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FALL 2012

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# WASHINGTON STATE

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THE CHINA CONNECTION :: ENGINEERS IN THE MAKING :: RACE, CLASS, AND WILLIAM JULIUS WILSON'S WORLD  
OF OPPORTUNITY :: LIFE HISTORIES: THE BUTTERFLIES OF CASCADIA

v11n4



WASHINGTON STATE  
m a g a z i n e

FALL 2012

## FEATURES

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China buys \$11 billion of Washington exports and sells the state \$31 billion of imports, in the last few years overtaking Japan as Washington's second largest export destination. With WSU's efforts to overcome linguistic, informational, and trade barriers, who knows where that economic relationship might lead?  
*by Larry Clark '94*

**28 :: Engineers in the Making**

At a time when Washington is a net importer of engineers, a more appreciative vocabulary could tempt a new generation of students into studying engineering.  
*by Hannelore Sudermann*

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Half a century ago, WSU was a national leader in producing black doctors of sociology. Among them, William Julius Wilson '66 PhD—recipient of 45 honorary degrees and the National Medal of Science, and author of landmark works that redefined poverty and race. "Going to WSU," he says, "was the greatest decision I ever made in my life." *by Eric Sorensen*

**39 :: Life Histories: The Butterflies of Cascadia**

In documenting the life histories of Cascadia's butterflies, every one of the 158 species represented a separate research project. The result has been a wealth of biological and ecological knowledge that simply did not exist before David Nunnallee and WSU entomologist David James began their monumental task.  
*by Tim Steury*

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Cover: Collage of Anise Swallowtail butterflies, photos courtesy Roger Jones.

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BECAUSE THE WORLD NEEDS BIG IDEAS

## first words

**The spirit of the land grant institution** :: Had the intent of the land grant spirit been simply to produce homemakers or farmers or carpenters, Justin Morrill, the author of the act that established the land-grants 150 years ago, might have best looked for his model among the craft guilds of the fifteenth century, wrote Enoch Bryan in 1931, 15 years after he stepped down as the first enduring president of Washington State College. In one of four essays that make up *The Spirit of the Land-Grant Institutions* (reissued in 1961), Bryan argued that the curriculum prescribed by the land-grant legislation was academic rather than vocational. "It was far broader, far more fundamental," he wrote.

In other words, the Morrill Act, or "charter," as Bryan referred to it, represented a revolutionary shift in education, from the "verbalistic" to the scientific, shifting American education from an elite and narrow institution that produced mostly clergymen and lawyers, to a rich process accessible by the common man and woman.

As radical and fresh as the idea might be, Bryan argued that the origins of the land-grant spirit lay with Thomas Jefferson's 1818 charter establishing the University of Virginia. Both, wrote Bryan, represent a shift to the natural and physical sciences, "to historical, political and economic science, to the study of agriculture, commerce and industry, as based on these sciences with a very distinct declaration of purpose, through these instruments, of contributing to the subsistence, comfort, health and happiness of all the people..."

Bryan was emphatic that this new educational spirit did not exclude the classics. Nor the arts. It was Bryan, after all, who established a music curriculum at Washington State College. Farmers need music, too, he believed.

So passionate was Bryan about the land-grant spirit that created his Washington State Agricultural College that he wrote about it throughout his life. More immediately, while still president, he envisioned an agricultural utopian community in which his students might live out the ideals and practices they learned while under his tutelage, sinking his savings into 300 acres of land on a bench above the Snake River, just above the site of the Little Goose Dam.

This year's observances of the 150th anniversary of the first Morrill Act vary amongst the more than 70 original land-grant colleges, most of which are now universities. WSU joined 27 others in presenting its vision of the modern land grant through a display, "Feed the World. Power the Planet," at the Smithsonian Folklife Festival this summer. The anniversary also presents an occasion to ponder whether the spirit of the land-grant still holds true.

It certainly does for John Reganold, Lynne Carpenter-Boggs, Brad Jaeckel, and others involved in WSU's organic major and farm. And, evidently, to Chuck and Louanna Eggert, who recently gave \$5 million to WSU to establish a much larger and more ambitious organic farm on campus. The Eggerts, who met at WSU, founded Pacific Natural Foods.

According to Reganold, the organic major and the first organic farm, located next to Tukey Orchard, were established for a dual purpose: to train students who wanted to learn about sustainable agriculture and, perhaps more important, to bring more people back into agriculture.

"When I took this to the faculty in 2002," says Reganold, "we were losing people in agriculture, across the U.S. That's turning around."

By 2002, the segment of the American labor force working in agriculture had dropped below 2 percent, down from 16 percent in 1945 and 41 percent in 1900.

Similar to Bryan's vision, the purpose of the organic agriculture major and the new farm are not simply to produce organic farmers, but to investigate the science behind the discipline, explaining, enhancing, and developing techniques that are increasingly being adopted by other agricultural approaches.

Sadly, Bryan's dream of a utopian community, after thriving briefly, succumbed to a common Western affliction, the lack of sufficient irrigation. The Eggert Family Organic Farm and the associated potential advances in agricultural knowledge and understanding may well be seen as an affirmation of his dreams.

*Tim Steury*, Editor





## Three Great Ways to Belong to One Great Organization.

There are over twice as many members of the WSU Alumni Association (WSUAA) today than there were just a few short years ago. They joined to support student scholarships, take advantage of all the incredible member benefits, and connect with other Cougars. We extend our thanks to all the alumni, students, friends, faculty, and staff whose membership has helped the WSUAA claim its rightful place among the finest and fastest-growing alumni associations in the country. We salute our Annual, Life, and now Platinum Life Members.

### New: Platinum Life Membership.

Platinum Life Membership is the newest way to belong to the WSUAA. It was suggested by and created for Cougs who want to help the WSUAA do even more for WSU. Platinum Life Members enjoy all the same great benefits and services as Annual and Life Members, plus a growing suite of extras.

If you have not yet joined, or you are a current member interested in one of the other membership types, please sign up today. Your membership—regardless of which type—is vital to the continued success of the WSUAA and WSU.



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v11n4 FALL 2012

# WASHINGTON STATE

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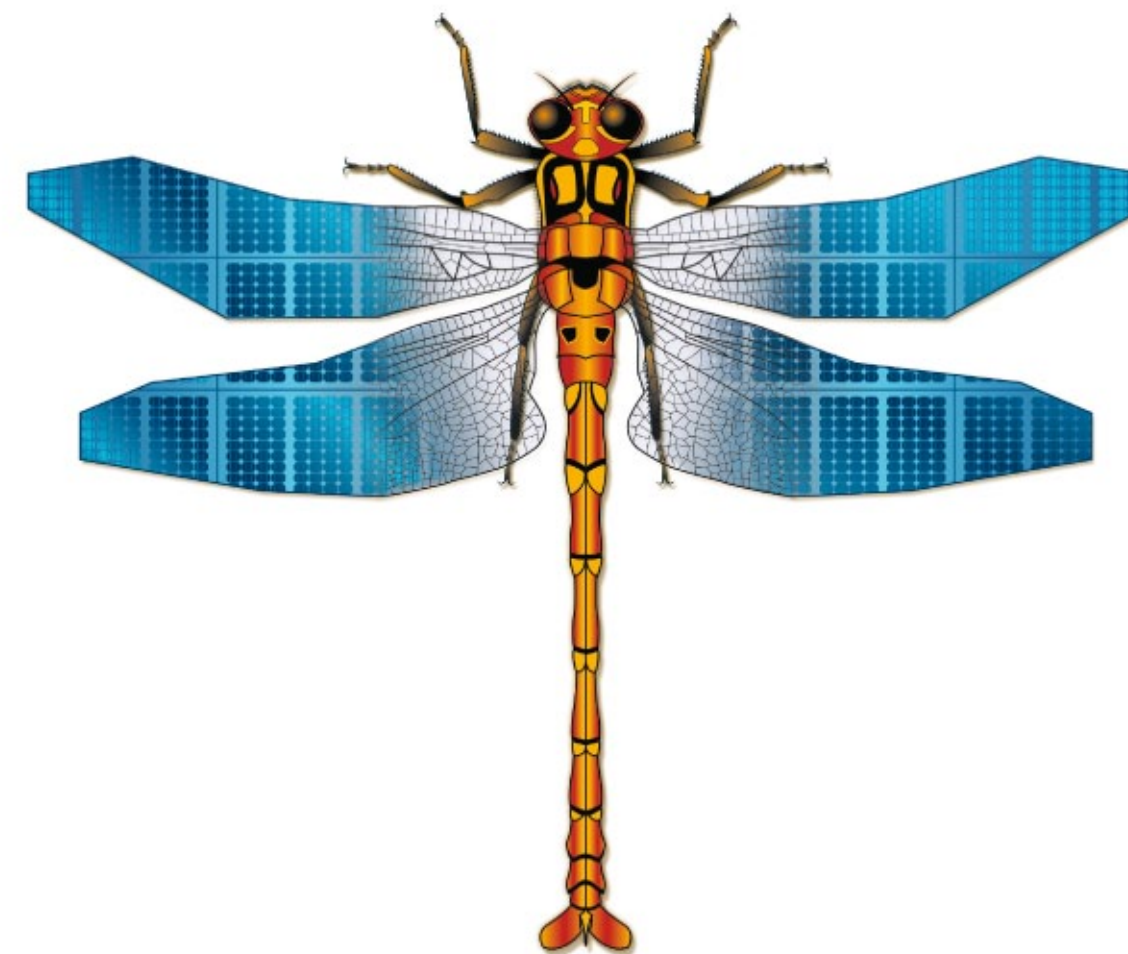
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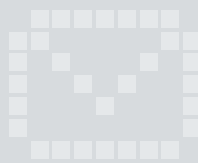
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## posts

### Not Saddle Mountains

On my second time through the very enjoyable edition I looked more closely at the central picture on page 45 which identified the view at “Columbia River, Facing Saddle Mountains.” This picture does not show the Saddle Mountains, which are north of the Columbia, but in fact looks west toward the sun setting over Umpatanum west of Vernita Bridge where Hwy 24 crosses the Columbia. Just off the gravel bar in the center of the picture is a bluish-green spot which is part of the BPA’s Midway substation, which is tucked between the river and the ridge and handles power lines into and out of central Hanford. At one point in the sub-station’s history it was the principal electrical power source for central Hanford and the reactors, which lie to the east of where this photo was taken.

*Jan R. (Jack) Beajon '74,'75*

### Flashbacks

Your Summer 2012 issue was a flashback and a flash-forward in consecutive articles. “The Collectors,” a well-told story of the Regla Papers, transported me to the early 1980s—as a young grad student in history, I worked on that collection in the archives under the guidance of John Kicza and John Guido. Then “The Atomic Landscape” presented the impressive body of work on that topic generated by WSU grads. It would be impossible for you (as the article’s author) to know that nearly 20 years after finishing my master’s, I published essays about Hanford in *ISLE* and *Isotope*, two journals of environmental

literature. They are minor in comparison to the works of the authors you highlighted, but I’m still proud to feel some connection to their work and to our collective alma mater.

*Eric Dieterle '80,'82  
Flagstaff, AZ*

I found the Summer 2012 issue informative and visually appealing as always but discovered, in addition, two personal surprises. J. Horace Nunemaker is a name that has burned itself into my brain but I never knew anything about him. At the end of my junior year (1956, I think), I unexpectedly received the J. Horace Nunemaker Award “for the student with the most promise of making a contribution to the humanities.” I didn’t apply for this—it just arrived as a letter, with a check for \$150, as I recall. It was fascinating to learn about him and his interests in the collectors story. As he died in 1949, the award must have been set up by his family as a memorial: I received it seven years later. I don’t know whether it is still given. The amount would seem trivial today but I think it more than covered tuition for a term (or even year) then. I would love to get in touch with his daughter Mary Emma Eriksen, as it has occurred to me over the years that I HAVE made a contribution to the humanities! I would like for her to know that.

The other story of personal interest was about Paul P. Kies. As a new freshman I needed another two credits to complete my schedule and I discovered Dr. Kies’s class in “Literature of the Opera.”



The Holland Library “spaceship” thing, as referred to by the reader below, is actually the 1994 Terrell Library skylight dome which brings light into the atrium, illuminating many university functions. Photos by Robert Hubner, Keith Nelson, and Shelly Hanks, respectively from opposite left.

It met two mornings a week at 8 a.m. Students were seated in alphabetical order and I found myself (Ellen Franzen) next to Richard French, son of the president of WSC at the time, C. Clement French. He was a senior and seemed very grown-up to me at age seventeen. It turned out to be one of the most influential classes of my entire undergraduate career.

I still remember the literature we read on which the librettos were based, and now that I am a regular opera goer, I am reminded several times a year of what I learned in Dr. Kies’s class nearly 60 years ago! He showed us a piece of the heavy velvet curtain from the old Met and told us stories about the opera singers. He played the most well-known or significant arias on an old 78 rpm record player. I have remembered a lot of those too and the titles by which they are known (e.g., “Casta diva,” “Un bel di,” “Vissi d’arte,” “Celeste Aida”). Even to a freshman he was an eccentric little man. The light in his office on the third floor of College Hall was often on late at night. I wish I would have been more adventurous and called on him during his office hours. But I will never forget him and his unforgettable class that I chose only by accident.

*Ellen Franzen Dissanayake '57  
Seattle*

I enjoyed your article on “The Murrow Boys” (page 18, Summer 2012). My father, Carl Pettibone, was a classmate and close friend of Edward. He had Ed’s picture hanging in our front room, and when Edward would travel to

Pullman, he always stayed overnight at our house.

My father worked at the Student Bookstore for over 20 years. When Wilson Compton became president of WSC, he made Carl his business manager. Later, Carl Pettibone became the first vice president of business for WSC, now WSU.

*Earl Pettibone, son of Carl  
Houston, TX*

Your recent edition was amazing from the moment I picked it up. It contained a host of references I could not fail to notice. Though not a graduate of WSU, I served for 11 years as pastor of the Simpson United Methodist Church in Pullman [1984-93] and taught several semesters as an instructor in the philosophy department at WSU. In addition, my wife Dorothy worked several years in Career Services as an employee in the Career Development Program and as coordinator of the On Campus Interviewing Program. The several references that caught my attention were the following:

Carl Gustafson, whose wife Charlene was my secretary at the Simpson UMC for 11 years. A marvelous woman! We recall many of her references to Carl, and now live in Port Angeles and are familiar with the Sequim Museum and Arts Center’s displays there of the discovery of mastodons in the area and Carl’s amazing find of the human element.

Don and Sylvia Bushaw and Clayton Crowe are remembered from my parish associations.



Read Mr. Hutchins’s “Hanford Reservations” at [wsm.wsu.edu/extra/Hanford-Reservations](http://wsm.wsu.edu/extra/Hanford-Reservations).

The name John Olerud jumped out at me and I began to realize the reason why the Mariners’s noted baseball player of recent years was familiar to me, and discovered that it was due to hearing about his father’s career at WSU!

I first opened the magazine from the back and realized that the poem there by Kathleen Flenniken was by the new poet laureate of Washington I had just witnessed on PBS. I then noticed the picture accompanying it and read the article on “The Atomic Landscape” that you presented with more photos from “Chain Reaction” by Zach Mazur. This account of “the Bomb that changed the world” made in Hanford really spoke to me for several reasons: a) my wife’s youngest daughter, Lynda, had to have her thyroid removed due to cancer at the age of nine. The family lived in The Dalles and used to swim in the Columbia downstream from Hanford, where I was told, many people called thyroid cancer “The Hanford Disease”; b) one of the first books I read years ago as a young man was John Hersey’s *Hiroshima*; c) my concern about this whole impact of the atomic age led me to write a poem about the reservation at Hanford after stopping by one of the gates as Zach Mazur had done. As part of the contribution to the ongoing reflection upon what happened there I include “Hanford Reservations” for your further consideration of this awesome event in our history. Thank you again for your amazing magazine!

*Graham Hutchins  
Port Angeles*

Enjoyed the article about raspberries. It was particularly interesting to find out that nearly 60 percent of the nation’s production comes from around the Lynden area, where I grew up. In the late 50s and early 60s, picking raspberries, along with strawberries, beans, and cucumbers, is how many of us made spending money. Obviously child labor laws and technology changed that. My only problem was I broke out in hives if I ate any.

*Irene Tichelaar Silverman '68*

### What’s New?

On that bicycling article—there’s the pic of that “thing” next to the Holland Library, looks like a spaceship trying to imitate I.M. Pei’s Louvre entrance. What is it? What’s its purpose? Other than to beautify the campus?

Maybe y’all can do a future piece on such additions to the campus, since us old-timers left so long ago.

*Mara Trotter '66, '79  
Alexandria, LA*

*We think Mara’s idea is excellent. Being here all the time, we tend to forget that many of you have not actually been on campus for a while. So we’re starting a feature called “What’s New?” which will do exactly what Mara suggests.—Editor*

### Correction

*“The Murrow Boys” article in our last issue credited its accompanying photo as “courtesy The Murrow Center/ Tufts University.” It should have read “courtesy Digital Collections and Archives, Tufts University.”*

**wsm @wsu.edu**

Ancient DNA—bringing the past to life: WSU molecular anthropologist Brian Kemp shows how he gathers and analyzes centuries-old genetic information. See the video at [wsm.wsu.edu/extra/ancient-dna](http://wsm.wsu.edu/extra/ancient-dna)

**@WSUDiscovery**



“We just found an eruption 300 times the size of Mount St. Helens” <http://bit.ly/JnE5GR>



Cute alert: Pygmy bunnies. And they’re bouncing back among the WA sagebrush. <http://bit.ly/3SaRfo>



Why can’t we all just get along? A #WSU student’s study of annoying customers offers a few clues. <http://bit.ly/Lq6Xmj> via @boingboing

### What’s new?



The [Paul G. Allen School for Global Animal Health](http://www.wsu.edu/PAH)’s new home opened this summer. Made possible by donations from the Gates Foundation and Paul Allen, the building is a 62,000-square-foot state-of-art research facility dedicated to the study of diseases typically originating in livestock and their transmission to humans.

ROBERT HUBNER





# Fueling Big Ideas

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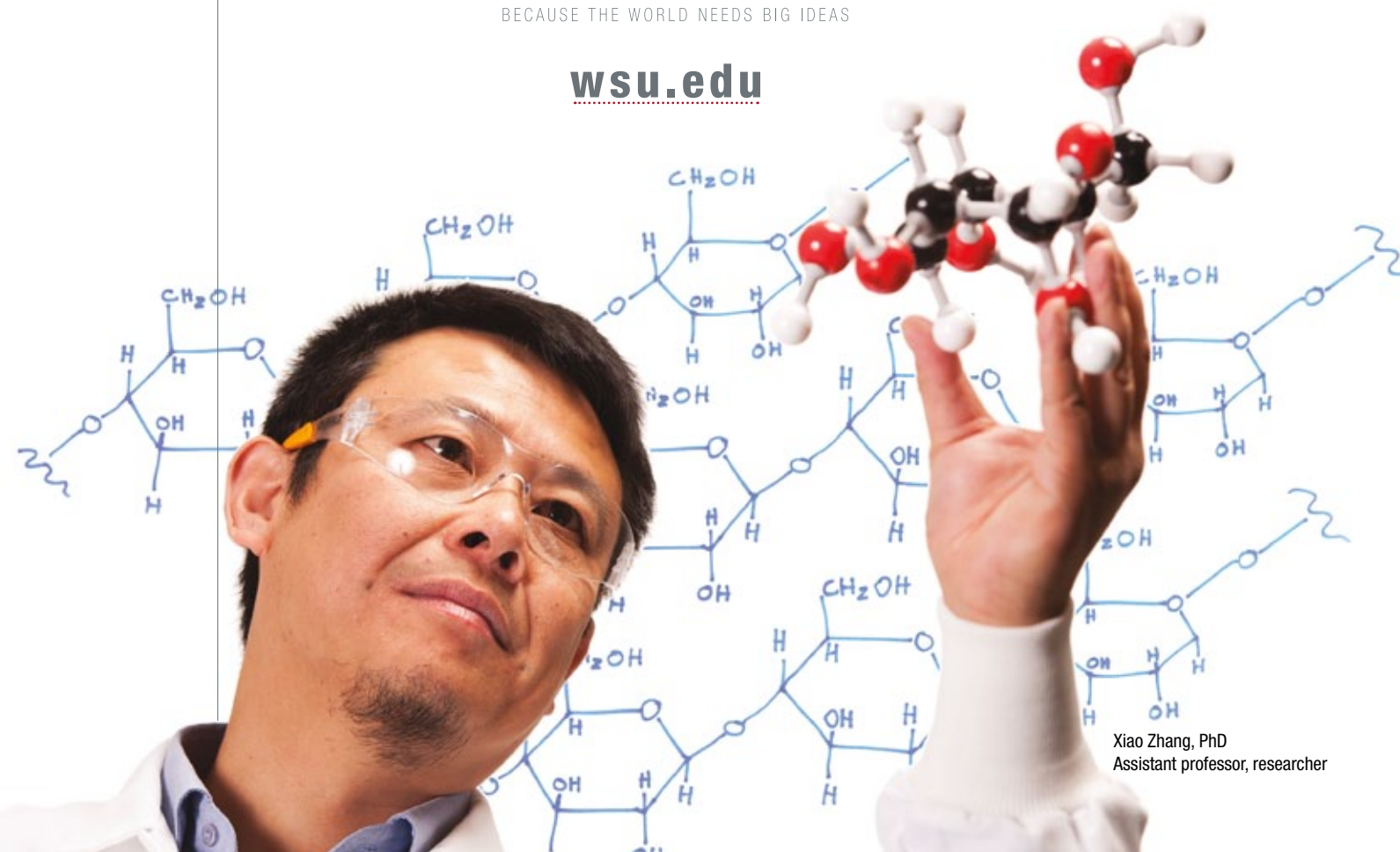
When jetliners routinely fly coast to coast on fuel derived from sticks, branches, and bark left on the forest floor, we'll have pioneer researchers like WSU's Xiao Zhang to thank. Dr. Zhang, a leading expert in converting non-food woody biomass to biofuel, is working hard to make the process cost-effective and sustainable.

