to help, and Africans who live in a world governed by fear and resignation.

Jennifer Lynn – The Way I Feel Tonight JENNIFER LYNN MUSIC, COWAN COUNTRY MUSIC,

2007 :: *Review by Jason Kardong '96* :: Jennifer Lynn '03 stays within traditional countrymusic subjects on this CD—loving, losing, drinking. In "Soon," she laments, "No more I'm sorry / No more I'm gonna try / ... No more one last time." In "The Whiskey," a beautiful waltz, her voice is filled with emotion and sadness, and the story becomes yours.



FensePost www. fensepost.com :: Review by Jason Kardong '96 :: Andy Fenstermaker '03, '06 had the idea to start a music-review Website, and in 2006 he launched FensePost. com. When I met Andy in Seattle, I was struck by his knowledge of music and deep background of obscure bands. He mentioned FensePost.com, and later I checked it out. What I found was a wellorganized, well-written site that included CD as well as live-show reviews, local and national. 🗦

Nathan Spencer

1999 Graduate (B.S. Liberal Arts, Psychology)
Teacher, Garry Middle School, Spokane, WA
Supports his alma mater with a gift to WSU!

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