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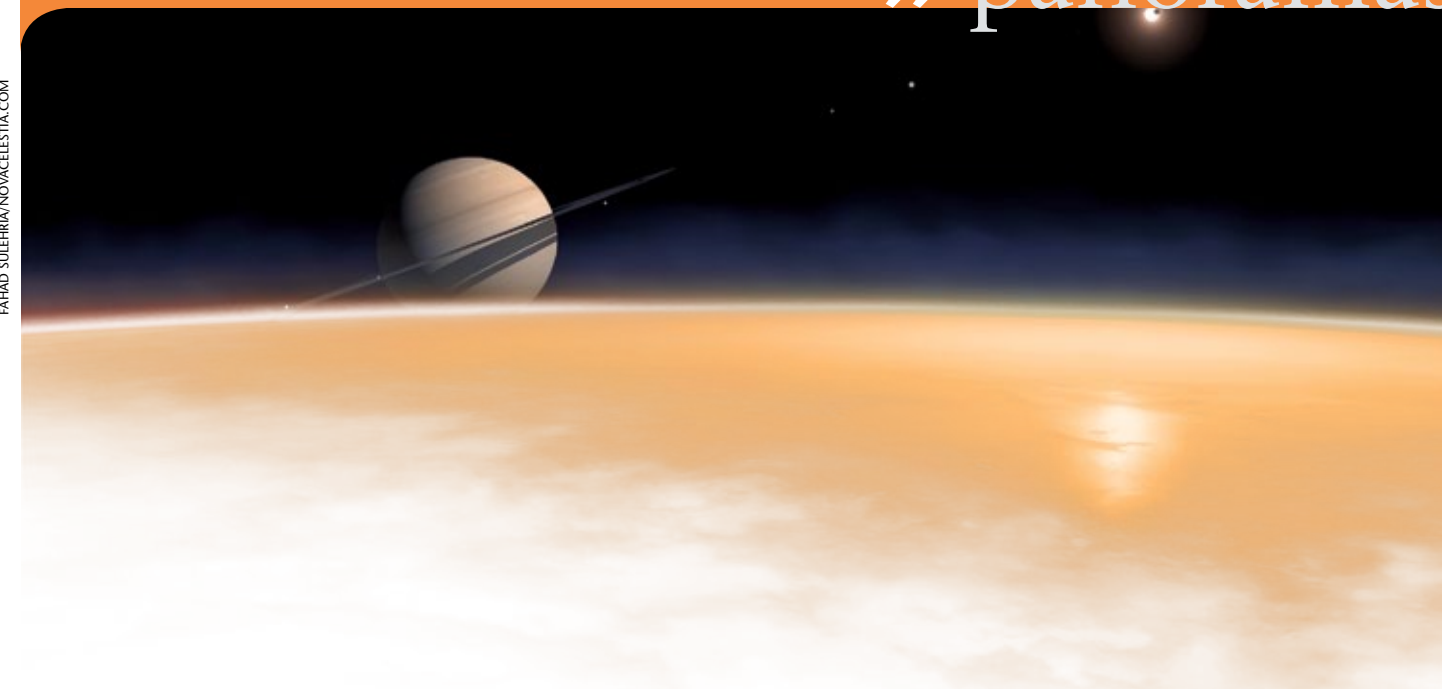
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Xiao Zhang, PhD  
Assistant professor, researcher

» panoramas

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FALL 2012

## Looking for life's origins in the clouds of a moon

*by Eric Sorensen* :: On the eleventh floor of the Webster Physical Sciences Building, Carol Turse watches over an array of glass tubes, flasks, and electrodes buzzing with 45,000 volts of electricity. Looking out the window, she takes in one of the better views of Pullman and the Palouse hills; looking inside the glasswork of her lab, she sees the atmosphere of Saturn's largest moon, Titan, and if all goes right, elements of life in the making.

With clouds and a thick, planet-like atmosphere, Titan is unique among the moons in our solar system. It might also be conducive to creating amino acids, the building blocks of life, which is what Turse hopes to see in a few days.

Turse, a doctoral candidate in the School of the Environment's Laboratory for Astrobiological Investigations, is conducting a variation of the Miller-Urey experiment, the first successful laboratory attempt to test theories about the

origin of life. In one flask she is boiling a mix of methane and ammonia, simulating conditions on Titan's surface.

"I call it the ocean flask," she says.

As the compounds boil, vapors rise to an "atmosphere flask" where they are exposed to the spark from a Tesla coil. This simulates lightning or some sort of static discharge, which can break the bonds of ammonia or methane and ease the way for more complex organic compounds to form. As the vapors condense, they run through a tube back to the ocean flask. If things go right, a week or so of this activity will produce a primordial soup similar to the "warm little pond" that Charles Darwin once speculated could lead to the chemical creation of a protein around which life would form.

Stanley Miller, a graduate student of the Nobel laureate and then-University of Chicago physical chemist Harold Urey, first conducted the experiment in 1952 after Urey suggested a

more primitive earth atmosphere of methane and ammonia may have helped life emerge. Miller built a setup similar to Turse's and after a week had a yellow-brown solution that contained glycine and several other amino acids.

Miller presented his findings in a seminar attended by Urey and Enrico Fermi, the University of Chicago physicist. At one point Fermi asked Urey if Miller may have indeed demonstrated the way life originated.

"Let me put it this way, Enrico," replied Urey. "If God didn't do it this way, he overlooked a good bet."

Scientists now believe early Earth's atmosphere was mostly carbon dioxide and nitrogen with little reactive methane and ammonia. Miller could not replicate his results in that milieu, but one of his former students did once he took into account other factors.

Titan also has conditions that challenge a Miller-Urey setup, the chief one being intense



## » panoramas

cold. Turse couldn't conveniently replicate  $-180^{\circ}\text{C}$  in the lab, but she and her advisor, Dirk Schulze-Makuch, theorize temperatures would warm in the wake of an asteroid or meteorite impact.

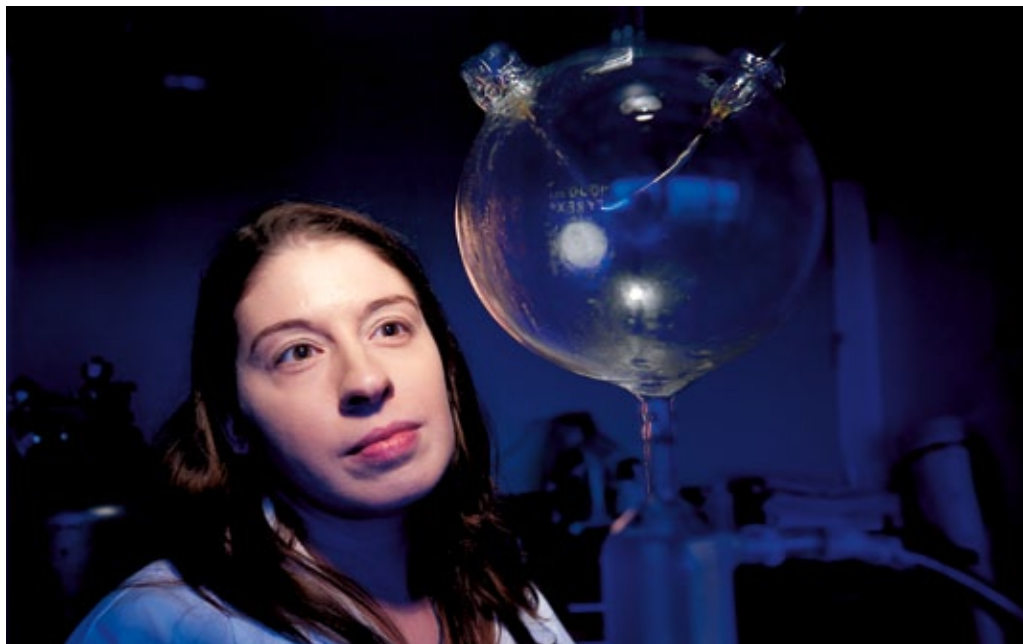
Turse, 36, has also reproduced variations of the original Miller-Urey experiment.

"It's exciting, and it works, but what about other planets and moons?" she says. "That's what we wanted to do."

To be sure, the experiment only addresses the origins of life—the first leg of astrobiology's

says Turse. "And then you can extend that to other planets as well, all these new exoplanets we're discovering. And I'm sure there'll be many, many more that we'll discover as well. And then billions of stars, just in our galaxy. Most of them have planets. The statistical odds are very good of life somewhere else. And it doesn't have to be complex life."

After running her apparatus for a week, Turse analyzed the resulting, cloudy soup and found four amino acids—not as many as Miller found, but amino acids nonetheless.



Doctoral candidate Carol Turse simulates Titan's atmosphere in the WSU School of the Environment's Laboratory for Astrobiological Investigations. Photoillustration Robert Hubner/Staff

three-legged stool of origins, evolution, and fate, as in, where life in the universe might be headed.

"It tells us we can make the building blocks of life—amino acids—from non-living, inorganic components," says Turse. "And that's great, but that's not life. People do make the intuitive leap—'Oh, there are amino acids, there must be life'—but not quite. There's so much more that you need to have life. At least you have to have some sort of replication, some sort of enclosed cells with a membrane. You don't have that yet, but at least you have the building blocks, which is important."

And the synthesis of amino acids raises tantalizing possibilities about not just life on our planet and Titan, but elsewhere in our galaxy and beyond.

"If we could do it that simply with that experiment, there's no reason you couldn't do it on other planets, say on Mars, or Titan, or Europa,"

She replicated the experiment and just before turning the equipment off, noticed a bright pink droplet on one of the electrodes, and kept the equipment running. Now she is taking samples of the soup at different times, aiming to see how different compounds are forming and to answer a brand new question for science: Why might a variation of Darwin's pond be pink?

## World vets

by Andrea Castillo '12 :: Quivering all over, a dirty yellow and white puppy with a large potbelly whimpers as a veterinarian injects it with saline fluids. The puppy is severely dehydrated and disoriented, unable to stand up on its own.

Chanco, as the veterinarians name him because of his pig-like round belly, initially had

a grave prognosis. Found wandering along the street, and visibly weak with parasites and tremors, he did not have long to live.

The puppy spends the night on intravenous fluids and medication. When the veterinarians return the next morning, his condition has improved. By the following day, they are confident he will survive.

Chanco was the second patient seen that day by World Vets volunteers at the Surgical Training Center, a veterinary clinic located in Granada, Nicaragua. A nonprofit organization headquartered in Fargo, North Dakota, World Vets provides veterinary aid and disaster relief in developing countries. It opened the clinic to house its new International Veterinary Medicine Program, which will train hundreds of veterinarians and veterinary students from across the globe.

Since 2006, the start-up nonprofit has grown into an international organization that has administered thousands of emergency surgeries conducted by volunteer veterinarians in developing countries. World Vets also responds to international crises, from rescuing stranded pets in flood-ravaged Thailand to scouring debris for animals that survived the 2011 earthquake in Japan.

"We started out with nothing—just the vision that veterinarians from all over the U.S. could help on projects," says Dr. Cathy King '97 DVM, who started World Vets with a donation jar at her clinic in Deer Park. "It just grew from there and three years later became a full-time job for me. Now we send out a team almost every week of the year."

The work, funded by donations and grants, benefits a wide range of animals, such as elephants in Asia, horses in Central America, and military dogs in Iraq. World Vets runs on a \$2 million annual budget, about half of which is in-kind product donations like veterinary medicine and equipment.

More than 3,500 people have volunteered for the organization in 36 countries. All volunteers pay their own travel expenses, so 100 percent of donations go toward running the programs, says King.

The Surgical Training Center, located in a small suburb of Granada, looks like a typical home save the red and black World Vets sign hanging above the front porch.

Nicaraguan veterinarians trained by World Vets run the center, which opened last November. For eight months of the year, the center provides training for Latin American students. During



the remaining four months, the program offers hands-on immersion into international veterinary medicine for North American and European students.

"In all the time we've been out here doing this work, we've had a lot of local vet students interested in learning who weren't getting a lot of surgical instruction in school," says King. "We decided that in order to maximize our impact we would put a focus on training."

The Surgical Training Center and International program, like World Vets field projects, are self-sufficient.

Students from the United States will pay to participate in the summer training sessions. The money from their tuition pays for the Latin American students during the year. Animals brought in for classes will also get neutered for free, continuing to help curb animal overpopulation in Nicaragua.

"That is the beautiful part about this program," says Claudio Mayorga, general manager of the Surgical Training Center. "The Latin American students pay absolutely nothing to participate in the training sessions. They receive everything they will need, including a DVD of the surgeries they can watch at home. This training, if not part of a self-sufficient program, would be very expensive."

Mayorga says the clinic and training sessions will develop better veterinarians in Nicaragua.

"Veterinarians in Nicaragua have all the knowledge to perform surgeries but don't have the practice," he says. "Not all of the universities in this country have a surgery room with all the equipment necessary. This clinic meets those necessities."

In March, a group of 11 volunteers traveled to the Surgical Training Center as part of a World Vets field project, providing free spay/neuter services and other medical treatments for small

usually get to work on real operating tables and in real clinics during field projects, she says.

"We've done surgery in a fire station, a Catholic church, an abandoned sweatshop and on basketball courts—oftentimes without water or electricity," says Allum. "The way this clinic is set up pretty closely mimics what the senior surgery students will operate from in their vet schools."

One of King's long-term visions for World Vets is to open training centers in different

Founded by Dr. Cathy King '97 DVM, World Vets has grown into an international organization providing veterinary services and training in developing countries. Photos Andrea Castillo '12



animals. The team completed about 105 basic consultations and 75 surgeries in four days of work.

Karen Allum '94 DVM, who led the volunteer group as a field service veterinarian, says the new facility is great for veterinary students still learning to do surgery. World Vets teams don't

regions of the world. Once the Granada program is fine-tuned and running smoothly, she would like to open up similar centers and programs in Africa and parts of Asia.

As for Chanco, the once debilitated puppy is now playful and energetic, his curly tail wagging constantly.

## Discovery

Fresh and fruity goodness from WSU's Tukey Orchard :: More News of Life on Mars and Saturn's Titan :: The Myth—and Psychology—of the Better Bat



[wsm.wsu.edu/discovery](http://wsm.wsu.edu/discovery)



## The perfect city

by *Kaitlin Gillespie '13* :: Charles Francis Adams, a wealthy businessman from Boston, envisioned a perfect city. It was to be clean, well-maintained, and economically prosperous. It could not be too crowded. It had to be close to water. It would be somewhere in the West.

Adams and a group of fellow businessmen created the Lewiston-Clarkston Improvement Company and in 1896 chose the site of modern-day Clarkston for their garden paradise. There, they built the community of Vineland.

Now, Vineland's story is being retold by WSU faculty and students.

"Vineland: Shaping Paradise" was installed as an exhibit in the WSU Manuscripts, Archives, and Special Collections (MASC) in April. An online version of the exhibit is expected to be launched late this summer.

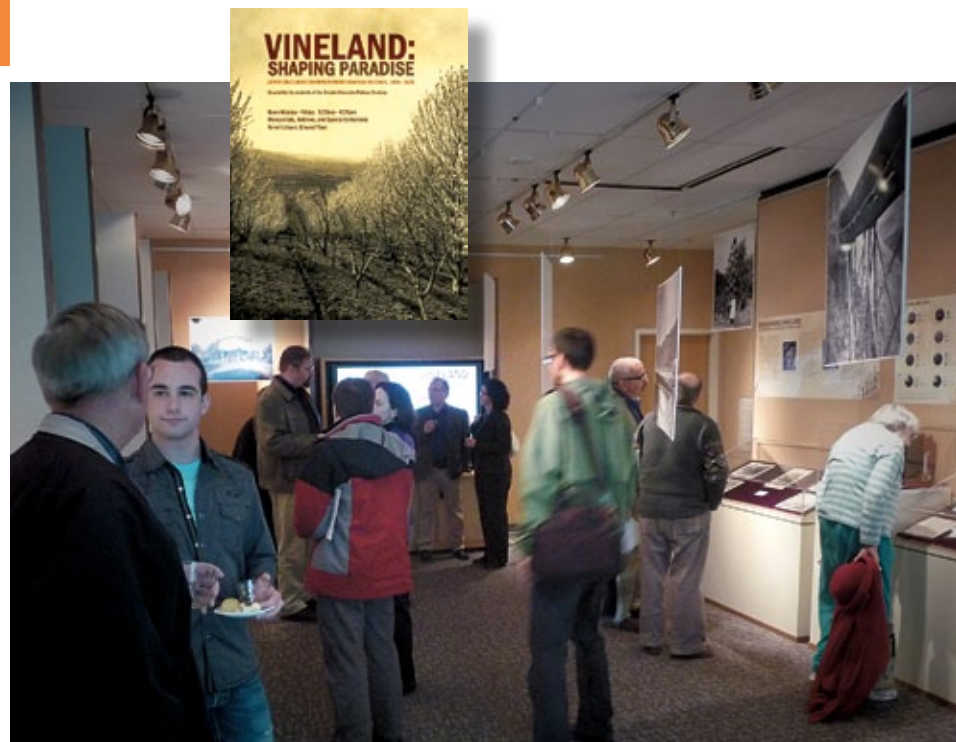
The history department at WSU sponsors the Greater Columbia Plateau Initiative, dedicated to exploring the history of the Columbia Plateau. With the support of grants, the group was able to create a two-year seminar that allowed students to research the region.

Students created the Vineland exhibit using MASC's Lewiston-Clarkston Improvement Company Records, a collection of 150,000 photographs, maps, and other items recording the rise and fall of the community.

"There're all kinds of really beautiful maps and photographs," says Associate History Professor Robert McCoy, one of the faculty members involved in the project.

The history of Vineland is not unusual, but is not something many people are familiar with, says McCoy.

The potential for irrigation along the Snake River drew investors to the area. The Lewiston-Clarkston Improvement Company built a dam and irrigation systems, allowing agriculture to flourish in the region.



COURTESY WSU MANUSCRIPTS, ARCHIVES, AND SPECIAL COLLECTIONS

However, like most utopias, interests changed. The company passed to different hands in the 1920s. In the 1940s, a local fruit warehouse and commission firm bought out the company.

Each student researched a different aspect of the community, including a series of photographs taken by Asahel Curtis, Edward Curtis's brother, and the use of Sir Ebenezer Howard's "Garden City" ideals, which emphasized grace and beauty in urban planning.

Unlike a paper that will only be seen by the professor, the seminar allowed students the opportunity to complete a project that would be seen by a large group of people.

"I think the sense was that they were doing history in public," McCoy said. "They had to make sure that they knew what they were talking about."

"I think it's always a challenge to push people to do something new, but it's very rewarding."

See the full online exhibit and images via [wsm.wsu.edu/extra/vineland](http://wsm.wsu.edu/extra/vineland).

## Unfiltered history

by *Tim Steury* :: Tom Brigham, the executive secretary of WSU's Emeritus Society, stopped by the magazine office some time ago with a box full of interview transcripts, the results of one of the society's major projects. Had I known how absorbing and distracting the contents would be, I might have been more hesitant to accept delivery.

Seriously, the oral histories contained in the box provide absorbing recollections of WSU history from the early 1950s on. At their best, the interviews combine engrossing storytelling and striking insight. Conducted and transcribed by history graduate student, now instructor, Katy Fry '06, '11, the histories provide unfiltered memories of WSU through five presidencies and rich insight into how we came to be where we are now.

I met agricultural economist Norm Whittlesey (at WSU 1964–1996) soon after I started at WSU in 1989 and interviewed him a time or two before he retired. I admired his work on water policy and knew that he was associated with some considerable controversy regarding water. But I was never clear on the details. Now I know, thanks to his lively and candid oral history.

The Grand Coulee Dam and the Columbia Basin Project was originally planned as purely an irrigation project. Half of it was funded by Congress. Power generation was added later in the planning. Decades after the dam's completion, the plans for the second portion of the irrigation

project were resurrected, and Whittlesey was asked to analyze its worth. Much to the dismay of a determined interest group, he testified before the House of Representatives that the project was in fact not worth the cost.

Whittlesey learned the dangers of being forthright and recounts a not-so-surprising but still troubling conversation with an unnamed legislator about truth and accountability. He also muses that the results of his testimony changed his opinion of tenure.

David Seamans, who joined the electrical engineering faculty in 1954 (and retired in 1992), remembers a campus that had one computer, an

1950s Pullman, an absorbing account of his career in biological science, and a hilarious description of campus unrest in the late 1960s and early 1970s and his part in it, including his firing by President Terrell from the Human Rights Committee.

Others interviewed for the project include James Quann (Registrar, at WSU 1957–1990), Robert Ackerman (Anthropology, 1961–2007), Don Orlich (Education, 1967–1993), George Hinman (School of Earth and Environmental Sciences, 1969–1997), James Short (Sociology, 1951–1993), Walt Butcher (School of Economic Sciences, 1964–1996),



Emeritus Society executive secretary Tom Brigham (center) with Katy Fry and Herb Nakata. Photo Robert Hubner

IBM punch-card machine in Thompson Hall, the administration building at the time. He taught the first computer hardware course on campus, in 1956 or 1957 and, with William Grant in music, built an analog music synthesizer.

Although Sue Durrant's (at WSU 1961–2005) story about her role in forcing WSU to follow Title IX guidelines has been told many times, including in this magazine, never have we heard such a personal and moving account of what it was like to have to sue her university to rectify an unbalanced athletic system.

Not only does biochemist Ralph Yount (Molecular Biosciences, 1960–2004) recount his discovery of an ATP analog that is used widely in biochemical research, he shares his thoughts about the relationship between scientists and their mothers.

Zoologist Leonard Kirschner (1953–1993) provides an irreverent but touching picture of

Thomas Maloney (Composite Materials and Engineering, 1956–1995), Sherrill Richarz (Human Development, 1968–1993), Thor Swanson (Political Science, 1951–1982), Herb Nakata (Molecular Biosciences, 1959–1993), Nicholas Kiessling (English, 1967–2000), and Edward Bennett (History, 1961–1994).

The oral histories are generally insightful, often funny, occasionally mis-remembered, and unflinchingly candid. As such, members of the society have decided not to make the interviews available online at this time. However, transcripts are available at Manuscripts, Archives, and Special Collections, and selections are posted at the link to Our Story below.

Read selections from the oral histories at [wsm.wsu.edu/extra/oral-histories](http://wsm.wsu.edu/extra/oral-histories).

## Come the big one, everyone becomes a Cougar

by *Eric Sorensen* :: An earthquake is like a big finger in a spider web. Touch one spot and parts of the web far away will move.

Dan Dolan has been pondering just how far away in the hopes that the web of our state's vast institutional infrastructure doesn't snap under the strain. Dolan, a professor of civil and environmental engineering, looked at how we might respond to and recover from damage to the state's building and housing stock as part of the Resilient Washington State Initiative, a multifaceted assessment of the ways an earthquake can hurt us and how hard it will be to recover.

The quick answer: Recovery could be very hard, and picking up the pieces will involve a lot more than lifting bricks. Dolan found that major damage could pull health and safety personnel from distant corners of the state, while condemned homes could turn residents into refugees, as happened after Hurricane Katrina damaged the Gulf Coast. Areas sapped of people would then have a hard time recovering economically.

"We figure New Orleans has probably extended their economic recovery by at least five years because people left the community, and also the economy takes longer to come back," says Dolan.

The state's seismic underpinnings have nearly two dozen ways to do damage. The Cascadia subduction zone megathrust could pack a magnitude 9 "Big One," while a catalog of earthquake scenarios compiled by the state Division of Emergency Management lists 19 other seismic faults and zones, most of which can produce a magnitude 7 or greater.

The last Cascadia event occurred in 1700, and the odds of another in the next 50 years are between 10 and 14 percent. A deep earthquake, like the magnitude 6.8 Nisqually quake of 2001, is a near certainty in the next half-century.

And the quake's magnitude is only one measure of its destructive power. Even moderate shaking can wear structures into submission if it lasts long enough.

"The Chilean earthquake [of 2008] was two minutes long and the damage is significant," says Dolan. "It doesn't have to be as strong an

:: continued page 18

## Our Story

Jewett Observatory, 1952 :: 50 years ago at WSU—Taking a look back at WSU in 1962 through the lens of the college's yearbook, the *Chinook*.



[wsm.wsu.edu/ourstory](http://wsm.wsu.edu/ourstory)





## A talk with Mike Leach about life, animals... and Cougar football

**Above:** Mike Leach being introduced as the new head coach of Washington State University's football team. *Photo Dean Rutz/The Seattle Times.*  
**Opposite:** Leach instructing players at spring practice. *Photo Dan Pelle/The Spokesman-Review*

by Larry Clark '94 :: I understand how the interview with Washington State University's new head football coach Mike Leach drifts from Cougar football to life in Pullman and pirates in Key West (I asked that one), but bulls in ancient Rome? The Tokyo fish market?

It starts out on track, as I meet with Leach at his office in Bohler Gym looking onto the practice field and the south side of Martin Stadium. As workers on scaffolds rush to complete the new addition to the stadium before fall, Leach points out proudly how the project is on time and under budget.

He grabs several posters of the proposed football operations building between the playfield and the stadium and explains details of the study halls, weight room, lockers, and offices.

Leach then launches into his take on the WSU football team and his impression after spring training.

"As a group you don't tell them things a whole bunch of times. You tell them a couple of times and you see improvements," he says. "They're loyal to one another and pulling in the same direction."

He names many of the players on the team—Logan Mayes, Leon Brooks, Ricky Galvin, Jeff Tuel, Dominic Williams, and more—emphasizing strengths of each. Leach says he wants to see steady improvement for a successful season, taking one game at a time. "The most games you can win in a week is one, so we will try to focus on that."

He's ready for conference play, but doesn't want the team to think too far past the next game. "Respect everybody and fear nobody," he says.

Before Pac-12 play, the Cougars will take on Brigham Young University, Leach's alma mater. Even though he says sentimentality goes out the window when you get on the field, Leach does remember a bit about his time at BYU. "When I was in college I was on the moving crew, which is based underneath that stadium. If a professor needs a new desk, somewhere under the stadium is that desk and we'd haul it to the office," he recalls.

Leach is an easy person to talk to, a natural storyteller with a steady delivery, but his eyes display a restless curiosity.

In Leach's bestselling book, *Swing Your Sword*, he applies his fervid imagination and knowledge to the game of football. For example, Leach writes about maximizing one's own strengths and overcoming fear through an analysis of David vs. Goliath. The book ranges across Leach's mental landscape and applies his lessons to life as well as football, as when he writes about going for it

on fourth down: "You think it through, and if you believe the benefit outweighs the risk, then you need to do it."

Unusually, he did not play football at the college level. Leach earned his law degree from Pepperdine, before realizing his love was coaching. Taking a risk, he graduated from the United States Sports Academy and went into collegiate football.

**HE COMES TO WSU AFTER TEN YEARS AS HEAD COACH AT TEXAS TECH** and jobs as an assistant coach at Kentucky, Oklahoma, and several smaller schools. At those teams, Leach and Hal Mumme developed the "Air Raid" offense, a fast passing attack that relies on short strikes to move down the field.

Leach manages the moving parts during the games, calling plays and coordinating with assistant coaches, but he keeps a relatively straightforward playbook. "You want to be as efficient as possible. You don't want to be so complicated that your guys can't pull the trigger. The smartest ideas in the world won't be helpful if your players on the field are hesitating," he says.

The vaunted "Air Raid" offense had great success at Texas Tech. In addition to five bowl wins and ten consecutive winning seasons, the Red Raiders led the NCAA in passing yardage for four years in a row under Leach. He earned the National Coach of the Year award in 2008. Tech also boasted the highest graduation rate for a Division I football team.

Leach has always emphasized academics for football players, with an optimistic but tough view toward their success. "Down deep, most of them want to get a degree, even if they're not great students. You try to reinforce that," he says. Players will get extra study halls and tutoring, and they'll run up and down the stadium if they miss or fall asleep in class.

Leach says it's clear that students have plenty of peer support at WSU, partly because of Pullman's unique college town atmosphere, which he witnessed soon after he arrived.

"When we first got here, we drove around town at 10:30 on a Friday night, and I was thinking I'll see students hanging around, but nobody's downtown. I said to my wife Sharon, 'What day is it? School's going on, right?'"

"Then we drove up by the college. It was the liveliest, most thriving student community. You talk about college atmosphere; you go up there, there are students everywhere. You look in the windows and there's a ping-pong

tournament, people having a debate. It's 37 degrees out and still they're playing shirts and skins basketball."

After that experience, Leach says he finally understands the knowing smiles from WSU alums when he asked what was great about WSU.

I mention my own experience at WSU meeting Japanese students and studying abroad, which grabs Leach's attention and leads him to reminisce about his own time in Japan. He had gone on a nine-day coaching clinic, eating foods new to him, sleeping in too-short beds at the "Lost in Translation" hotel, and trying out a traditional Japanese tub. He lingers on the details of his trip, including the foray to the Tokyo Bay fish market.

"We got up at three or four in the morning, and you'd be amazed at the stuff they pull out of the ocean...tunas almost the size of a pickup," he says. "It was a really impressive operation."

Our discussion leads to his recent bear hunting expedition to northern Canada for the Outdoor Channel, where he nabbed a seven-foot-four male black bear that was threatening cubs. Leach describes the hunt—five hours of only seeing a woodpecker, then the big bear appeared—which leads me to the "Who would win...?" question.

For the last couple of years, reporters and others have been asking Leach about theoretical battles between different animals, such as who would win between a grizzly and shark? Leach answered, "If it's salt water, I'd pick the shark. If it's fresh water, I'd pick the grizzly."

I join the fray with a question of who would win between a bear and a sabertooth cat. Leach answers with a historical reference.

"In the Roman empire, in the Colosseum contest between lions and bulls, bulls won every time. If I think about it, cats are quicker and more explosive, but they fatigue quicker. Once they're out of gas, they're done. My suspicion is that bull got clawed up a bit, and when the lion tired out, the bull would finish him off."

We analyze but don't resolve the question, and I suspect he might still be thinking about researching it.

And then there's the pirate story when I ask him about Key West—where he moved in 2009 after Texas Tech—and its rich buccaneer past.

"My radio show on Sirius with Jack Arute would finish about three, so about four my wife and I would go to this coffee shop and sit on the

porch," he says. "I'd see this guy dressed in full pirate gear come racing up the street on his scooter with a parrot holding on tight to his shoulder. He had the fluffy sleeves, the fluffy pants, boots, the whole thing. He looked like a real pirate except he's on a scooter."

"I nudged my wife and I said, 'I'm gonna die if this guy gets off here and he has a wooden leg.' Sure enough, he flops his outside leg over and he's got a wooden leg."

Leach jumps up and demonstrates the clever hinged knee on the pirate's wooden leg. He follows up with another story, of when reporter Spencer Hall was visiting to interview Leach and spotted a different pirate in a restaurant.

"Spencer says, 'I'm a reporter and I've been all over the country, but you look like a real pirate, straight out of another time. You're the most authentic pirate I've ever seen. Have you seen anybody that compares?' The pirate drops his eyes, and he shakes his head and says, 'There's one.' Spencer says 'What does he have that you don't have?' The pirate says, 'He's got a wooden leg.'"

**THE CONVERSATION RANGES EVEN FURTHER AFIELD.** We talk about restaurants in Pullman (Swilly's, Black Cypress, and a bunch more), gargoyles and music at Rico's, his kids' impressions of Pullman schools (they love them), and Jimmy Buffett (Leach is a fan, but has yet to meet him). We eventually return to football.

Leach says for the fall season Cougar fans "can expect steady improvement and a dedicated effort. We're a team that's emerging and that's always exciting."

As I prepare to leave, Leach tells me about another of his books, *Sports for Dorks*, in which people with a wide range of expertise apply their knowledge to athletics. I tell him about some WSU faculty who study the movement and anatomy of insects. Leach's eyes show that intense curiosity.

"We are working on another volume, so ask them to call if they're interested in sports. I'd love to talk to them," he says. <<

Watch videos of Mike Leach's press conferences at WSU at [wsm.wsu.edu/extra/Leach](http://wsm.wsu.edu/extra/Leach).





» in season

## SUMMER BLUES

:: by Hannelore Sudermann ::

IN 1944, when Glenn Aldrich was 12, he helped his father carry blueberry plants into an old sheep pasture next to their home. The family then planted the first commercial blueberries in Lewis County and some of the first in the state.

Maybe it was fate, says Aldrich '58, '62, but somehow his father had found the perfect crop for the soft acid soils along the Cowlitz River. The berries flourished there in Mossyrock, a pretty pocket of the valley.

Sixty-eight years later those berry bushes tower over Aldrich. In the intervening years, he has added some 20 more acres, spent time in the Air Force, taught vocational ag to high schoolers, raised sons Chris '87 and Jason '92, and helped found the Washington Blueberry Commission in 1969.

When I called the farm to see if Aldrich would be willing to be interviewed for this story, his wife Wisten was quick to answer. "Oh sure. He majored in talking," she laughed. "Well, he majored in agriculture, I think. But he could have minored in talking."

So as I walk up the drive between that original field of blueberries and a set of barns, I'm not surprised that Aldrich has started the conversation before we even make our introductions. Pointing to the field he explains these are Rancocas blueberries, an early variety known for high yields, size, and flavor.

There are three or four other fields around the state that are about the same age, Aldrich explains, and some even older. These first plants on his farm came from Eberhardt's Nursery on Steamboat Island, in south Puget Sound. Farmer Joe Eberhardt helped introduce the blueberry to the region and also developed some of his own varieties—the Eberhardt and the Olympia.

The cultivated blueberry hasn't been around all that long. The highbush cultivated blueberry that we know today was born in New Jersey in the early twentieth century, Aldrich says, alluding to the work of Elizabeth White. The daughter of a cranberry farmer, White enlisted the help of local wild-blueberry pickers to go into the woods around her family's cranberry bogs and find and tag the best wild berry bushes with desirable fruit qualities such as good size, flavor, pickability, and storability.

With the advice of U.S. Department of Agriculture scientist Frederick Coville, White crossed several varieties—and planted 3,000 seedlings.

Only two good varieties came out of those first efforts, but over the next several years, according to Coville's reports, White and her collaborators produced several more successful varieties.

Coville worked with farmers along the eastern seaboard in places like New Jersey and New Hampshire to find wild cultivars to use in crosses and hybrids and establish the foundation for our blueberry varieties today. Several, including Brooks, Rubel, and Sooy (named for one of the pickers from Elizabeth White's farm) were used to make the early crosses and until recently were in the genetics of almost all commercial berries.

In his decades growing berries for sale and berry bushes for nursery stock, Aldrich has seen the industry develop—and now, as new health information about the berries has become fodder for the mainstream press, demand has skyrocketed. "There's no doubt about it, the health news has been fabulous for our marketing." According to the U.S. Blueberry Council, the fruit is an excellent source of vitamin C, manganese, fiber, and antioxidants.

It's the anthocyanins, says Aldrich. The pigments that make the blueberry blue are also found in eggplants, black currants, and cranberries. They're credited with having high antioxidant effects, protecting the cardiovascular system from oxidized cholesterol, and reducing artery-clogging plaque. Research on the benefits of blueberries is still in its early stages, but recent findings have credited the fruit for lowering blood sugar, preserving eyesight by protecting against macular degeneration, and protecting memory.

For decades most of Washington's blueberry farms have been like Aldrich's: small, intensive, and local. "The west side farms can range from a fraction of an acre to hundreds of acres," says Alan Schreiber, administrator of the Washington Blueberry Commission. But in recent years blueberries have moved east of the Cascades into the Columbia Basin, where they're being planted by the hundreds of acres. The big issues on the east side are irrigation and making the soil acid enough to host the high-yielding blueberry plants. Heat is a lesser concern. Still, the berries do best in cooler environments at the edges of woods, in coastal areas, and in mountain clearings.

But there are benefits east of the mountains, says Schreiber. "They don't have the insects or diseases that occur in wetter areas, which means there are lots of organic berries."

With the increase in demand and new berry bushes going in all over the state, blueberry production has increased from 20 million pounds to 60 million since Schreiber started with the commission four years ago. "Each year our crop has been a record size," he says. "We're expecting that again in 2012."

For those who want to grow their own blueberries, WSU Extension advises planting them during their dormant season between January and March west of the Cascades, or March to April in Eastern Washington. Ideally they would be two-year-old root stock or three-year-old plants in containers. When the lack of acidity is an issue, home gardeners can amend the soil with shredded pine bark or a sulfur product. They reach full production stage around eight years—getting five to six feet high and producing up to 25 pounds of fruit per plant. The bushes bloom in late April and early May and are ready to be picked from July through September. "In the warmest spots in Eastern Washington they will start picking at the end of June," says Schreiber. "August is the peak of the season. And the last will be picked in late October."

Pick your blueberries four to five days after they turn blue, when the sugar levels are highest. Then check back every three to five days since berries on a cluster do not all ripen at the same time. Fresh berries should last up to two weeks in a refrigerator. They also freeze well. Simply rinse them and spread them on a cookie sheet and set in a freezer until frozen through. Then store them in baggies.

For most home berry growers, the biggest problem is the birds that will swoop in and steal away the berries as soon as they're ripe. The best solution is simply netting the berries to keep the birds out. But there are a few other concerns, including an aptly named fungus, mummy berry, which leaves the fruit white, hard, and inedible. Mummy berry is prevalent after long wet springs, especially if affected fruit from the previous year is left on the ground under the bush. There is a fungal spray to use on developing blossoms, but one of the best ways to address this is to rake out beneath the bush in early spring and to immediately remove the blighted shoots and affected berries when you see them. «



## » panoramas

:: from page 13

earthquake. When you have it that long, fatigue takes over after a while. The damage accumulation gets to be too much. And we currently don't design for earthquake duration. We only design for peak accelerations in our codes."

Earlier this year, the Resilient Washington State subcommittee summarized assessments



Video frame from "Alaskan Way Viaduct and Seawall Replacement Project," depicting simulated damage from an earthquake. Prepared for WSDOT by Parsons Brinckerhoff

compiled by teams in four areas: critical services, utilities, transportation, and Dolan's group, housing and economic development. The housing analysis showed some of the biggest shortcomings. To be resilient, single-family housing should be structurally sound, safe, and sanitary—fit for occupation—within a week of an earthquake. Housing group members were willing to let mid- and high-rise structures remain uninhabitable for a few weeks or months.

But the group found that houses built after 1950 might be uninhabitable up to a month and it could be three months to a year before older houses can be occupied. It could take up to three years before mid- and high-rise structures built before 1977 can be occupied.

One problem is many older apartment buildings have parking on the first floors with little support for the floors above. The 1994 Northridge earthquake near Los Angeles saw such buildings' parking levels collapse or "pancake."

"If you look around Aurora or drive up and down I-5, you'll see a lot of those buildings where a first floor is parking and then two to three floors of apartments above it," say Dolan. "And all are on steel columns, steel-piped columns or something like that. There's no lateral capacity on that first floor. And we perceive that as being a really large risk to having a resilient community because if those buildings come down, they're no longer habitable."

Read more about potential damage from an earthquake at [wsm.wsu.edu/extra/quake](http://wsm.wsu.edu/extra/quake).

## Yet another existential mystery

by Tim Steury :: Although humans greatly outnumber our closest living relatives the great apes, for some reason the genetic diversity of modern humans is much lower, posing a puzzle that only gets more puzzling the further geneticists look into our evolutionary past. Not only is this disparity counterintuitive, it contradicts a basic tenet of population genetics theory, that larger populations should display greater genetic diversity.

Luke Premo, an assistant professor of anthropology, has taken a stab, with coauthor Jean-Jacques Hublin, at exploring the conundrum in the *Proceedings of the National Academy of Sciences* (January 6, 2009).

Premo is an evolutionary anthropologist who studies Pliocene and Pleistocene hominin behavior and demography. The Pleistocene epoch reaches back two million years, and the Pliocene precedes it. "Hominin" refers to humans and extinct members of the human lineage.

The traditional explanation of our low genetic diversity is that sometime between 30,000 and 130,000 years ago a special event, perhaps a volcanic eruption or epidemic, caused a "bottleneck" in our species' population size. Although our population has rebounded since then, mutation rates, which are relatively slow, have not kept pace with rapid population growth, leaving us with less genetic diversity today than predicted by our current population size.

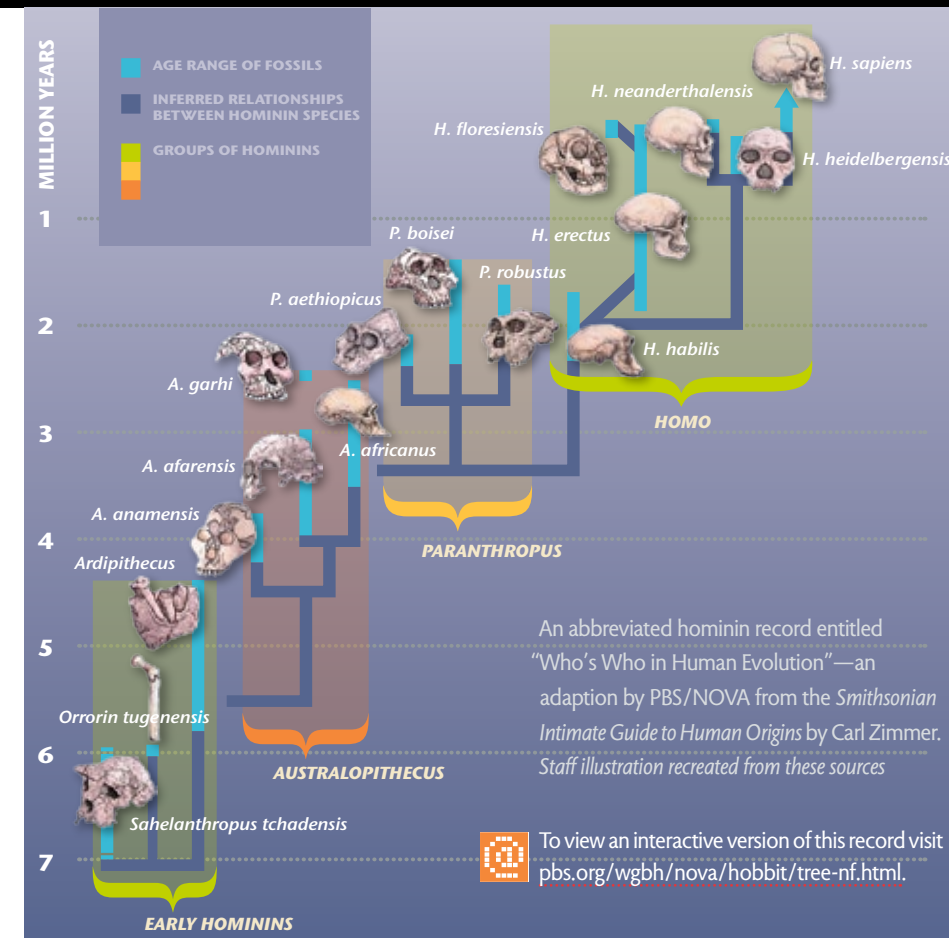
Such an explanation makes sense, except for the fact that Pleistocene humans, Neanderthals, and their common ancestors are now also known to display an unexpectedly low genetic diversity, suggesting that the cause has a greater antiquity than previously thought.

Also, says Premo, if a volcanic eruption, the more likely cause, decimated the human population, why did it not similarly affect the Pleistocene ancestors of today's great apes?

Premo and Hublin explore an alternate hypothesis, that "effective population size of human lineage reached its current level more than 500,000 years ago, before the population ancestral to Neanderthals and modern humans split."

If that takes you aback, you're paying attention. It is here that theory and reality momentarily diverge in order to explain population history.

"Effective population size" refers to the size of an idealized population that would show



the same level of diversity as the real-world population of interest.

While at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany, Premo and Hublin constructed a computer model to explore their notion that cultural differentiation among spatially defined groups may have played a role in curtailing human genetic diversity.

Culture in this sense is defined as learned information that can lead to variation in behavior. Culture is not exclusive to humans. However, says Premo, the cultural variation among chimpanzee groups—say, the practice of cracking nuts on a rock anvil instead of a log anvil—are unlikely to inhibit individuals from moving between groups and interbreeding.

But with humans, cultural traits, whether they be religion, language, or cuisine, can be more effective in keeping groups reproductively isolated. This is what Premo and Hublin refer to as "culturally mediated migration." Their computer model accounts for geographic space within which the simulated populations are located. Simulated individuals have simple genomes that are subject, to a small degree, to genetic mutation. They also possess cultural traits that are subject to copying error, or "innovation."

The model is equipped with an experimental dial of sorts, which Premo and Hublin can vary, thus changing the severity of the cultural difference that mediate migration between the groups.

The result? In populations structured by a high cultural similarity threshold, natural selection could have suppressed genetic diversity "over thousands of generations, even in the absence of bottlenecks or expansions in census population size."

Ongoing research of the Middle Stone Age archaeological record, says Premo, is likely to provide an empirical test of the provocative conclusion that cultural differentiation may have played an important role in explaining reduced genetic diversity in Pleistocene hominins and us.

## Cherries in two dimensions

by Nella Letizia :: Two-year-old trees in the WSU Roza Experimental Orchards near Prosser are the first step in transforming a 100-year-old production system for sweet cherries. The trees' unique branches, called upright fruiting offshoots (UFOs), form the core of a novel architecture suited for mechanized harvesters in sweet cherry orchards of the future.

Planted at an angle, young trees are trained to grow on a two-dimensional plane, putting more of their effort into developing a fruiting wall instead of the nonproductive

wood in a traditional, three-dimensional canopy.

The UFO tree architecture is taking off around the world, says Matthew Whiting '01 PhD, associate professor of horticulture at the WSU Irrigated Agriculture Research and Extension Center. Whiting co-directs a \$3.9 million, four-year, collaborative project funded by a USDA Specialty Crops Research Initiative (SCRI) grant to develop a sustainable, stem-free cherry production, processing, and marketing system.

Washington, California, and Oregon ranked first, second, and third for U.S. sweet cherry production in 2011 at 200,000, 75,000, and 43,200 tons. At the same time, says Whiting, sweet cherry harvesting requires the most investment of time and labor among all tree fruit operations. Cherry trees and the orchards they grow in don't accommodate mechanical harvesters; laborers still pick fruit by hand, climbing and carrying 10- or 12-foot ladders all day. With each mature cherry tree producing between 50 and 200 pounds of fruit, harvesting takes many pickers—often hundreds in a given crew.

Unfortunately, those pickers are increasingly hard to find. State officials, petitioning Congress for help, estimated that nearly 72 percent of Washington seasonal workers are here illegally and claimed that many potential laborers are staying away because they're afraid of being deported.



Matthew Whiting with UFO cherry orchard system.

Immigration reform could reduce the labor pool even further. Georgia's 2011 ordeal with its immigration enforcement law serves as a cautionary tale. An economic impact report estimates that after HB 87 took effect on July 1, labor-related losses to participating growers after the spring and summer harvest were \$75 million.



## » panoramas

One Washington sweet cherry grower, Denny Hayden '73, president of Hayden Farms in Pasco, is paying close attention to the Georgia case.

"We're one political decision away from disaster," Hayden says. "That's why we started moving in this direction several years ago. But

Ranches in Prosser saw a 2011 harvest of 8.6 tons of Tieton cherries per acre on his UFO block, not counting the fruit from pollenizer trees. The state average on 40-year-old, traditional sweet cherry trees is 5 to 5.25 tons per acre, says Whiting. Oliver credits the architecture for the improved yield.

"We decided we're never going to plant a traditional cherry tree again," he adds. "We've seen the advantages of the UFO. It cost a lot to get the block in, but we think in the long run that the yield advantages that we've seen so far and the picking advantages will outweigh the initial cost of establishment."

The key is in promoting uprights. The more uprights in the first year, the better the chance for fruiting sooner—and the higher the yields. In 2011, Whiting, graduate student Antonia Sanchez-Labbe, Joseph Grant of University of California, and Lynn Long of Oregon State University tested how timing the horizontal training of initial growth affects shoot numbers. The team discovered that the earlier the trees were tied down horizontally, the more upright shoots sprouted. Along with training, proper pruning techniques ensured renewal of upright shoots.

Now completing their second year of the USDA grant, SCRI researchers from around the country are also working to breed a sweet cherry variety with fruit that falls easily off the stem, develop a mobile cherry harvester, extend shelf life through better packaging, assess consumer preference of stem-free cherries, and delve into the economics of mechanical harvest.

## Chinooks and Powwows at your fingertips

by Larry Clark '94 :: If you're searching for a photo of a long-lost college friend or you want to dig into the rich history of Washington State, visit the WSU Manuscripts, Archives, and Special Collection's website to browse WSU's yearbook *The Chinook* up to 1986 and most issues of *The Powwow*, the alumni magazine from 1910 to 1969.

All texts are searchable and can be printed, shared online, or downloaded to your own computer. You can also browse the books online and let serendipity guide you to unexpected corners of the University's history.

"You can find not only pictures of family or friends, but what they did and what they were like at college," says University Archivist Mark O'English, who managed the digitization project. He says the ability to search the books quickly has already made his work as a reference librarian much easier, enabling him to more quickly answer several historical questions.

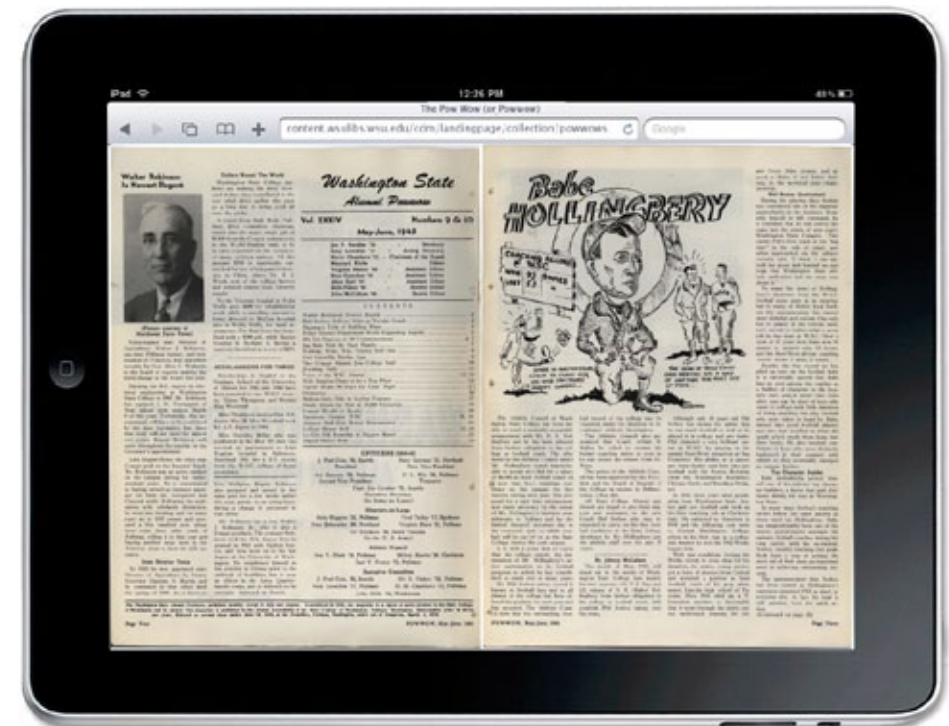
"The first day we put it live, someone came in and wanted to know how long we've had fencing at WSU," he says. "We searched and found the first mention of fencing as a sport in 1906, so we could work back from there. Without that tool, how do you even start to answer that question?"

*The Powwow* can lead to fascinating bits of WSU and alumni history. A glance through a 1962 *Powwow* reveals that James Cairns '59 and Billie (Larson) Cairns '57 were among the first Peace Corps volunteers in India and met Jacqueline Kennedy there.

O'English says the *Chinooks* alone have almost 38,000 pages available. Many of the WSU football programs are also on the website, and O'English hopes to digitize departmental histories, *HillTopics* (WSU's alumni magazine from 1970 to 2000), and *The Daily Evergreen* in the future.

Student Publications still sells volumes of *The Chinook* from 1986 to the present, if you are looking for those books. <<

You can access the digital archives of the *Chinooks* via [wsm.wsu.edu/extra/chinook](http://wsm.wsu.edu/extra/chinook) and the *Powwows* at [wsm.wsu.edu/extra/powwow](http://wsm.wsu.edu/extra/powwow).



Sample pages from WSC *Powwow* alumni newsletter, May 1945. From the WSU MASC online archive.

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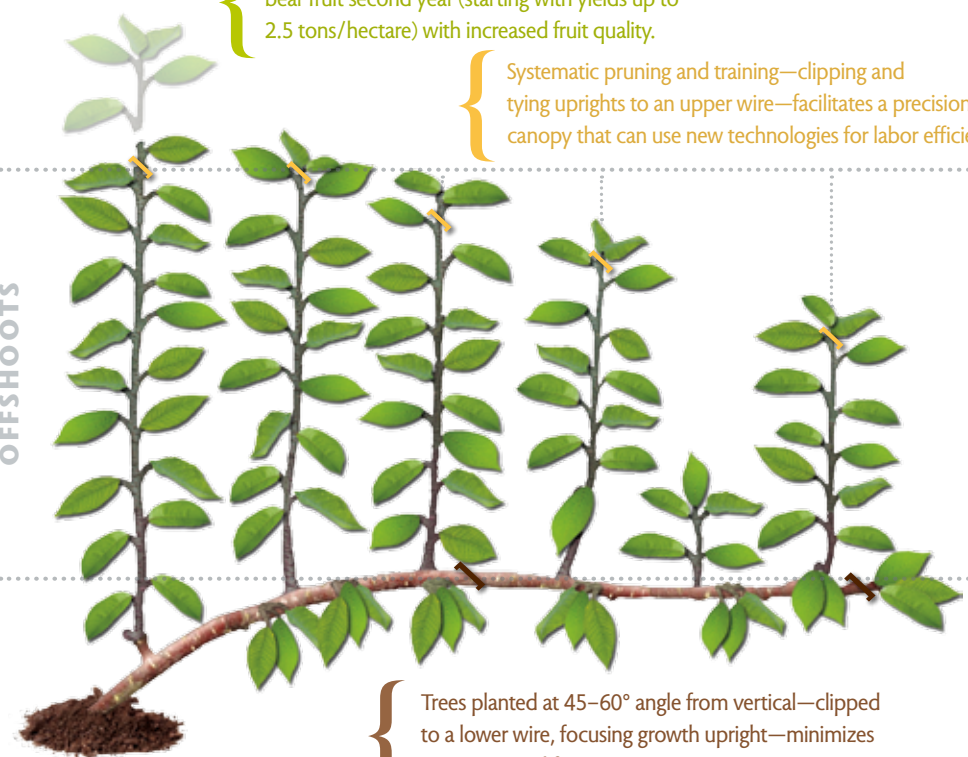
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OFFSHOOTS



Trees planted at 45–60° angle from vertical—clipped to a lower wire, focusing growth upright—minimizes environmental footprint.

Staff illustration based on *The U.F.O. System: A Novel Architecture for High Efficiency Sweet Cherry Orchards* by Matthew Whiting at the WSU Irrigated Agriculture Research and Extension Center in Prosser.

how do you mechanize? How do you move away from labor? The tough part is doing this fast enough. We're expecting big things to come out of this program."

Five years ago, a few growers in Washington, Oregon, and California planted test UFO blocks in their orchards. Keith Oliver of Olsen Brothers

"We had less doubling [a stress-induced doubling of fruit on each stem], and with Tietons, that's always a concern," Oliver says, "and because of the architecture, that was a benefit that we hadn't counted on ... the harvest efficiency was also better. The pickers filled the bins a lot faster with the UFO..."

## Coordinates

Historic wildfires of the Northwest :: Cougar wineries :: Foods of Washington



[wsm.wsu.edu/coordinates](http://wsm.wsu.edu/coordinates)



通向中国

:: illustration David Vogin ::



The  
China  
Connection

:: Larry Clark '94 ::



**BUSINESS PROFESSOR JERMAN ROSE** first went to China in 1995 as part of a Washington State University hospitality program to train hotel managers in the Shangri La Hotel Group. Recognizing the growing opportunity for business students from both China and the United States, he decided to learn Chinese and look for an academic partner for WSU's international business program.

By 1998 he had helped establish a relationship with Southwestern University of Finance and Economics (SWUFE) in Chengdu, Sichuan Province. Almost 15 years later, says Rose, the college has established a WSU Center at SWUFE and facilitated many undergraduate, graduate, and faculty exchanges.

For Rose, the China connection is far more than just an institutional relationship. It's a vital part of a broader need for students to embrace an international business environment. "More than anything, we hope that students develop what we might call a 'global mindset,' a curiosity and interest about people outside the U.S.," he says.

His work, and that of many other faculty, staff, and students at WSU, is helping reinforce the trans-Pacific connection that is so crucial to the cultural exchange and economic success of both Washington and China, but linguistic, informational, and trade barriers remain.

**CHINA IS WASHINGTON'S LARGEST TRADE PARTNER**, buying \$11 billion of Washington exports and selling \$31 billion of the state's imports. In the last few years China overtook Japan as Washington's second largest export destination, after Canada.



JERMAN ROSE BY SHELLEY HANKS

Boeing, our largest exporting company and an icon of Washington state, projects that over the next 20 years China will need 5,000 new airplanes, worth more than \$600 billion, and will be its largest commercial airplane customer. The Boeing-China link is not just a future partnership. In 1916, Boeing's first engineer was China-born Wong Tsoo, and Boeing has had a presence in Chinese commercial aviation since 1972. Aerospace products are now Washington's top export to China, at \$3.9 billion and representing 55 percent of all exports. Moreover, every commercial Boeing airplane has some parts made in China, from doors to wing panels.

Likewise, many other industries export significant amounts to China. That number, says WSU economist Andrew Cassey, has been growing in

volume and dollars in recent years. One in three jobs in Washington state is tied to international trade, partly, says Cassey, because "the ports of Seattle and Tacoma are closer to Asia than other West Coast ports by a day's shipping distance."

From forestry products to software and high-end medical equipment, Washington products feed the demands of an emerging Chinese middle class estimated at 300 million strong, nearly the total population of the United States. Those middle class consumers, especially the younger ones, want luxury and Western brands. For example, Washington-based retailer Starbucks Coffee has expanded aggressively in China, with more than 750 locations in the country at the end of 2010.

Some of Washington's agricultural products could also fill that quality niche nicely, but they face some difficulties. As a traditionally agricultural country, China does not have the same needs for food as other nations such as Japan. However, although China ranks only fifth among countries receiving Washington agricultural products, ag exports climbed 45 percent from 2010 to 2011.

Washington apples have strong name recognition but, according to Eric Yunfei Zhao '11 PhD, a research associate at WSU's IMPACT Center who works on export assistance along with Cassey, "We can only export red delicious and golden delicious to China."

The IMPACT Center, which provides economic and market analysis for Washington agricultural and other industries, has also worked with the wine industry to improve its China presence. While Washington vintages are being sold more in China as the middle class gains a taste for wine, "they value more the wines from France because of reputation. In price, the wines from Chile are much lower than United States," says Zhao.

One major agricultural export feeds the animals that cater to another growing middle class taste: meat. Washington alfalfa exports to China are strong, says Zhao, because the state has the space to grow animal feed and meet the escalating desire for beef and pork.

Airplanes and alfalfa are tangible evidence of Washington in Chinese markets, but as China grows, another vital export can help both the state's businesses and their Chinese counterparts: expertise. As buildings go up in Shanghai, Beijing, and other cities, they need more architects and engineers. Many of those experts come from WSU.

Another kind of expertise comes from the knowledge of Chinese culture and history, especially at the highest levels. Former Washington state Governor Gary Locke—the first Chinese-American governor in the history of the nation—was U.S. Secretary of Commerce and now serves as ambassador to China. Chinese president Hu Jintao recognized the importance of the state, making Seattle the first stop in his first state visit to the United States in 2006.

**ERIC ZHAO EARNED HIS DOCTORATE IN AGRICULTURAL ECONOMICS AT WSU** after he came to Pullman from Beijing in 2007. His story shows another, and perhaps more personal, side to the trade equation: WSU's place in fostering cultural understanding between China and Washington.

Zhao grew up on a farm in Hebei Province and, after working for a biological products firm in Beijing, he decided to pursue graduate studies at an American university with a strong agriculture program.

After the traffic jams and bad air quality of China's capital city, "When I came to Pullman, I just felt at home," he says.



ERIC ZHAO BY ROBERT THURNER

Like Zhao, many Chinese students attend WSU for its strengths in engineering, agriculture, clean energy, business, and other programs. In fact, according to Prema Arasu, WSU vice provost of international programs, 45 percent of our international students are from China, far more than from any other country.

"We have a robust connection with China and it's only getting stronger," she says. Arasu says a recent agreement signed with the Chinese government's China Scholarship Council will fund students to either earn their doctorate at WSU or conduct part of their research and build academic collaborations with WSU. Currently, 20 to 25 students are doing their doctoral work at WSU and another ten are involved with shorter-term research.

Chinese students also make an impact economically. Eric Schinfield, president of the Washington Council on International Trade, says the state sees about \$450 million in benefit from students coming here.

Moreover, says Schinfield, "just by educating students from China, you're facilitating trade with China. They develop an affinity with Washington state. We sometimes forget about those relationships when we get so focused on commodity export."

Over in the College of Business, the Chengdu-based program at the Southwestern University of Finance and Economics has been bringing in many Chinese scholars and students, including an executive MBA exchange. The dean of the college, Eric Spangenberg, says another benefit for U.S. students is that "they learn by living with Chinese students, working on projects, sitting in class with Chinese students and professors."

Those experiences are essential for an international business program, says Spangenberg, but it "takes a long time to establish relationships and reputation. Jerman Rose was like Lewis and Clark. He was able to help us keep that relationship alive, and as globalization has become a priority for the college, he's introduced it to the next generation of leadership."

At least in reputation, it's paid off. WSU's international business program is ranked number 19 in the nation, says Rose, and about 40 percent of all undergraduate business students have an international experience other than taking classes.

Rose and Spangenberg agree that study abroad can best prepare students for the realities of the business environment. "Since 2007, we require students to either study abroad, or have an international internship, or do missionary or social service work," says Rose. "It's our belief that it is important for students to go face to face, to get out and smell the dirt, just to see what it is."

Spangenberg agrees, "You can't afford not to [study abroad] anymore. Whether you're selling paper clips in Bellevue or you're selling Boeing airplanes in Beijing, you're going to be working in an international market."

Arasu says faculty-led tours to China, such as the College of Business semester program to SWUFE, can make study abroad to China more accessible. As another example, she mentions veterinary medicine associate professor Mushtaq Memon taking a group of vet students last year to learn about animal acupuncture in China. They went to Beijing and learned about ancient techniques of acupuncture and traditional Chinese veterinary medicine as applied to animal care, a skill that has grown in demand among American pet owners.

"If more faculty like Dr. Memon can lead group programs, then that 10 or 20 who go will come back to be our ambassadors on campus and encourage more students to seek these cultural experiences. Or they come back after a short one- or two-week program and say, 'I can do this for a semester,'" she says.



COURTESY PREMA ARASU

Faculty-led tours, often at a lower cost than semester- or year-long study abroad programs, such as Karen Leonas leading apparel and textiles merchandising students on a study tour of China's textile industry, can increase exposure to Chinese culture and industry across disciplines. Other programs are in the planning stage: Forrest Parkay is working on the College of Education's first study abroad program to remote Yunnan Province, and WSU Honors College dean Libby Walker is coordinating with Southeast University in Nanjing on an exchange with their honors program, a novel offering at Chinese universities.

**JIE CHEN '91 PHD CAN ATTEST TO THE IMPORTANCE OF THOSE PROGRAMS.** Originally from Beijing, Chen studied international relations at the Monterey Institute of International Studies, and then came to Pullman to study for his doctoral degree under WSU political science professor and nuclear deterrence expert Patrick Morgan in the late 1980s. He taught at Colorado, Wisconsin, and Old Dominion University before moving back to the Palouse as dean of graduate studies and distinguished professor of political science at the University of Idaho. During his years in academia he has taken a number of students to China.

"I cannot overemphasize the importance of firsthand experiences," says Chen. He says it's relatively easy for students in a related major, be it Asian



or China studies or international relations, but there's a need to encourage students in programs like engineering to participate in study abroad.

"If students at WSU, especially in engineering, don't have basic knowledge about the country, which many companies have to deal with, they'll be seriously disadvantaged," he says.

Christopher Lupke, an associate professor who directs WSU's Chinese language program, concurs. "Students want to combine a real knowledge of China that has depth, that has focus, with some other things, such as a double major with business," says Lupke. "A double major in engineering and Chinese is simply more marketable."

For many, the language itself imposes a psychological barrier. Lupke hears from people that Chinese is impossible to learn, and it's the most difficult language in the world. The Chinese language's mystique, he says, is completely untrue.



JIE CHEN BY ROBERT HUBNER

"Mandarin has very straightforward and simple grammar. There's no tense in Mandarin. There's no case in Mandarin. There's no gender in Mandarin, unlike most European languages," says Lupke, while acknowledging the difficulty of thousands of characters and the language's tones. "The written language, the characters, and the tones do make Chinese more difficult than many other languages, but the relative simplicity of the grammar makes it much easier. So I think it's a tradeoff."

He notes that Mandarin Chinese is the lingua franca of China, intended to be easy since millions of Chinese people speak a regional language as their first one.

Despite the reputation of the language's difficulty, Lupke has seen a "tectonic shift in students who want advanced Chinese language." Students and their parents are demanding more Chinese language, even at the K-12 level.

To meet the demand for Chinese, WSU has three permanent faculty members teaching not only language, but literature, culture, and film courses. The university also has a full-time Chinese language instructor fully funded by the Confucius Institute out of Seattle. The institute, similar to Germany's Goethe-Institut, promotes Chinese language instruction worldwide.

But for Lupke, immersion in the Chinese language is crucial to achieve the high level of proficiency necessary to be fluent. WSU students can get that intensive training through a study abroad program in Harbin. They study among students from Yale, Stanford, and other elite schools after taking basic classes at Pullman, with the goal of becoming fluent.

"Students must sign a language pledge," says Lupke. "They have a Chinese roommate who's carefully screened, who's not allowed to speak to them in English. There are no so-called English language content courses. Everything is 100 percent Chinese. You're living it, you're breathing it, you're dreaming it at night."

To help with the costs of studying in China, students have access to a number of scholarships. The College of Business students have help from Scott '72 and Linda Carson's million-dollar donation for undergraduates to study abroad.

Others have been awarded the David L. Boren Scholarship out of the Department of Defense, providing \$20,000 a year for study abroad of languages in the critical interest of the U.S., such as Chinese. "In the past five to seven years, we've received 14 of those scholarships, which I think is more than any other university to whom we would compare ourselves," says Lupke.

The federal government, recognizing the strategic importance of Americans understanding Chinese language and culture, also began the "100,000 Strong" initiative in 2010 to dramatically increase the number of students studying in China. Ten times more Chinese students come to the United States than Americans who study in China, a number that Lupke feels is untenable.

"It's absolutely critical that we have as many American students getting good in the Chinese language as possible. Those students need to be spread across a wide range of disciplines; we need engineers, lawyers, doctors, nurses, people in business, agricultural economics," he says.

Another form of exchange comes from WSU professors and researchers already in those fields. Arasu says collaborations are taking



CHRISTOPHER LUPKE BY ROBERT HUBNER

place, with more on the way. Smart grid expert and WSU engineering professor Anjan Bose has been invited by the president of Tsinghua University, one of China's top engineering schools, to evaluate their electrical engineering program.

Chinese food giant COFCO has expressed interest in biological systems researcher Juming Tang's microwave sterilization techniques. Also in food safety, Regents professor in chemistry Herbert Hill's work with ion mobility spectrometry could ease the identification of contaminants, an area of interest to both the U.S. and China. Shulin Chen works with several partners, including China Agricultural University, in his renewable energy research.

THE RESEARCH PARTNERSHIPS PLAY TO WSU'S STRENGTHS, just as a new export outreach program builds on WSU's land grant and extension mission. The Washington Small Business Development Centers (WSBDC), operating under the auspices of WSU and the U.S. Small Business Administration, received a grant in 2010 to ramp up help for small businesses that wish to export.

"One purpose of the proposal was taking advantage of the state-wide footprint that we already had," says Terry Chambers, director of the WSBDC. He says the existing 26 advising centers all over the state were in a unique position to promote both national and state export initiatives.

As part of the grant Chambers hired Vern Jenkins and three other international trade specialists, who go out to small businesses and work with them to assess their readiness to export, prepare an export strategy, research markets, and get over the many informational barriers to moving their products overseas.

Jenkins, who has worked in China for decades and is fluent in Mandarin, describes his work as easing the process for companies to work in countries like China. "We work with a lot of clients that have cursory experience with export or they're still learning how to do it. It's not an easy thing to just export," he says. "We're looking for ways to simplify, demystify, and accelerate."

Chambers says that many organizations have export information out there, but don't have the resources to work with new-to-export companies because of the level of interaction required. The WSBDC also offers business advice to those companies. Whether it's a custom lighting company in Spokane or a fruit processor in Wenatchee, says Chambers, "The combination of business adviser and trade specialist has been very powerful in moving them through the export process."

One of Jenkins's duties is traveling extensively through the state to build awareness of the export program, from chambers of commerce to the companies' own places of business, with great response. He says, "When the light bulb goes on, and they realize we have expertise and advice in our programs at no cost to them, they go, 'Wow. Maybe I am willing to try it.'"

After twelve months, they have around 250 clients statewide and at least 20 percent are now exporting. Considering that it usually takes two to three years to begin exporting, that's a successful program, says Chambers.

The WSBDC export assistance program also provides educational opportunities for WSU student interns who deliver market research. "Without them, our ability to help companies move would be substantially more difficult. It would take all the international trade specialists' time to do all that research, so the WSU interns are a godsend," says Chambers.

Despite the support, Jenkins notes that not all small businesses will succeed in exporting to China. "It's prudent for a small business to ask why should I go to China, is there a market there for me, and what are the risks going into that market," he says. "Doing business in any culture, including China, is understanding what that environment's like."

Partly through the efforts of the WSBDC, along with their partners at WSU's IMPACT Center, Washington's exports increased 9 percent to a record \$64.6 billion in 2011. The state is the largest exporter per capita in the United States, but the path to China for both trade and cultural exchange is not completely clear.



VERN JENKINS BY SHELLEY HANKS

EVERYONE INVOLVED WITH CHINA AND TRADE KNOWS SOME OF THE STICKING POINTS. Differences in intellectual

property rights affect a number of Washington companies, from software firms like Microsoft to pharmaceuticals to products that may emerge from WSU's research. Until stronger copyright and patent laws can be enforced in China, some companies will have difficulty, says Schinfeld.

Regulatory hurdles can also hinder exporters. "There is a lack of regulatory transparency for many processed agricultural products. The product can even be rejected at customs in China," says Zhao.

Political concerns about China may give some companies pause as well. Chen researches the middle class in China and their interest in pursuing reforms, and he believes the rising middle class is pro-American in terms of lifestyle and ideals, but it's complicated.

"The middle class is in a pretty tricky situation," he says. "On the one hand, they want the political stability. On the other hand, they feel kind of stifled by the political system. I believe most of the middle class is pretty ambivalent."

One way Chinese students can both learn about America and practice the ideas—without jeopardizing their economic stability at home—is by coming to the U.S. to study, says Chen. They now have the financial resources to do that, and increasingly they are then returning home.

For WSU's students and faculty, the cost, along with perceived linguistic and psychological barriers, should not keep them from going to China and learning about the culture, says Arasu. She knows many students can't afford to study abroad, because of financial or degree completion constraints.

"What are we doing for the 97 percent of our students who don't have the privilege or opportunity to go abroad?" she says. Part of the solution can be building interactions between international students and American students here on campus, says Arasu, citing a recent exchange with WSU's football athletes.

WSU still needs increased scholarships for study abroad and alignment of curricula with overseas programs to ease the transfer of credits, she says, but the need for students with global experience, even in just a classroom, is absolutely necessary.

Chen agrees, "This kind of change is imminent. We cannot wait until the students themselves later realize, 'Now I'm working and I realize I wish I could have taken a Chinese society course.' But it's too late!"

As students and businesses come and go from Chengdu or other places in China, they're also transforming. "More important than this intellectual content, the facts and figures, is this personal growth and attitude change," says Rose. ☒



:: Hannelore Sudermann ::

## engineers in the making



**Opposite:** Engineering student Ben Hazari landed an internship at Boeing last summer. *Photo Robert Hubner.* Cold-flow nozzle of GEnx-2B engine on a Boeing 747-8. *Photo Olivier Cleymen.* **Right:** William Clos '84 leads a program at Boeing that pairs WSU students with engineering mentors at Boeing. *Photo Robert Hubner*

### BY THE NUMBERS

Washington is home to about 650 aerospace-related companies, and almost all of them regularly need new engineers. When you step back and look at the other fields of engineering, says Bob Olsen, WSU associate dean for undergraduate programs, the demand simply grows. He rattles off a few of these areas: computers and technology, public works



**I**NTENT ON PROGRAMMING a machine to cut a section of sheet metal, six engineering students hunch around a worktable on an upper floor of a factory that designs and builds tooling and automation for the aerospace industry.

The space is bright and warm. A tinkerer's dream of wires, tubes, tools, fittings, shelves, cords, and hardware surrounds them. The students scrutinize a screen, scribble in their notebooks, and scratch their heads. Determined to arrange a resistor ladder electrical circuit to tell the machine to move a single part before lunch, Josh Sackos frowns at a laptop. "You could just try to run it and see what happens," offers Mohammad Faraj.

"Wait," says one of them. "Don't give us the whole thing." A few more minutes of changing the commands, they finally sort it out and with a sigh of relief, Calawa takes off for lunch. Patrick Noll, Ben Hazari, and Kevin Kline stay at the table pulling sandwiches and energy bars from paper bags and talking about how they got into engineering at WSU. "In high school someone said, 'Hey, you should go into engineering,'" says Noll, "and I thought, 'Why not?'"

These are jobs for people who like math and science and who might prefer blue jeans to blazers. And, frankly, these guys like solving puzzles. "This stuff we're doing here is really appealing," says Hazari, gesturing around the factory.

"We're learning new ways to automate things," adds Kline. "We could be engineering some part over and over. But this level of stuff is cool. It's more inventive."

"Inventive." "Cool." "Appealing." The words are music to Dean Candis Claiborn's ears. At a time when our state is a net importer of engineers and so many of our industries are counting on a new generation of workers, that kind of language could tempt a new generation of students into engineering at Washington State University.

projects that have popped up from federal economic stimulus money, a retiring baby boomer generation of power and utility engineers, and a universe of new inventions and applications.

Washington, according to the U.S. Department of Commerce, is one of the largest employers of engineers per capita, but at the same time ranks 38th in the percentage of bachelor's degrees granted in science and engineering. Higher education has fallen short, says Olsen. The gap between supply and demand threatens our state's economy and deprives Washington's students the chance to be part of the advances that will grow our state.

"The employers out there are all over the map," says Olsen. "We have the big ones like Boeing, Paccar, power companies, aerospace suppliers, and civil engineering firms." And many newer areas like software medical technology.

To help fill the need, WSU is recruiting new engineering majors and working to retain them once they've declared, says Olsen. Over the



years the school has had a problem with losing declared majors to other programs. In 1999, just 33 percent of the students who started out as engineering majors finished as such. Now, by taking steps like enhancing advising, developing mentoring programs, and offering freshmen and sophomores opportunities to work on real design projects, that number is around 50 percent, says Olsen.

“And freshman interest in engineering as a major has gone up 45 percent,” he says, adding that the school is recruiting more transfer students from the community colleges. The school is also working to lift enrollment limits, increasing the number of seats in the upper division programs available to qualified students. And the state has directed WSU and the University of Washington to each redirect \$3.8 million of their budgets into their engineering programs with the goal of producing a total of 380 more engineering degrees a year. For WSU, this means not only bolstering the engineering training in Pullman, but enhancing the joint mechanical engineering program based at Olympic College in Bremerton and offering an engineering degree in Everett at the University Center of North Puget Sound.

But WSU’s instruction is just part of the effort. “We don’t train people for a particular industry,” says Olsen. “Our goal is a broadly educated engineer who can then work into these areas.” With the help of companies around the state, through mentorships and programs like the short course at Electroimpact, says Olsen, students are getting that extra training and guidance to close the gap between school and the workplace.

William Clos ’84, a Boeing engineer, is well aware of that gap. He has responsibilities for design, testing, and FAA certification of cargo handling systems and other mechanical equipment. Twenty-eight years ago when he started at Boeing, aerospace provided half of the private

sector technology jobs in the state. Today, though the industry provides closer to a fourth, Clos has never seen a time when Boeing hasn’t needed new engineers and he has a role in preparing them. He leads a program to mentor 20 to 25 WSU students each year, pairing them with senior engineers and managers who are WSU engineering alumni in the same areas of study. Through one-on-one relationships, the professionals help the students figure out how to make the best move into the industry.

But first, these women and men have to choose to study engineering. For many, it seems the engineer lurks in some gray zone between science and technology. It’s just not an obvious career choice. The leaders and faculty at WSU are puzzling through this problem—how to show engineering as a more dynamic, exciting, interesting, and—dare we say—glamorous vocation.

The public image of an engineer doesn’t offer much, says Dean Claiborn. While you have all kinds of examples of lawyers, doctors, mechanics, even forensic scientists on television, you don’t really see engineers, she says, “unless you count MacGyver.” And most of today’s students have never even heard of the TV character who engineered his way out of all kinds of jams with everyday items like duct tape and shoelaces.

High schoolers are sometimes told, “You’re good in math, go into engineering,” she says. “But that is not a very compelling conversation.” And women who have a talent for math and science are often advised to go into health care. A whole gender is missing out on this career because of a stereotype, says Claiborn, who has her doctorate in chemical engineering.

So she’s wanting to change the conversation. There are plenty of reasons to be an engineer, she says. To help humanity, for example. “A

lot of students are attracted to the medical fields,” she says. “But if you want to save lives, be an engineer.” There are all kinds of engineering solutions to human health issues like access to fresh water, clean air, and safe food. And there are life-saving medical inventions like defibrillators and pacemakers, and even substitutes for bone and tissue.

If you want to save the environment, be an engineer, says Claiborn. It’s the engineers who are figuring out how to make use of alternative energy sources and how to be more efficient with the technology already in place.

Even if you want to make money, be an engineer, she says. They are among the top earners of new graduates. Last year a Georgetown University survey of the economic value of college majors showed that the highest median earnings of any major are in engineering (\$75,000).

“It’s a question of getting the message out to students,” says Claiborn. Angel Hall ’09 discovered engineering offered her both creative satisfaction as well as an opportunity to do good.

Working for Western Integrated Technologies she gets to design machines with hydraulic, pneumatic, electrical, and mechanical applications. She uses a range of tools to build the contraptions her clients need. For an exercise equipment company, she is building a hydraulic unit to test a treadmill. “We have to simulate a runner,” she explains, “so the company can test the treadmill under heavy use over a period of time. I can’t wait to see it up and running.” She cracks a smile, suddenly aware of her pun. This job is perfect for her, she says, because she can build an idea and

then work with other engineers to make it work. “You need engineers who can sit there and design all day,” she says. “But you need other ones who have a big picture and can kind of farm out the different steps that need to be done.”

In her spare time, Hall is president of Developing World Technologies, a nonprofit group that funds the creation of new technologies to help unindustrialized communities. The humanitarian effort started when she was at WSU. “I saw this as a senior project on a human power irrigation pump and was hooked,” she says. “I wanted to go to Malawi. I wanted to make a project like that.”

Her team made a self-priming pumping system and took it to Africa to see it work. They toured the countryside, visited an orphanage, and saw small farms planted with lettuce, beans, and tomatoes. And they tried out their pump.

“We found out it didn’t work,” says Hall. The team had designed the pump to fit the rear sprocket of a standard U.S. bicycle. But the bicycles in Malawi come from all over the world and have many different dimensions. Also, Hall and her partners didn’t realize that almost every bike had a rack over the back tire for transporting things like food and firewood. It got in the way of carrying and using the pump. They quickly refined their prototype, adapted it to fit around the rack, and are now working with a manufacturer to produce the pumps at a price the farmers can afford. The idea is to help farmers irrigate to raise enough food to supply their families and then have some extra to sell at the market. Now the group is funding other similar engineering projects and ideas.



*Opposite, and this page left:* Angel Hall ’09 at Western Integrated Technologies. *This page, left to right:* Kirt Johnson ’94, ’96, Jason Michelbook ’99, Colin Connacher ’90, Curtis Robillard ’89, Jeff Johnson ’92, ’94, and Ron Reis ’80 at the Renewable Energy Corporation silicon plant in Moses Lake. *Photos Robert Hubner*





## POWER ENGINEERING

Our state is the leading hydroelectric producer in the country, with the Grand Coulee dam being the highest capacity plant. Not only does the industry need engineers to maintain and operate the dams, it needs them to update and upgrade them to make them more efficient. Now is an interesting time, say energy industry leaders. A whole generation of power engineers is retiring and a new workforce is needed to take over.

Still, opportunities to increase hydroenergy outputs are limited by geography. Our state, more than most, has turned to other forms of renewable energy.

Curtis Robillard '89 wasn't planning on a clean energy career. He chose engineering as a means to more certain employment after college. "I grew up in Yakima Valley. I watched kids come back with different degrees, and there were no jobs for them." Robillard majored in chemical engineering and found he could apply his training to a variety of needs at the job he took in Moses Lake. At the time, Renewable Energy Corporation was converting an old Union Carbide plant into a facility to make solar-grade silicon, a highly purified version of the metalloid. The silicon is sold to other businesses that turn it into crystal wafers for use in solar cells converting light into electricity.

In the decades Robillard has worked there, the company has continued to expand and bring in new technologies to more efficiently make a purer silicon. Robillard has put his engineering training to use in a multitude of ways, from updating the original plant to helping build new reactors. During that time, he has also seen an influx of more WSU-trained engineers.



*Opposite, left:* Renewable Energy Corporation in Moses Lake. *Opposite, right, and this page:* Cameron Wheeler '09 of ZappBug at the Founder's Co-op, South Lake Union. *Photos Robert Hubner*

## The Frank Fellows

It took Harold Frank nearly a decade from the time he finished his engineering degree at WSU in 1948 to the start of his own business with Applied Magnetics, a manufacturer of magnetic recording heads.

Now he is helping today's young engineers kick-start their own ventures. In 2005, Frank and his wife Diane provided WSU with \$3 million to start the Harold Frank Engineering Entrepreneurship Institute.

One component of the institute provides 12 engineering and business majors the chance to be Frank Fellows and take part in a year-long intensive program. They have courses in business planning and prototyping as well as a week in Silicon Valley to visit with entrepreneurs, CEOs, and investors.

Growing up, Cameron Wheeler, a 2008 Frank Fellow, never met anyone who had that kind of success. But hearing the stories of the Bay Area entrepreneurs, Wheeler was convinced that he could find his own good idea and, with some effort and courage, go into business for himself. "There was nothing that was keeping me from being like them."

The fellows' initial training is followed with a summer internship at a start-up and a year of classes and support to develop and market a project idea. Wheeler took part in a project to create a plastic-free beverage vending machine. Other projects include a news website that uses Twitter's public stream to compile real-time news, and a human-powered water pump.



Visit [www.cea.wsu.edu/entrepreneurship](http://www.cea.wsu.edu/entrepreneurship) for more on the Harold Frank Engineering Entrepreneurship Institute.

**SOMETIMES BECOMING AN ENGINEER** is a means to another role. Attorney Lewis Lee in Spokane, for example, graduated in electrical engineering but then turned his energies to intellectual property law. His firm, Lee&Hayes, has clients working in electronics, e-commerce, life sciences, and nanotechnology.

Then there's Donald Bradley, whose chemical engineering degree got him in the door at the Pacific Northwest National Laboratory and led to his becoming the director of the lab's Coastal Security Institute in Sequim. He is now a senior technical advisor at the station where part of the work involves detecting pathogens and chemical agents in the ocean and along beaches and estuaries.

"They become business people, manage companies, and become CEOs, vice presidents, or presidents," says Claiborn. They are also at the forefront of new business. A recent Forbes study shows that more engineers are running start-ups than business majors.

## A NEIGHBORHOOD OF NEW IDEAS

That brings us to Cameron Wheeler '09. He is just 24 and spends his days in one of the hottest innovation and technology spots in the country—South Lake Union in Seattle. Wheeler's current venture is ZappBug, a device that uses heat to kill bed bugs.

After hearing the horror stories of people who unwittingly brought bed bugs home in their luggage, he crafted plans for a small heater and a large, collapsible container, then enlisted the help of a tailor to mock up a prototype. Using his engineering training, he calculated the largest possible box he could fill with luggage and other infested items and still reach the necessary heat to kill the bugs. Then he factored in how much insulation he needed to help heat retention. He also designed the "box" with seams and zippers that the blood-feeding bugs couldn't penetrate.

Wheeler wants this venture to stay small and lean—with low overhead, just two other business partners, and a flexible setup for ordering, assembling, and delivering the ZappBug.

"We live in such a unique time," he says. "All you need is an idea and the willpower to make it happen." Because of online marketing and sales, it's much easier to advertise, sell, and deliver a product. Because of hand-held devices and Google Translate, it's much easier to connect with suppliers—even in China.

And, says Wheeler, bed bugs are the perfect online focus. "It's one of those taboo subjects," he says. People who think they have bed bugs don't want to tell anyone in person. They'll first go to their computers for information and solutions. Amazon.com will offer his ZappBug for sale. "It's like being on the shelf of the biggest store in the world," he says.

It also helps to be around other start-ups. He rents desk space with the Founder's Co-op, a community of early-stage entrepreneurs.

"The only people who are here are here because they want to be," says Wheeler, gesturing to the room. Several dozen men and women sit at desks that nearly fill the entire second floor of the building.

That guy over there, says Wheeler pointing, he's an angel investor who helps small start-ups. Then he points to a team doing search engine optimization to connect people with local solar contractors, and a man who runs a website where people post about their mediocre day.

He rents a desk and an address here, he says, but he's getting more. They're all willing to share their experience and advice, he says. "Usually, if you want to get something done, somebody here has done it already."

The neighborhood is full of these people. And when we step outside to say goodbye, we find bustling sidewalks at lunchtime. Every other person is wearing a blue ID tag from Amazon.com. The rest are computer engineers or work in start-ups like Wheeler's, or medicine, or the biotech businesses that have poured into the neighborhood over the past decade.

There are other spots like this around the state, including the Spokane Intercollegiate Research and Technology Institute and the Bothell Technology Corridor. These are incubators for the businesses that will drive our state's economy in the future, says Olsen.

Wireless—biotechnology—medical devices—alternative energy sources—none of these fields existed several decades ago. There are new worlds of ideas yet to come, says Olsen. "We are training students now who may be doing jobs we haven't even thought of yet." ☒





STEPHANIE MITCHELL/HARVARD UNIVERSITY

## { RACE, CLASS, *and* WILLIAM JULIUS WILSON'S WORLD *of* OPPORTUNITY }

:: Eric Sorensen ::

IN THE MIDDLE of the last century, a Tennessee preacher-turned-sociologist, Tolbert H. Kennedy, found a relatively untapped pool of doctoral students among the nation's black college graduates. Between 1944 and 1965, when Washington State University barely had a few dozen black students, he and fellow ex-preacher Wallis Beasley helped produce more black doctors of sociology than all but two schools, the University of Chicago and Ohio State.

Among them was a young man who went from the hardscrabble coal country of western Pennsylvania to graduate first in his class at Wilberforce, the oldest black college in the country, and get a master's degree at Bowling Green University. Casting about to study for his doctorate, he fielded fellowship offers from nearly half a dozen universities.

Kennedy, then the head of the Division of Social Sciences, told the student over the phone what it was like at WSU and made it clear that he took pride in having so many outstanding black graduate students. He followed up with letters and calls offering to answer any questions.

"I was so impressed with that attention that I decided to go there," recalls William Julius Wilson, sitting in one of three offices he keeps at Harvard University. "You have to understand, I didn't get that kind of attention at the other universities."

From WSU, Wilson went on to positions at the University of Massachusetts at Amherst, the urban sociology powerhouse University of Chicago, then the "dream team" of Henry Louis Gates Jr. at Harvard, with positions in the Kennedy School and departments of sociology and African and African American studies.

He is now one of the nation's most accomplished and looked-to analysts of race, inequality, and poverty, a MacArthur "genius" award

recipient and, counting this year's accolade at Yale University, holder of 45 honorary degrees. *Time* magazine in 1996 named him one of America's 25 most influential people. President Bill Clinton said his books "made me see race and poverty and the problems of the inner city in a different light." He is only the second sociologist to receive the National Medal of Science, the highest scientific award in the United States.

He is at times bewildered by his success. His father died young, leaving Wilson's mother to pull six kids out of poverty. All ended up going to college and earning at least a bachelor's degree. He is largely a product of public education but his top rank of University Professor—with a capital "U"—typically goes to products of elite prep schools and Ivy League colleges.

In some ways he typifies the word academic in academic celebrity, with a button-downed presence and books long on analysis. But he is also an intellectual warrior, spearing several orthodoxies of his fellow liberals, stoking the ire of fellow black sociologists, and planting several flags against conservatives in battles over race and public policy. One of his books provided the socioeconomic backdrop for a season of the HBO series *The Wire*.

He has a true rags-to-riches story. He worked hard to make it happen and is unabashedly proud after several decades of personal doubt. But he will just as soon tell you that his life and life's work illustrate that his version of the American dream is a statistical outlier, a beneficiary of opportunities beyond the reach of most poor African Americans.

T.H. Kennedy and WSU are among those opportunities. It's easy to overstate that in a university magazine, and maybe Wilson let himself get carried away over several interviews and occasionally wistful memories of living in Pullman. But let the record reflect that more than once, with no prompting at all, he would say something like this:

"Going to WSU was the greatest decision I ever made in my life."



IN 1960, the year before Wilson’s arrival, Pullman had fewer than 13,000 residents, of which about 7,000 were WSU students. Seventeen residents were listed as “Negro,” the census category of the day.

Wilson gave it little thought. Most universities were overwhelmingly white, so he expected it. He was comfortable with the racial makeup of his fellow graduate students and felt welcomed by the faculty. Pullman was similar to his rural hometown of Blairsville, Pennsylvania.

“It was just a beautiful place,” he says, “and the image of walking in downtown Pullman and looking up and seeing the campus up on the hill was fascinating. And I loved to fish. There was just great fishing down on the Snake River.”

He recalls no incidents of racism on campus and only one “paternalistic racial experience,” in a bar downtown. Civil rights protests were blossoming across the South and a tipsy patron approached, put his hand on his shoulder and said, “Believe me, I like you. But boy, slow down.”

At that, Wilson has a good laugh.

We’re sitting in his office in the W.E.B. Du Bois Institute for African and African American Research, four floors above the slate roofs and brick-lined mystique of Harvard Square. He is 76, but doesn’t look it—trim from a 10-hours-a-week habit of stationary cycling and strength training, with an unlined face he says came from his mother, who lived to 95.

Wilson followed the civil rights movement from Pullman, but racial issues were largely absent from his studies. He focused instead on the fundamentals of sociological inquiry with Richard Ogles ’61 PhD, senior advisor, professor of the philosophy of social sciences, and “a man with a rigorous mind.” He studied the logic of inquiry, the nature of evidence, the structure of explanation—how to develop your theory, gather your data, make your case.

“Even today,” he says, “the stuff that I learned as a graduate student at Washington State informs the way that I analyze and teach my students.”

At graduation, he was honored as the top graduate student in the sociology department. It was icing on the cake and one of several reasons he feels so good about choosing WSU.

“It was the greatest decision I ever made because that’s really where I developed the confidence and that’s where I really realized that I had special talents,” he says. “And that’s where I got the kind of solid training that has held me in good stead throughout my professional career, particularly my training in the logic of inquiry.”

When he left for Amherst, the civil rights revolution “really took off.”

“He soon came up against the hard realities of race relations,” says James Short, professor emeritus of sociology and the department’s last remaining faculty member from Wilson’s time here. “That’s where he’s made his reputation. He realized that here was an under-researched area. We’d been talking about race since before the Civil War but there was so much we didn’t know about how blacks were faring in modern society.”

Exploring the literature of race and ethnic relations, Wilson found a handful of good works, but most were ideologically driven and short on theory—“awful stuff.” He undertook a comparative analysis of South Africa and the United States, a comprehensive theoretical framework that became the book *Power, Racism, and Privilege*.

Halfway into the work, before he could change direction, he realized he was putting blacks in a monolithic socioeconomic group when many of them were actually moving up in the world. This was going unnoticed in the wider discussion of race, but it was as obvious to him as his own life.

“I was experiencing upward mobility,” he says. “I realized my situation is significantly different from the black poor and my situation wasn’t

unique. There was a substantial number of blacks who were improving in the economic system, the growing black middle class.”

Wilson explored the idea further at the University of Chicago, articulating it in the provocatively titled *The Declining Significance of Race*.

**WILSON APPRECIATES THE VALUE** of hooking the reader with a good, if not bold, opening statement. In that sense, the first sentence of *The Declining Significance of Race* does not disappoint.

At my suggestion, Wilson pulls down a copy, opens it to page one, and reads it out loud. His timing adds to its heft, as if he were reading a poem:

*Race relations*

*in America have undergone fundamental changes in recent years,*

*so much so*

*that now the life chances of individual blacks*

*have more to do with their economic class position*

*than with their day-to-day encounters with whites.*

When the book came out in 1978, racism remained an obvious feature on the nation’s cultural landscape, with ongoing fights over school busing and integrating neighborhoods. Images of fire-hosed civil rights protesters were fresh in the national consciousness. It’s easy to see how more than a few people would be upset at even the suggestion that the role of race might be downplayed in American life.

“A lot of middle class blacks who experienced social mobility were fearful that a book like mine would slow down the trend in affirmative action,” Wilson says. “People might say, ‘Middle class blacks are doing OK’” and go on to other issues.

The American Sociological Association gave the book its Sydney Spivack Award but the Association of Black Sociologists protested “the misrepresentation of the black experience.” One academic blamed Wilson for giving “aid and comfort” to those who would “blame poverty on poor people.” Wilson, who as a child had tussled with kids who called him the n-word, was tagged with it by a Chicago activist.

Stephen Steinberg, a City University of New York sociologist, says Wilson served the nation’s “retreat from race,” with a palatable, mainstream appeal that fueled his rise to prominence. *The Declining Significance of Race*, he writes, “had the right title—one that satisfied the nation’s yearning to put race behind, to pretend that racism was no longer the problem it had been in times past.”

In 1981, shortly after the inauguration of President Ronald Reagan, the White House called, inviting Wilson to a meeting with “a group of other black conservatives.”

“Take me off that list,” said Wilson, a liberal Democrat.

Perhaps that’s all in the cost of creating a new paradigm.

“People had not thought about the black experience in terms of class,” says Wilson. “It was always kind of a racial thing. My basic argument was

that economic class had become more significant in determining blacks’ chances in life and that there was a growing gap between the haves and the have-nots in the black community, and we have to appreciate this and understand it in terms of policy programs that would reflect this growing divide. That was entirely new at the time. No one talked about that before.”

**IN RETROSPECT**, Wilson is fond of saying, “It’s better to be misunderstood than ignored.”

At the time, he was hurt by the criticism and outraged to be called a neo-conservative. But he didn’t hide.

“I took it as a challenge,” he says. “I didn’t retreat. Maybe it’s something in my own personality. I fought back.”

His next book, *The Truly Disadvantaged*, focused on the flip side of rising black prosperity: inner-city blacks with poor training and limited education, rising unemployment, rising welfare enrollment, and shrinking prospects for getting out of poverty. He got at this by looking at the cumulative effects of living in neighborhoods whose poverty deepened when middle-class blacks moved out. It takes a prosperous village to raise a child, and when nearly half the people are poor, the village structure and culture put a serious hurt on the child’s chances.

That plight falls inordinately on black children. Rare is the white family that lives in a poor neighborhood for more than a year; most black families have lived in the poorest 25 percent of neighborhoods in consecutive generations.

“A majority of black families,” says Wilson, “not just poor black families.”

Sociological discussions of racially-based inequality often look at structural forces and cultural forces. The economy, politics, and educational institutions are examples of social structures with great sway over social roles and relationships, the behavior of people in certain positions, and the machinery of our social processes. Culture involves shared outlooks and the behavior of people in similar situations, often the same place, like a poor, segregated neighborhood.

In *The Truly Disadvantaged*, Wilson looked at how the overwhelming structural feature of poverty ends up having more granular, cultural impacts on the neighborhood. He discussed verbal skills, unwed mothers, gang activity, how one comes to find meaning in the world and make decisions based upon it.

“You may feel that education is really not very meaningful,” he says.

“You develop a view on the basis of your perception of how the world works that even if you graduated from high school, you’re not going to have a job, so why even bother studying?”

Other sociologists had long steered clear of cultural analysis, fearing it would again open the door to blaming poor blacks for their lot. Wilson was criticized for it but saw it as a matter of due diligence. And in the final analysis, he says, the larger, structural factors have an “overwhelming power.” Life in a poor neighborhood is the butt end of a long line of disadvantages—a social isolation that restricts social advancement, a lack of role models, reduced access to jobs and job networks, quality schools, and mainstream institutions. Such disadvantages come to have a life of their own, “passed,” he writes, “from generation to generation.”

When *The Truly Disadvantaged* came out, conservatives had been citing libertarian Charles Murray’s *Losing Ground: American Social Policy, 1950–1980* to justify deep cuts in anti-poverty programs, claiming they actually increased poverty and welfare. After *The Truly Disadvantaged* was released, says Wilson, New Jersey Sen. Bill Bradley invited him to his

office in Washington and told him the book, “provides the ammunition liberals in the Congress need to counteract Charles Murray.”

Wilson says some cities have used *The Truly Disadvantaged* in support of initiatives like a federal housing program converting the worst public housing projects into mixed-income developments. Under the Obama administration, the program has been modified to include neighborhood investments in early childhood education, employment, safety, and transportation.

*The New York Times Book Review* listed the *The Truly Disadvantaged* among its 15 best books of 1987. The book influenced the philosophy and politics of the then-Chicago activist Barack Obama. Along with *The Declining Significance of Race*, writes University of Michigan sociologist Alford Young Jr., *The Truly Disadvantaged* “established William Julius Wilson as a pre-eminent public intellectual of the African American social condition. Their impact extended far beyond the confines of the academic community and elevated Wilson to the status of a widely-read public scholar.”

**MURRAY ALSO INSPIRED** Wilson to, once again, double down. He assembled a massive \$2.5 million research project of inner-city Chicago neighborhoods, with 20 research assistants, two administrators, and five co-investigators. It led to the 1996 book, *When Work Disappears: The World of the New Urban Poor*, which argued that while a neighborhood suffers when its residents are poor, it suffers even more when they are jobless.

“Regular employment provides the anchor for the spatial and temporal aspects of daily life,” Wilson writes. “It determines where you are going to be and when you are going to be there. In the absence of regular employment, life, including family life, becomes less coherent.”

With a ground-level view that at times is more journalistic than academic, the book documents how the disappearance of work provided a foundation for the mounting crime, broken families, and welfare of inner-city ghetto neighborhoods. In the 1950s, post-war industries and union protections helped low-skilled blacks find a measure of prosperity. But as industries went to the suburbs, if not overseas, a “new urban economy” emerged in which ghetto residents were isolated from work, with twice the unemployment rate of whites. Remaining employers surveyed for the project took a dim view of ghetto workers and said they were reluctant to hire them.

“For the first time in the twentieth century, most adults in many inner-city neighborhoods are not working in a typical week,” Wilson writes. The neighborhoods in turn have high levels of crime, welfare, unstable male-female relationships, drug use, and off-the-charts incarceration rates. More than two-thirds of African American high school dropouts in their 30s have spent time in prison.

In the foreword for a 25th-anniversary edition of *Declining Significance*, Wilson advocates a mix of private- and public-sector initiatives targeting unemployment in the most jobless areas. In inner cities, where low-skilled workers easily outnumber low-skilled jobs, much of the job creation will need to be in the public sector.

The current recession complicates matters with a fundamental question: Where is the money going to come from? But the recession and, more recently, the Occupy Movement, has shifted the policy argument, tying joblessness to the economy and general inequality, not some perceived personal shortcomings.



"I resist being pessimistic," says Wilson, "but it's increasingly difficult because we're so incredibly polarized right now that you sort of want to throw up your hands in despair and say that nothing can be done. But if you wallow in pessimism you just don't do anything. Prospects don't look good right now. We just have to hang in there. We just have to keep fighting. We can't succumb."

**WILSON WAS 12 YEARS OLD**, the oldest of his five siblings, when his father died.

"It was a devastating experience," he says. "And my mother told me, 'Bill, you have to take on greater responsibility. You have to be the man of the house.' I'm 12 years old."

At first, he was too crushed. A classmate years later reminded him that he seemed to have lost his spirit. But he did step up. He worked in a bowling alley, setting pins, cleaning, and giving the money to his mother, who worked as a housekeeper. They were on relief for a spell and often hungry.

But at night his mother would gather the kids around a table to do their homework while she would knit.

"Despite the fact that we were overwhelmingly impoverished, it never occurred to us that we weren't going to get a college education," says Wilson.

To some extent, his experience is echoed by the families in *Good Kids from Bad Neighborhoods*, a study of successful adolescents who overcome the overwhelming odds of their high-risk areas. The study, on which Wilson was a junior author, found a major factor in the kids' success was the "mediating variable" of strong family units.

But there are some ways in which Wilson's experience is hard, if not impossible, for today's black poor to replicate. Yes, Wilson had personal initiative to spare. He worked hard, and thinks his first two marriages suffered for it. He now spends about half a year in Thailand, the native country of his third wife, and can work even more there outside the U.S. cycle of phone calls and email.

But he fights against the American faith in "rugged individualism," of pulling one's self up by one's bootstraps. In the normal statistical curve of families and outcomes, he says, there will be families that make it against overwhelming odds by chance alone.

Wilson credits his success less to work than an extraordinary set of circumstances. He grew up in a rural area, not the inner city. He started poor but had reserves of social capital. He had teachers in Blairsville that pushed him. His aunt, Janice Wardlaw, with help from Wilson's father, earned two master's degrees and in turn helped finance Wilson's college tuition. She took him to New York museums and libraries during summer visits, gave him books, and talked constantly about "ambition and creativity." His church gave him a college scholarship. At Wilberforce, he found a mentor and role model in Maxwell Brooks, a sociologist and one of the first blacks to get a doctorate from Ohio State.

At WSU, he was influenced by Ogles and charged by a supportive atmosphere. Years later, he would tell *The New Yorker* magazine's David Remnick, "I became a star out there and came into my own."

Wilson caught the eye of the University of Chicago when the chairman of its sociology department, Morris Janowitz, saw him give a presentation in Bulgaria. It was a case of being in the right place at the right time, followed by what Wilson calls "affirmative opportunity." At the time, a scholar needed to have a book published to be appointed a Chicago associate professor with tenure. Janowitz recommended Wilson's appointment based on the unpublished manuscript for *Power, Racism and Privilege*.

It was a gamble based on his potential. It paid off with *The Declining Significance of Race*.

After his Harvard appointment in 1996, Wilson had several years of self-doubt, in part from being surrounded by people from the best private schools and elite universities and feeling "like they have a kind of cultural capital that I don't have."

"Now I walk around with a swagger," he says, "but it's taken me some time to get to this point."

He is a proud man, with books considered classics, a phalanx of nationally-known former graduate students, and popular courses, including one based on *The Wire*. He is an impressive individual, but it frustrates him to see economic and social outcomes, consequences of a vast, disparity-producing social structure, framed in individual terms.

Writing with Anmol Chaddha in the essay "Way Down in the Hole": Systemic Urban Inequality and *The Wire*, he points out that two-thirds of Americans feel blacks who can't get ahead "are mostly responsible for their own condition."

*The Wire* is fictional, but its look at the inner-city institutions—the ghetto drug trade, police, City Hall, schools, and the media—weaves together "the range of forces that shape the circumstances of the urban poor while exposing deep inequality as a fundamental feature of broader social and economic arrangements."

Over dinner one evening, Wilson took to talking about a scene early in the series when D'Angelo Barksdale, a lieutenant in his Uncle Avon's drug gang, tells Stringer Bell, the second-in-command, that some of his underlings might chafe under new restrictions.

As if they have a choice, says Bell, as if they're going to say, "let me quit this game here and go to college." ☒

Read more about Wilson's WSU colleagues and their accomplishments at [wsm.wsu.edu/extra/Wilson-cohorts](http://wsm.wsu.edu/extra/Wilson-cohorts).



SHAHZAD AHISAN/THE CHICAGO MAROON

BUTTERFLY IMAGES  
courtesy David James  
and David Nunnallee

## LifeHistories The Butterflies of Cascadia

:: Tim Steury ::



STAFF PHOTO

» A GLORIOUS SUNNY DAY in April after a long cool spring, it is Earth Day in Cowiche Canyon near Yakima, and the Cowiche Canyon Conservancy is hosting an educational field day. Scores of people armed with water bottles and binoculars are ambling down the trail toward presentations on birds, salmon, and geology as well as butterflies. Executive director Betsy Bloomfield fills me in on the conservancy's endeavors as she guides me downstream to a station manned by David James.

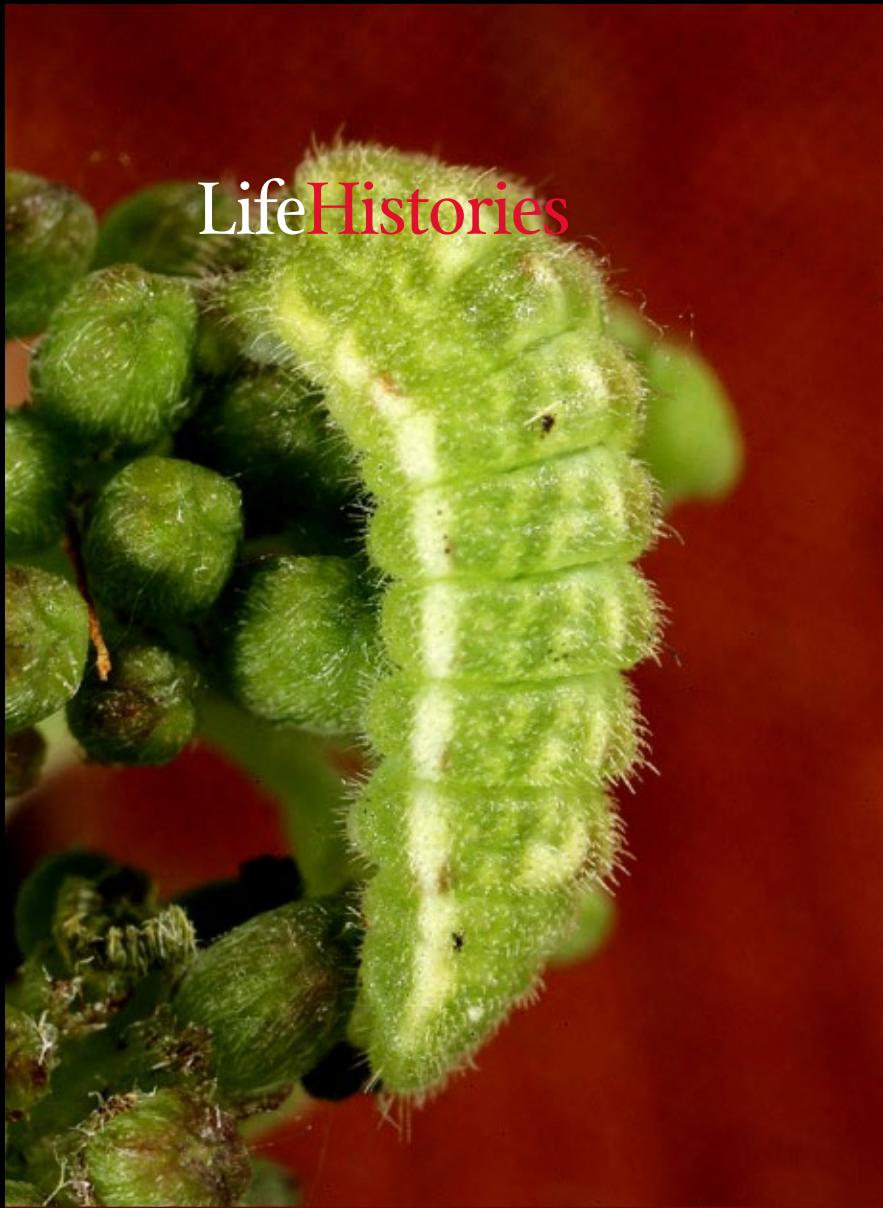
James, a research entomologist at the Irrigated Tree Fruit Research Center in Prosser, has with coauthor David Nunnallee published *Life Histories of Cascadia Butterflies* (Oregon State University Press, 2011). It's a unique and exhaustive documentary of the life cycles, from egg to caterpillar to chrysalis to adult, of all, save one, of the 158 butterfly species native to Cascadia, the region encompassing Washington, southern British Columbia, northern Oregon, and the Idaho panhandle.

When we reach James, he is addressing a small, mesmerized crowd about the canyon's butterflies. Then, as if on cue, one of the book's, and the day's, star attractions flutters by: Lucia's Blue, spring personified.





# LifeHistories



**Above:** Lucia's Blue at larval stage 3 with egg, larval stage 4, pupa, adult male ventral and dorsal views.

**Left:** David James (right) tries to convince a Cowiche Canyon visitor that butterflies are not quite as delicate as they look.



## LUCIA'S BLUE (*Celastrina lucia*)

A lovely little butterfly, generally quite rare, Lucia's Blue is partial to Cowiche Canyon. In some years, James has in a few hours along the trail counted several hundred adults, which prevail in the canyon for four to six weeks starting in early April.

"You'd have to go a long ways to find another population of Lucia Blues," says James.

The habitat is unusual for the Lucia's Blue, as it's usually found in the mountains.

The key, says James, is the red osier dogwood. "They've recently emerged. Once they've mated, the females will lay eggs on the red osier dogwood. They lay them on the flower buds and young leaves."

The Lucia's Blues develop very rapidly. Once the caterpillars are well-fed on red osier dogwood, they turn into a chrysalis, the stage in which they spend the rest of the summer and winter.

"It was supposed to be a retirement project," wife and fellow entomologist Tanya James says of *Life Histories*. Although the time commitment on top of his "day job" in Prosser was tremendous, Tanya welcomed the enterprise. She loves to hike, she says as she doles out orange wedges to their daughters. But David needs a purpose. Just hiking to the top is not enough. Chasing butterflies is.

Lucia's Blue was only recently described as a species, so recently that Robert Pyle's definitive *Butterflies of Cascadia*, published in 2001, lists it as a subspecies. But of blues in general, writes Pyle, "few habitats in season are without their blues," and the 20 blues species included in *Life Histories* represent two-thirds of North American species.

Pyle's *Butterflies of Cascadia* and James and Nunnallee's *Life Histories* work as unusually comprehensive companions in their coverage of the region. *Life Histories* is exhaustively unique. Although other books about butterfly life histories exist, none quite matches its thoroughness. As Pyle writes in his foreword to *Life Histories*, "In the whole world, no other comparable region enjoys a work of this scale, ambit, and acuity for its butterfly fauna."

But what distinguishes *Life Histories* from general field guides and most butterfly books in general is that it treats the whole life of the butterfly. After all, the common image of the butterfly, the beautifully patterned adult, represents only a fraction of the insect's overall life. Once they have courted and bred, butterflies lay eggs that hatch into larvae, or caterpillars. The caterpillars feed, grow, and molt a number of times before becoming chrysalides, or pupae. The adult butterfly forms within the chrysalis and emerges. The portion spent in each stage varies by species.

As James points out in his introduction, the adult of many butterfly species may live for only a week or so, "with 98 percent of their life history hidden or unknown in immature stages, so a full understanding of the factors controlling populations must necessarily include the study of immature stages."

But information on the entire life history of many butterflies of many geographical ranges is sorely lacking. Fortunately, Cascadia is now not among those deficient ranges.

**Opposite, left:** Adult Mourning Cloak dorsal view with eggs, larval stages 1 & 4, pupa, adult ventral view. **Opposite, right:** Adult Coronis Fritillary ventral view with egg, larval stages 1 & 5, pupa, adult dorsal view.



## MOURNING CLOAK (*Nymphalis antiopa*)

From his pack, James pulls a container of butterflies, captured earlier across the ridge in Bear Canyon. In contrast to the rarity of Lucia's Blue, the butterfly he holds in the sun as it warms up is known throughout the world. While the Lucia's Blue apparently is particular to the red osier dogwood as a host plant, the Mourning Cloak claims an enormous range at least partly due to its much more diverse diet.

Common to riparian corridors, lower elevation canyons, forest margins, and meadows from Alaska to Venezuela, from Lapland to Siberia, as Pyle notes, the Mourning Cloak populates all of Cascadia except the wettest coastal rainforest. Although it is a tough butterfly, like many butterflies it has trouble with cool and damp.

In fact, such is that aversion that one thing that Washington is not rich in is butterflies. Pyle calls it the "rot factor." Much of Washington is simply too wet and cool for butterflies to thrive.

But where the Mourning Cloak lives, it thrives. Compared to its more ephemeral fellows, it is a long-lived butterfly. This one emerged last July, James tells his audience. It will lay its eggs shortly, and will still be around this coming July. The larvae, however, will pupate to escape the summer heat.

Now, warming in the sun, the butterfly rests on James's hand. Butterflies, which are cold-blooded, need air temperatures of 65–70 degrees to fly.

Universal as it is, the Mourning Cloak can never lose its appeal, for it is stunningly lovely. Vladimir Nabokov, known for his Lepidoptera obsession as well as his novels, composed a poem about it in 1921:

*Velvety-black, with a warm tint of ripe plum,*

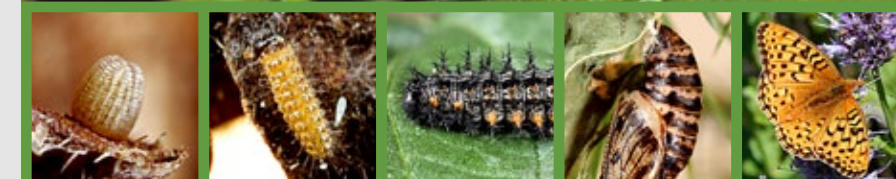
*Here it opened wide; through this live velvet*

*Delightfully gleams a row of cornflower-azure grains,*

*Along a circular fringe, yellow as the rippling rye ...*

"Almost there," says James as the Mourning Cloak stirs. "Sometimes they shiver."

And off it goes.



## CORONIS FRITILLARY (*Argynnis coronis*)

Rather than pupate to escape the heat as does the Mourning Cloak, the Coronis Fritillary goes to the mountains.

One of 16 species of fritillaries that occur in Cascadia, it returns to the valley in early September to feed on rabbitbrush and lay eggs on senesced violets.

A theme resonating this Sunday with many in Cowiche Canyon is "Project Butterfly." The conservancy's Bloomfield, for one, is nearly beside herself with the recent clinching of an agreement with the Yakima Schools and Heritage University that incorporates elements of Project Butterfly into their curriculums.

In 2005, with the help of the Washington Department of Fish and Wildlife, the Cowiche Canyon Conservancy was able to purchase 1,800 acres on Cowiche Mountain, a few miles upstream from here.

Snow Mountain Ranch serves as a vital preserve not only of the steadily retreating shrub-steppe landscape, but also of butterflies.

Projects include a small botanical garden with specimens of host and nectar plants and a children's butterfly natural area. James is identifying habitat niches for possible reintroduction of butterfly species no longer endemic to the area. But most important is simply preservation and enhancement of habitat.

"If you provide the right habitat," James has said, "they will come."



## LifeHistories



### BECKER'S WHITE (*Pontia beckerii*)

Of the thousands of known species, the only butterfly that causes economic damage is the Cabbage White (*Pieris rapae*). Gardeners here today might indeed scorn the white butterflies that flit through the warm canyon. A closer look, however, would change their mood. The difference, besides diet, is the underside of their wings.

"The whites you see here are Becker's Whites," James tells a new group. Whereas the Cabbage White's underwing is yellow, the Becker's White's is a beautiful green.

Even with the James family's purposeful hikes, the bulk of the information for *Life Histories* was accomplished in a more controlled setting.

James tells me separately the same as his wife, that this was originally a long-considered project that would be finished sometime after "retirement." His major work is directed toward biological control in vineyards.

But then he caught wind that David Nunnallee in western Washington was also documenting butterfly life histories.

"Once we got together, there was a synergy," says James. "It became more of an achievable thing to get done in a shorter period of time."

Although adult butterflies were collected in their habitat, and the finished book now provides an identification guide for whatever stage one might stumble across, one does not simply go out and track down eggs, caterpillar, chrysalis, and adult for each of 158 species of butterflies. For most of those species, that work required raising them in the lab.

On the one hand, such an endeavor was nothing new for James. He started raising butterflies as an aspiring eight-year-old lepidopterist in England.

But the reality of scientifically documenting each stage of these butterflies' life histories was daunting.

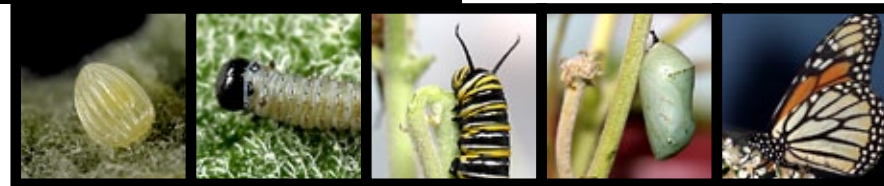
"It was a phenomenal amount of work," he says. Many of the species had never been reared before, and each species required a different way of getting them to lay eggs.

Their desire to produce such an exhaustive study required that James and Nunnallee raise each species multiple times.

"There was so much variation," he says. Variation, that is, within an individual species. For example, the color of the larvae might vary depending on the host plants they feed on. Many of the entries in *Life Histories* include as many as six photographs of larvae in order to show that variation.

Each species, says James, represented a separate research project. But the final result is a wealth of biological and ecological knowledge that simply didn't exist before their work.

The book has produced lots of "suggestions for further research," says James with a smile.



### MONARCH (*Danaus plexippus*)

One butterfly that does not make a showing in Cowiche Canyon today is the Monarch, probably the best-known butterfly in the world. It is actually much too early for Monarchs, and even later in the season it is not common. According to *Life Histories*, most Monarchs that occur in Cascadia probably originate in California. This and the longer migration of Monarchs between Canada and Mexico are threatened by decreasing habitat, particularly stands of showy and narrow-leaved milkweed, their host plants, due to agriculture and urban expansion.

Efforts to conserve appropriate habitat depend on a better knowledge of their migration routes. Although eastern Monarch migrations are fairly well understood, our understanding of western migration is sketchy. Although a recent study analyzed data on host plant availability and climate and predicted origins of migrating monarchs, it still does not clarify routes.

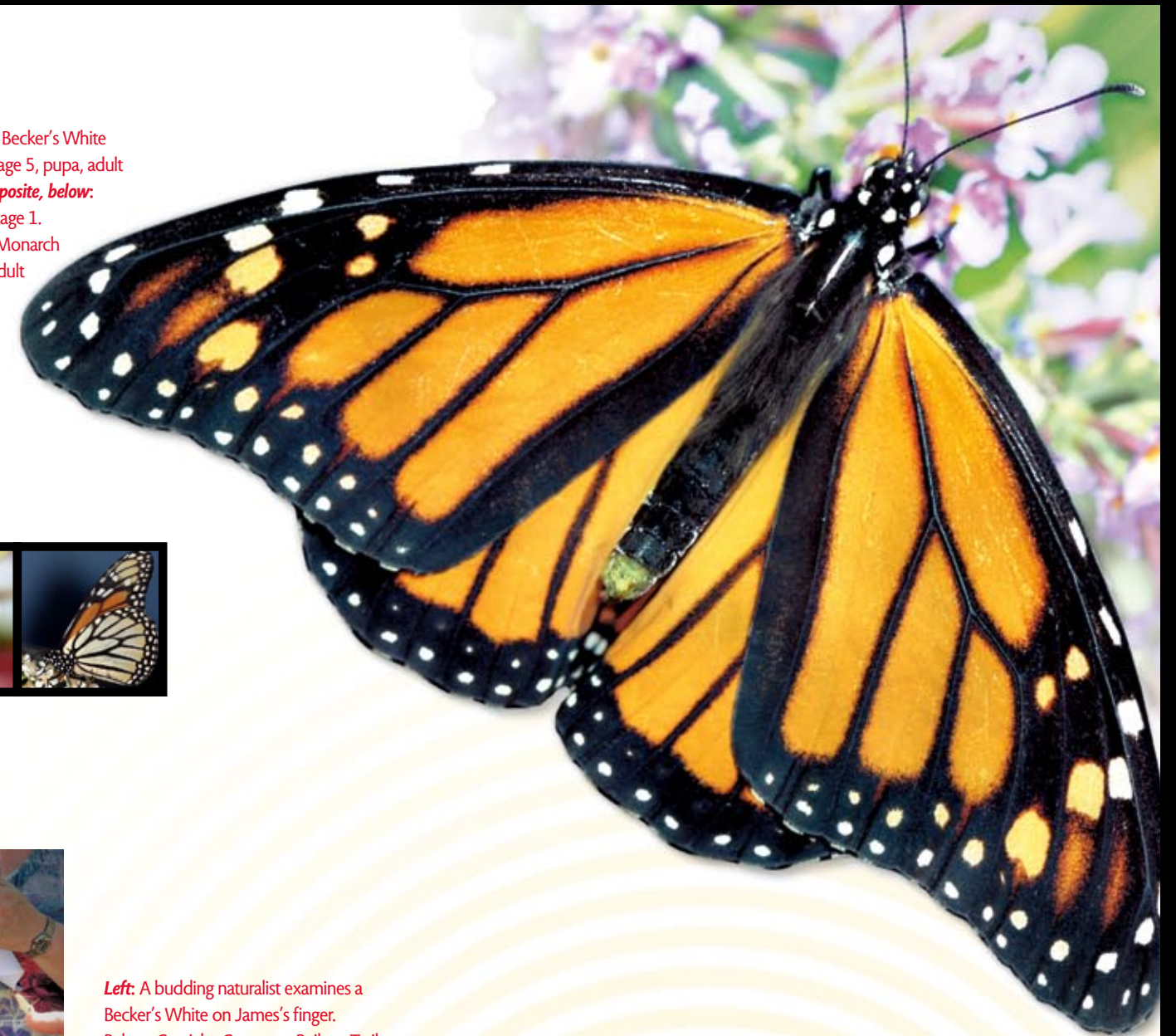
James is proposing to answer fundamental questions about western Monarch migration by enlisting prisoners at the Washington State Penitentiary in Walla Walla.

To conduct a rigorous study, which will take years, James will need tens of thousands of monarchs. Raising them himself is simply not feasible.

As part of the Sustainable Prisons project, which has been successful in western Washington in connecting prisoners with nature, officials at the penitentiary contacted James about possible prisoner participation in his work. According to James, prisoners have "reared endangered species more effectively than experts."

Starting this summer, prisoners at Walla Walla will begin raising the thousands of Monarchs necessary for James's study. Once the butterflies have reproduced and metamorphosed, they will be tagged, transported to various sites near the California-Oregon border, and released.

**Opposite, left to right:** Becker's White larval stage 1, larval stage 5, pupa, adult ventral view, eggs. **Opposite, below:** Monarch egg, larval stage 1. **This page, continued:** Monarch larval stage 5, pupa, adult female ventral view. **Right:** Monarch adult female dorsal view.



**Left:** A budding naturalist examines a Becker's White on James's finger. **Below:** Cowiche Canyon, a Rails to Trails site, is a beautiful remnant of shrub-steppe habitat.

### IN WILDNESS IS THE PRESERVATION...

"We cannot protect what we do not understand," write Nunnallee and James in their introduction. Their book has contributed enormously to our understanding of the full lives of butterflies and, it is hoped, will contribute to the protection of these wonderful animals.

The great British naturalist Sir David Attenborough has called *Life Histories* "magisterial," a label that suggests much more than a collection of data and observations. A richly unique combination of traditional natural history and obsessive data-driven science, the book is, finally, beautiful—both in itself, for it is wonderfully photographed and written, and for showing us the enormously complex beauty of our Cascadian butterflies. ☒

To find out the one species of butterfly elusive to *Life Histories: The Butterflies of Cascadia*, visit [wsm.wsu.edu/extra/Cascadia-butterflies](http://wsm.wsu.edu/extra/Cascadia-butterflies).







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### » CLASS NOTES

#### 1950s

**Marguerite "Peg" Motley** ('55 MS, '64 Ed.), a retired Pullman school teacher and businesswoman, is Washington State University's 2012 Woman of Distinction in the alumna category. After teaching she started Wheatland Travel, which became the motor coach charter business Wheatland Express.

#### 1960s

**Wade Lundstrom** ('65 Mech. Engr.) and his wife Diana (Hudkins) will celebrate their fiftieth wedding anniversary on September 9.

**Jeannine Rogel** ('65 Ed.), recently retired after teaching for 47 years. She also travelled to India on a Fulbright Fellowship, to Oxford University to present a paper, to Poland to study the impact of the Holocaust on that region, and Kenya to help build a school for Maasai students.

**Joy Broom** ('67, '75 MFA) was the March artist-in-residence at the de Young Fine Arts Museum of San Francisco.

#### 1970s

**Diane Davis Letsch** ('71 Engl.) is retiring from Springdale Schools in Springdale, Arkansas, after 40 years as an English teacher, school counselor, and counselor coordinator.

**James H. Clark** ('75 Civil Engr, '76 MS Env. Engr.) spoke at the World Water Forum in Marseille, France, in March 2012. Clark was presented with the WSU Alumni Achievement Award in 2004.

**Janet Finke** ('75 Elem. Ed., Comm. Disorders) made a second trip to South Sudan to train teachers at a girl's school in Akon and distribute books and clothing donated by Ellensburg Rotarians.

**Patricia Leedy** ('75 Ed.) has finished her second children's book *Shemsu: A Story Told in Comic Verse*. It joins *The Shemsu Alphabet* (2011). Both books were inspired by a shelter rescue dog.

**Evelyn Rodewald** ('77, '82 MA Hist.) and Neil Sickle coauthored *The Indian Way: Indians and the North American Fur Trade*, in which they explain the specific Native American cultures and their influence on development of the European fur trade in Canada and the United States.

**Mary Lauwereins** ('77 Bus. Admin., Mktg.) was appointed by Nissan America as director of credit services for the Nissan Motor Acceptance Corporation.

**Michael J. Stratton** ('77 Comm.) is a member of The Boeing Project Management Community of Excellence, which sends Boeing employees across the world to teach management workshops. He co-founded the organization about 15 years ago.

**James D. Lincoln** ('79 MS Vet. Med.) retired after 34 years teaching veterinary surgery at WSU.

**Bruce Titus** ('79 Finance), of Bruce Titus Eastside Subaru in Kirkland, was nominated for the prestigious TIME Dealer of the Year award for 2012 for exceptional performance in his dealership and distinguished community service.

## » tracking



### Gene Callan '76

## A dream for today and tomorrow

by Hannelore Sudermann :: From his office in the old Henry Weinhard brewery in the core of the Pearl District in downtown Portland, architect Gene Callan '76 is involved in projects as varied as an office building at the University of Washington, a golf course clubhouse in Beijing, and the new wing of the Maryhill Museum of Art in the Columbia River Gorge.

He's also surrounded by projects he and his firm, GBD Architects, have had a hand in for the past two decades. The Brewery Blocks project of residences, retail space, and offices like his, for example, started in 2000. The use of elements from the old brewery, as well as the Portland Armory and an old Chevrolet dealership, is a

classic illustration of GBD's design philosophy: Save what is good, renew what you can, and create something that harmonizes with the structures and spaces around it. "We embraced the bones of the old buildings," says Callan. "We didn't want it to look like a new mega-complex." Though the vats and flues are gone, the old chimney, the red brick courtyard, and original elements like the balcony space in what was the large brewery room remain.

Callan headed to Portland right after WSU. He was lucky to land a job in the middle of a recession, finding a place in Skidmore, Owings, and Merrill, an international firm. Some years later, he scaled back to a small two-person firm. The combination of those two jobs made it easy for him to move into GBD, a medium-sized firm which had just the right mix of team and autonomy to suit him.

GBD, where Callan is now a director, has been at the forefront of LEED-accredited sustainable design—as Portland was one of

Portland-based architect Gene Callan '76 designed the addition for the Maryhill Museum of Art in Goldendale. Photo Brian Lee

the nation's first cities to try to build green buildings. "A lot of firms around the country were talking about it, but not a lot were doing it," says Callan. But Portland businesses and the city were interested in more sustainable architecture and urban planning early on. "We all learned together what green building projects really meant."

In the case of the Maryhill Museum, that meant creating a structure that could harmonize with both the historic neo-classical style building and the striking hillside landscape along the river. In 1914, entrepreneur Sam Hill built his mansion on the Columbia to serve as a summer residence for his family. The Beaux-Arts structure was designed by Washington, D.C., architects Hornbower & Marshall and built out of poured concrete. It was to be a



## » tracking

landmark for a new community Hill envisioned along the Gorge.

Alas, Hill's wife Mary couldn't be convinced to relocate to Washington, Hill's business ventures failed, and the house would never be occupied. The locals called it "Sam Hill's Folly."

One of Hill's friends, an American dancer named Loie Fuller, encouraged him to turn the house into a museum of art. Fuller, who found her fame in Paris, helped Hill fill it with works by French masters, including her friend, sculptor Auguste Rodin. Then Queen Marie of Romania, another friend, came in 1926 to dedicate the mansion as a museum and provide art and materials from her own life for the collection. During her speech, the queen called it "a dream for today and tomorrow."



The Mary & Bruce Stevenson Wing at Maryhill Museum of Art in Goldendale. *Motoya Nakamura/The Oregonian*

Finally, a third benefactor, Alma de Bretteville Spreckles, continued the effort after Hill's death, ensuring the museum opened in 1940.

For Callan, who grew up in nearby Goldendale, Maryhill was always an eccentric character in a landscape filled with barns, wood-frame houses, and acres of ranchland. "As a kid, I would go there," he says. "It had a special attraction to me, not only for the collection and the building, but the site." Perched above the Columbia River with views to Mount Hood and up and down the gorge, the 5,000-acre property is vast and stunning. Such was the attraction that after starting his career in Portland, Callan and his WSU

classmate Peggy McKee '76 eloped and were married on the grounds.

Decades ago, the museum's collections had outgrown its space. For lack of display room, many treasures are locked away in storage. Callan remembers first working on plans to expand the museum more than 20 years ago. They needed more space for educational programs, better storage, added offices, and just plain updating. "We did a number of schemes," says Callan. But time, money, and organization worked against the project. "The stars just hadn't aligned," he says. Finally in 2010, the museum's advisory board, the money, and the needs reached the right point. What was a \$30 million project got scaled back to a \$10 million effort to add

16,000 square feet and provide the museum a modernized, energy-efficient wing named for patrons Mary and Bruce Stevenson.

Several GBD colleagues worked on the project with Callan, including Dick Kirschbaum '75. The wing is built into the rock on the hillside beneath the museum, protected from the wind and with deep overhangs to let in the view and keep out the sun. Much of the rock removed to make room for the structure was reused on the addition and surrounding property. "We tried to use as much as we could of what Mother Nature was giving us," says Callan.

The style of the wing could be described as contemporary and quiet. It's meant to conceal

**Mary Westendorf** ('79 Elem. Ed.), a 27-year educator in the Fruitvale School District in Bakersfield, California, was selected by the Board of Trustees to be the district's next superintendent.

### 1980s

**Robert Hanson** ('82 Bus. Admin.) of Tacoma bowled a 300 in the Regular Singles of the United States Bowling Congress Open Championships. Hanson, proprietor of Tacoma's Tower Lanes, led the Washington State University bowling team to a national championship in 1982.

**Brad LeaMaster** ('82 DVM) is Oregon's State Veterinarian. His office monitors infectious animal diseases in Oregon and maintains disease control plans throughout the state.

**Ross Dalbey** ('83 PhD Biochem.), a scientist at Ohio State University, was among 80 microbiologists elected to fellowships in the American Academy of Microbiology.

**Ron Richards** ('83 Social Sciences) is an assistant coach for men's basketball at Linn-Benton Community College in Albany, Oregon. Richards began coaching at WSU under George Raveling and Harold Rhodes. As an assistant coach he helped Moscow (Idaho) High School win back-to-back 2A Women's state titles (1980-1982).

**Stacy Taylor** ('83 Economics) is the branch manager of the Tri Counties Bank in Truckee, California.

**Nancy Ross Sutherland** ('84 MS Chem. Engr.) was named 2012 TAPPI Fellow, an honorary title given by the leading association for the worldwide pulp, paper, packaging, and converting industries.

**Alex Guenther** ('86 MS, '89 PhD Civil Engr.) received the American Geophysical Union's 2011 Yoram J. Kaufman Unselfish Cooperation in Research Award.

**Leslie E. Wong** ('86 PhD Ed. Psych.) is the president of San Francisco State University. He was formerly the president of Northern Michigan University.

**Timothy Yeomans** ('86 Phys Ed., '90 MA) is superintendent of the Puyallup School District. He previously served as superintendent of the Meridian School District in the Bellingham area.

**Shelley Redinger** ('89 Ed., '92 MEd) is superintendent for Spokane Public Schools. She was the superintendent of Spotsylvania School District in Fredericksburg, Virginia.

**Lisa Teske** ('89 Comm.) is the director of marketing and business development at Kennewick General Hospital. She has 23 years of experience in marketing and has worked at Battelle at Pacific Northwest National Laboratory and Key Technology, Inc., based out of Walla Walla.

**Karen Weathermon** ('89 MA, '99 PhD Engl.) was named 2012 Outstanding First-Year Advocate by the National Resource Center for the First-Year Experience and Students in Transition. She was recognized for her leadership of WSU's living-learning community program Freshman Focus and the University's Common Reading program.

### 1990s

**Jeff Niesz** ('90 Ag. Econ.) is on the domestic sales team for Columbia Marketing International, one of Washington state's shippers of apples, pears, and cherries. Niesz has 16 years experience selling produce in the Northwest.

**Mark Springer** ('90 Music, Ed.) was appointed dean of the College of Liberal Arts at St. Cloud State University in Minnesota. He has been a faculty member at the university for 16 years and interim dean for a year.

**Mike Thoren** ('90 Agribus., '91 Ag. Econ.) received the Colorado Ag Hall of Fame's first "Rising Star In Agriculture" award. He is currently the president and CEO of JBS Five Rivers Cattle Feeding, LLC.

**Andi Day** ('91 History) has returned to the county of her childhood to head up the Long Beach Peninsula Visitors Bureau as executive director. She will be responsible for supporting and growing the region's tourism industry.

**Eric Shanks** ('93, Comm.) is the senior vice president of personal insurance underwriting for Fireman's Fund Insurance Company. Shanks will be based in the company's Chicago office. He has 19 years of experience in insurance.

**Bill Marsh** ('94 Ed.) The five-time Metro League football coach of the year was hired by Archbishop Murphy High School in Everett to be its new football coach. He is also the executive director of Beecher's Flagship Foundation, an organization that helps children make healthy eating decisions.

**Eran Mahrer** ('95 MS Env. Sci.) is vice president, utility strategy at the Solar Electric Power Association and will lead SEPA's efforts in engaging utilities to develop solar strategies and practices.

**Meiyin Wu** ('95 MS Env. Sci., '99 PhD Env. & Nat. Resc. Sci.) is director of New Jersey's Montclair State University's Passaic River Institute for Environmental Research and Education. Prior to taking the position, she was an associate professor of biology and microbiology at the school.

**Paul (PJ) Creelman** ('96 Comm.) published his first novel, *Phoenix Flight: Rise of the Phoenix Flight* in October 2011.

**Hank Jacky** ('96 Civ. Engr.) is a project manager at Everett-based Kirtley-Cole Associates. He has worked in the construction industry for 16 years.

**Jennifer Merschorf** ('96 Bus. Admin.), a breast cancer survivor, is the chief executive officer of the Young Survival Coalition, the first nonprofit organization to focus exclusively on the needs of young women affected by breast cancer.

**Michael Tidwell** ('96 MA, '02 PhD Liberal Arts) is dean of the College of Business at Eastern Michigan University. He is the former dean of the College of Business at Bloomsburg University of Pennsylvania.

**Jeanett Castellanos** ('97 MEd, '98 PhD Ed. Admin.), director of the Social Sciences Academic Resource Center at the University of California, Irvine, is the recipient of the Outstanding Support of Hispanic Issues in Higher Education Award.

**Debra Sutphen** ('97 PhD Hist.) is the interim vice president of instruction at the Sierra College, where she is also dean of liberal arts.

**Leonard Mudachi** ('98 Hotel & Rest. Admin.) is founder of Blanco's Holdings, a restaurant management company in the Republic of Kenya.

**Colleen Quinn** ('99 Comm.) is an account supervisor for the Fearey Group, a public relations firm in the Pacific Northwest.

**Rosie Rimando-Chareunsap** ('99 Engl., '11 PhD Ed. Admin.) is the vice president for student services at South Seattle Community College where she has worked since 2000.

### 2000s

**Janie Darby** ('00 Nurs., '02 MN) has joined the orthopedic practice of Dr. Lotfi Ben-Youssef and Dr. James Scott as a family nurse practitioner at the Sidney Health Center in Sidney, Montana.

**Steve Broussard** ('01 Soc. Sci.) has joined the UCLA football coaching staff as the new running backs coach. Before taking this position he was wide receivers coach at Arizona State, and running backs and special teams coach at WSU.

**Michelle Anderson** ('02 Comm.) is digital editor/producer of TheHorse.com. She started her career at *Appaloosa Journal* and has since worked and written for several top equestrian publications and websites.

**Shelly Michalak** ('03 Human Dev.) recently passed the Behavior Analyst Certification at the Florida Institute of Technology.

**Blythe A. Duell** ('04 MS, '08 PhD Psych.) received the Professor of the Year award at Southeastern

itself in the landscape and not steal attention from the grand old original structure. "It's a really quiet place to absorb Mother Nature," says Callan. "And at this site she has given us a ton to look at."



For more information on the museum's new wing visit [maryhillmuseum.org](http://maryhillmuseum.org).

## Patrick Siler '61

## On the wall

*by Kaitlin Gillespie '13 ::* Patrick Siler points to a crack in the wall he's about to paint. He points to another, and another. He has to fill those. And there's that slanted place in the concrete he has to deal with. He can't push his lift onto the sloped surface. Maybe he'll build a wooden platform to roll the lift onto. And the tree in front of the wall, well, he'll figure that out when he gets to it.

"I still have quite a bit of preparatory work on this wall," Siler says, sitting in the Thomas Hammer café where the mural is located. "I've done a lot of work on the building just so I can do my painting, scraping, filling, power washing."

This summer, the retired WSU art professor put the finishing touches on the third and final part of the Pine Street Plaza Mural. It's a larger scale than Siler's ever worked on before, and he has to use a different set of skills to complete the piece. Siler has to draw the mural first, creating a grid he can then transfer to the wall. The whole process takes more than a month, and he can only paint when the weather allows. Otherwise, the paint won't dry.

Siler has been working on the mural since 2009, when he completed the first part, "Skyhorses and the Finer Points of Solitaire & Checkers."

The first part of the mural depicts a typical small town, where brightly-colored townsfolk play checkers and cards in the middle of Main Street. Generic businesses line the street: bars, clubs, a divorce attorney's office. But floating through the sky are seahorses and sea turtles. Fish fly through the clouds along with an airplane. The animals spy on the people below, watching them play their otherwise average games.

Siler said the seahorses are for his wife, Elizabeth, an English as a second language specialist in the English department at WSU.

"You can imagine a seahorse is a pretty unique shape," he says matter-of-factly. "There's



PHOTO: ZACH MAZUR/WSU MUSEUM OF ART

Patrick Siler '61 paints his downtown Pullman mural.

nothing that has the shape of a seahorse... It's just an example of what I've been doing for years."

The second part continues the theme, where crabs soar high above saxophone players performing on stage.

"There's tension between these things that are so disparate," he said.

Siler's work draws from German Expressionism, comics of the 1930s and 1940s, and traditional Japanese and Chinese brushstrokes. Siler said he tries to find disparity in objects and put them together to "create visual fireworks," things that may not go together and may not sell, but work because they are what he wants to create.

"I'd rather spend time developing something super duper with my art than do a half-ass job of that and go out and try to sell it," he said. "I want to do the best art, the most original art, the most interesting art I can."

In addition to completing the mural, Siler had his work displayed at the WSU Museum of Art this past summer. The Curator's Choice exhibit featured several of Siler's finished works, in addition to a series of sketches and drawings he did in preparation for the mural. The museum spent \$4,000 from the permanent collection fund for the pieces, enough for him to purchase supplies to finish the mural.

"It's a good thing for Pullman history and a former faculty member who taught here for many years, that he's represented in the permanent collection in a way that's not just a painting," says Chris Bruce, the museum director. "It's a way to share a person's process as well as the end product."

Siler was born in Spokane and grew up in Tacoma. Throughout his childhood, Siler was always interested in art, and took a sketch book everywhere he travelled.



He earned his bachelor's degree in art studies from WSU in 1961. He then studied at the University of California, Berkeley, where he earned a master's degree in painting in 1963. He says he tried to earn a teaching degree but could never complete it: He only wanted to be an artist.

Siler spent about ten years in the Bay Area, doing parttime jobs like reupholstering furniture and painting metal pieces for a telecom company. He applied for several teaching jobs, but did not find a fit for him until he heard about a position open at his alma mater.

Siler returned to Pullman, where he spent 16 years as the main ceramics professor and another 16 years as the main drawing professor.

Siler's work has been featured in museums across the country, including the American Craft Museum in New York City, the Seattle Art Museum, and the Smithsonian. He has also had work featured in Europe, Japan, and Korea.

"It's one of the benefits of growing up in America. I can become an artist and paint whatever I want and I still don't starve to death," Siler says.

"I would probably do it even if I were starving to death."

*Go to page 56 to view the mural and for weblinks.*



With a veterinary master's degree in hand, Yessenia Picha returns to her country, where 80 percent of the world's alpacas reside. *Photo Mushtaq Memon*

## Yessenia Picha '12

# Of alpacas and affection

by *Linda Weiford* :: Yessenia Picha '12 comes from a family of *alpaqueros*, or alpaca ranchers. She grew up around the curious, long-lashed creatures raised mostly for the fiber made from their soft, durable fleeces. With 80 percent of the world's alpaca population residing in Peru, it's no surprise that after completing her veterinary degree at the Catholic University of Santa Maria, she worked for an agricultural social services agency in the area of genetic improvement of the animal.

While the work was rewarding, "I felt there were important gaps in my knowledge," says Picha. She knew she could obtain more rigorous veterinary training in the United States. Also, in Peru veterinary medicine is considered a man's job, especially when it comes to working with large animals like alpacas and cattle, she says. "I came to see that I would have to study harder and work harder to show that I can make a difference."

Oklahoma State University where she has worked since 2008.

**Cortney Franklin** ('04 MA, '08 PhD Crim. J.), a criminal justice professor at Sam Houston State University in Texas, received the inaugural "New Scholar Award" from the Academy of Criminal Justice Science's Victimology Section.

**Kimberly Van Der Beek** ('04 Comm.) is blogging for *People* magazine on celebrity parenting. Kimberly and her husband, actor James Van Der Beek, had their second child Joshua in early March. He joins 18-month-old Olivia in the Van Der Beek household.

**Melanie Swanson** ('05 Soc. Sci.) received an MBA in strategic management from the University of Wisconsin-Madison.

**Scott Walter** ('05 PhD Higher Ed. Admin.), former head education librarian at WSU, has been appointed university librarian at DePaul University in Chicago.

**Tyler Freed** ('06 Bus. Admin.) is branch manager of Windermere Real Estate's Bonney Lake office. Freed played rugby at WSU and now serves as the coach for the Rainier Highlanders rugby team.

**Allyson Beall** ('07 PhD Env. & Nat. Res. Sci.) spoke at the World Water Forum in Marseille, France. Beall is an instructor in WSU's School of Earth and Environmental Sciences.

**Brian Hanson** ('08 Principal Cert.) was named Steilacoom High School's new principal. He has 11 years of experience in the district teaching English and drama.

**Rachel Lewis** ('08 Ag. Econ.) was recently appointed by the Quincy City Council as the new manager for the Quincy animal shelter.

**Patrick Kelly Shea** ('08 Sup. Cert.) is superintendent of the Sequim School District. Shea previously was the human services director at Mead School District in Spokane.

**Donna Drader** ('09 MS Nat. Res. Sci.) helped start a school in Uganda. On a recent visit Drader was honored by the school naming one of the buildings after her.

## 2010s

**Patrick Murphy** ('12 EdD) is assistant superintendent for secondary schools in the Edmonds School District. He has been executive director of secondary education for the Issaquah School District.

**Lauren O'Neal** ('12 Nurs.) was chosen by Wine-By-Cougars and the WSU Alumni Association as the artist of the 2012 Artist Expression on a limited-edition wine offering.

## IN MEMORIAM

## 1930s

**Mid Rowland** (x'34), 95, April 5, 2012, Pullman.

**Fred E. Frederickson** ('35 Elect. Engr.), 98, April 2, 2012, Bellevue.

**Royal Tracy Hawley** ('36 Mech. Engr.), 97, February 19, 2012, Bothell.

**Carol Ellis** (x'37), Pi Beta Phi, 96, March 28, 2012, Spokane.

**Delia Emma Kling** ('37 Home Ec.), 96, January 26, 2012, Walnut Creek, California.

**Ethel Metzger** ('37 Hist.), Kappa Delta, 98, March 22, 2012, Spokane.

**Howard F. Carroll** ('38 DVM), 96, March 21, 2012, Millbrae, California.

**William F. Greene** ('38 Bus. Admin.), 95, May 2, 2012, Lacey.

**John Woodrow Brown** ('39 Ag. Chem.), 95, May 5, 2012, Burlington.

**John "Gil" Nelson** (x'39), 92, April 15, 2012, Scottsdale, Arizona.

## 1940s

**Adeline D. Gault** ('40 Fine Arts), 92, April 17, 2012, Colfax.

**Charles A. Hooper** (x'40), 90, May 22, 2012, Kennewick.

**Juanita C. Jorgens** ('40 Liberal Arts, Ad.), 94, February 21, 2012, Spokane Valley.

**Jean Adria Read** ('40 Home Ec., '41 Ed.), 93, August 13, 2011, Seattle.

**Warren Robert Weber** ('40 Civil Engr.), 92, February 18, 2012, Albuquerque, New Mexico.

**Edith V. Woodworth** ('40 Home Ec., Ed.), 94, April 22, 2012, Bellevue.

**John A. Holmes** (x'41), 92, February 27, 2012, Hot Springs, California.

**Jean Smith** ('41 Home Ec.), 94, January 4, 2012, Yakima.

**David F. Taylor** ('41 Liberal Arts), 92, April 23, 2012, Richland.

**Muriel Tugaw** (x'41), 93, March 16, 2012, Salt Lake City, Utah.

**Betty Berg Davis** ('42 Math), 89, November 21, 2010, Spokane.

**Elsie Agnes H. Grant** ('42 Bus.), 91, April 5, 2012, Richland.

**Russell E. Schlee** (x'42), 93, May 6, 2012, Mission Viejo, California.

**Howard Kittel** ('43 Mat. Science & Engr.), 92, May 8, 2012, Bellingham.

**George P. McCallum** ('43 Engl., '48 MA For. Lang. & Lit.), 90, March 2, 2012, Spain.

**George Ernest Hall** (x'44), 89, March 18, 2012, Portland, Oregon.

**Catherine Marie Purvis** ('44 Psych.), 90, April 23, 2012, Las Vegas, Nevada.

**Raymond O. Ellis** ('45 DVM), 89, May 26, 2012, Oak Harbor.

**Buryl Stewart Thayer** ('45 Fine Arts, '53 MA Home Ec.), 89, April 7, 2012, Shoreline.

**William Harold Thomas** (x'45), 88, January 15, 2012, Bellevue.

**Dean Dix Robinson** ('46 Speech Comm.), 87, December 29, 2011, Gaithersburg, Maryland.

**Jack Franklin Carter** ('47 MS Agro.), 91, September 9, 2011, Fargo, North Dakota.

**Wayne Frederick Ehlers** ('47 MS Ag. Econ.), 91, June 2, 2012, Camarillo, California.

**Dorothy Jane "Dot" Kimble** ('47 Sci.), 88, April 25, 2012, Pullman.

**Robert J. Sheridan** ('47 Phys. Ed, '48 Ed.), Theta Chi, 89, March 28, 2012, Wilsonville, Oregon.

**Jesse R. Strand** ('47, '49 MS Geol.), 88, July 26, 2011, Bernalillo, New Mexico.

**Bobbee Judd Eddy** ('48 Engl.), 88, March 17, 2012, Spokane.

**Sam Morris Hupp** ('48 Bus. Admin.), 85, Palm Springs, California.

**Roy Charles McLeod** ('48 Hist.), Pi Kappa Alpha, 85, May 4, 2012, Lakewood.

**Gil Nelson** ('48 Phys. Ed.), 92, April 15, 2012, Scottsdale, Arizona.

**Don Lee Barbee** ('49, '55 MA Higher Ed. Admin.), 84, April 1, 2012, Seattle.

**Helen Rademacher Bator** ('49 Phys. Ed., '53 Ed.), 84, February 29, 2012, Moses Lake.

**Paul Edward Carter** ('49 Engl.), 86, May 19, 2012, Spokane.

**Armin Christeler** ('49 Vet. Med.), 97, March 2, 2012, Santa Rosa, California.

**Shirley Louise Corbit** ('49 Vet Med.), Delta Delta Delta, 84, March 20, 2012, Spokane.

Five years ago Picha came to Pullman for a three-month visit to study under Ahmed Tibary, a professor in the College of Veterinary Medicine who specializes in animal reproduction and is known around the world for his work with camelids, members of the biological family that includes camels, alpacas, and llamas. Tibary and his colleagues were the type of experts Picha longed to work with, she says, adding that she also appreciated the school's philosophy of respect toward animals. What's more, WSU had its own herd of alpacas.

"At home, alpacas don't like people much because we view them more as business subjects and don't show them much affection. They ignore us and spit on us," she says. In Pullman, she found a different experience. "Here, they seem kind and smart," she says. "I think, because they are treated with more affection."

Recognizing Picha's desire to continue her education, Mushtaq Memon, an associate professor of comparative animal reproduction at WSU, encouraged her to apply for a Fulbright scholarship so she could return to WSU and complete her master's degree. Not only did the competitive international program award her a grant for her studies, it provided for intensive English language training.

"When she first got here, she spoke in broken English and seemed unsure of herself," says Memon, himself a Fulbright scholar who now serves as WSU's Fulbright Ambassador. "But she was curious, determined, and worked hard. During her two years here, she learned, grew, and gained confidence. And yet, she never lost sight of where she came from and her commitment to contribute what she learns when she goes back." Late this summer Picha returns to Cuzco as one of the first, if not the first woman veterinarian in Peru to earn a veterinary master's degree in the United States.

Picha hopes to work mainly with alpacas and cattle and would like to eventually return to school and earn her doctorate. Someday she hopes to join the faculty at a university. "I hope to teach my students to be critical thinkers. Before, I didn't question what I learned from my books or my professors," she says. "Here, I was encouraged to ask, 'Why?'"

And whenever she sees someone wrestling with an alpaca—the economic mainstay of many Peruvian villages—she'll draw on her Pullman experience. "I'll tell them, alpacas can help you," she says. "You don't need to have a fight with them. Here, let me show you..."



JAMES SNOOK/US PRESSWIRE

## Marcus Capers '12

# What it means to be a Coug

by *Darin Watkins* '84 :: Marcus Capers wanted to make his place in the game of basketball. Now, after a four-year career at Washington State University, his workman-like attitude has forever etched his name into the Cougar record book.

In sports circles, Capers is referred to as the iron man, a distinction reserved for those rare players who have played more, or stayed with the game longer, than anyone else. Officially, the Cougar guard appeared in 135 games over his four years, an accomplishment that tops the previous record set by George Hamilton more than 60 years ago. It's a WSU record enriched by two years of post-season tournaments and stands, as some observers believe, as a record that may never be broken.

"It was a complete surprise. I didn't realize I had played that many games," says Capers. "I wanted to make my mark on the game, and not live in the shadows of someone else's success."

Growing up in central Florida, Capers' dream was to stay in basketball all his life. He felt that to be successful as a high school basketball coach, he needed to succeed as a player. "Having played the game brings a different level of respect," says Capers. "The same with recruiting. It's how I helped bring several current athletes to WSU."

Capers is known at WSU for being a natural leader—one who always showed up



## » tracking

for practice and stayed focused in every game. The stats show Capers' contribution in every category—points scored, rebounds, assists, and steals. What they don't show is that, as a player, Capers just seemed to make everyone else around him play better.

"Marcus was all about the team winning games and had a role that made him a valuable asset," says WSU basketball coach Ken Bone. "A very good defender and an opportunistic offensive player. We will miss his acrobatic dunks and his ability to always play with great effort!"

Recruited out of high school by several major programs, Capers narrowed his choice to Florida State and WSU. But in the end, he sensed that becoming a Cougar might prove more meaningful to him.

"There really is something special about this school ... something very different from other campuses," Capers says.

But his journey to Pullman was almost cut short when his scholarship was derailed. "Coach Bennett called me with the bad news," he says. "The scholarship he had to offer had just been given to another player."

The WSU faithful love to tell the story of how player Taylor Rochestie generously gave up his own scholarship at the beginning of his senior season, relinquishing it for Capers. The two had met during Capers' recruiting visit to Pullman and had remained in contact.

Ask Capers about his most memorable moment at WSU and he will point to his freshman season. It was Senior Night in 2009, with 12 seconds to play and his team down by two points. Capers had the ball in the middle of the court, with a chance to be the hero. Then, out of the corner of his eye, he spotted Rochestie moving down the court—and without hesitation passed him the ball.

Rochestie took Capers' feed and launched a game winning three-pointer that propelled him and the entire team into Cougar folklore.

"That may be the greatest assist of my career," Capers said. "To, in some small way, give back to Taylor—who had given so much to me—was really special."

The first in his family to go to college, Capers felt tremendous pressure to succeed. But at first he didn't appreciate the enormity of the challenge awaiting a student athlete. It was like working

**Eugene A. Day** ('49 Chem. Engr.), 90, March 9, 2012, Louisville, Kentucky.

**Robert Lloyd Gilson** ('49, '51 MA Psych.), Alpha Tau Omega, 85, February 20, 2012, Plymouth, Massachusetts.

**Harold F. Hambelton** ('49 Hort.), 89, April 1, 2012, Yakima.

**Marilyn Long** ('49 Pharm.), 87, February 1, 2012, Spokane.

**Carole Abernethy Pearson** ('49 Phys. Ed.), 85, April 12, 2012, Lacey.

**J. Norris Pearson** ('49 Mech. Engr.), 86, March 31, 2010, Lacey.

**Gordon E. Pilcher** ('49, '50 MA Econ.), Theta Chi, 83, January 25, 2012, Mountain View, California.

### 1950s

**Eugene Paul Boawn** ('50 Elect. Engr.), 85, January 20, 2012, West Seattle.

**Robert W. Bucklin** ('50 Comm.), 85, April 15, 2012, Silverdale.

**Rev. James W. Hardy** ('50 Ag.), 86, February 24, 2012, Vacaville, California.

**Howard D. Hoops** ('50 Hotel & Rest. Admin.), 88, March 27, 2012, Pacifica, California.

**John Henry "Jack" Snell** ('50 Ag. Ed.), 83, March 16, 2012, Ellensburg.

**W. Doyle Watt Jr.** ('50 Fine Arts), 85, March 8, 2012, Grand Rapids, Michigan.

**Albert A. Busch** ('51 MS Ag.), 88, May 17, 2012, Syracuse, New York.

**Dennis H. DeJong**, ('51 DVM), 85, March 20, 2012, Salem, Oregon.

**Byron Duane Floch** ('51 Bus. Admin.), 84, March 21, 2012, Spokane.

**Vernon Stanley Pierce** ('51 Pharm.), 83, April 21, 2012, Spokane.

**James P. Tatham** ('51 Mech. Engr.), 83, March 18, 2012, Snohomish.

**Howard E. York** ('51 Ag., '54 Ed.), 91, February 14, 2012, Liberty Lake.

**Gordon B. Davis** ('52 Bus. Admin.), 83, April 21, 2012, Bellevue.

**Erland P. Elefson** ('52 DVM), 82, April 12, 2012, Arlington.

**Robert E. Rylander** ('52 Theatre Arts, '58 Ed.), 84, May 26, 2012, Vancouver.

**Richard L. Zwiener** ('52 Forest & Range Mgmt.), 84, October 3, 2011, Klamath Falls, Oregon.

**Shirley Anne Currie** (x'53), 81, February 18, 2012, Sun Lakes, Arizona.

**Allan D. Garrett** ('53 Acct.), 80, March 6, 2012, West Richland.

**Peter Mullins** ('53, '54, '61 PhD Ed.), 86, April 27, 2012, Sydney, Australia.

**Erich Naethe** ('53 Gen. Stud.), 84, March 4, 2012, Topeka, Kansas.

**Quentin D. Norgaard** ('53 Civ. Engr.), 89, September 26, 2011, Anchorage, Alaska.

**Richard William (Dick) Ager** ('54 Pharm.), 80, March 9, 2012, Spokane.

**Herbert Feichter** ('55 Econ.), October 25, 2011, Salzburg, Austria.

**Karl Norman Johnson** ('55 MA Arch. Engr.), 80, April 11, 2012, Poulsbo.

**Carolyn L. Wilson** (x'55), 78, April 13, 2012, Gig Harbor.

**Gordon (Gordy) Lindstrom** ('56 Soc. Stud.), 79, February 5, 2012, Edmonds.

**Jo Ann Sandra Nelson** ('56 Ed.), 77, February 20, 2012, Juneau, Alaska.

**Lloyd William Rudy Jr.** ('56 Zoo.), 77, April 22, 2012, Great Falls, Montana.

**Vernon L. Anderson** ('57 Ag. Engr.), 78, March 10, 2012, Sunnyside.

**Janet An Biggart** ('57 Bus. Ed.), 76, April 20, 2012, Seattle.

**Adamadia M. Davis** ('57 Zoo.), 78, March 14, 2012, Worcester, Pennsylvania.

**Gordon E. Ruehl** ('57 Arch. Engr.), Sigma Phi Epsilon, 77, April 29, 2012, Spokane.

**Trilochan S. Bakshi** ('58 PhD Botany), 86, April 24, 2012, Edmonton, Alberta, Canada.

**Ted S. Brown** ('58 Elect. Engr.), 77, March 3, 2012, Lacey.

**Michael D. Hander** ('58 Bus. Admin.), 78, April 25, 2012, Auburn.

**Jean J. McCarthy** ('58 MS Ed.), 82, May 16, 2012, Side Lake, Minnesota.

### 1960s

**James Robert Birkland** ('60 Elect. Engr.), 75, April 13, 2012, Newcastle.

**Charles D. England** ('60 Soc.), Kappa Sigma, 80, May 12, 2012, Newcastle, California.

**John H. Mansperger** ('60 Ag. Engr.), 74, March 24, 2012, Sacramento, California.

**Taro Melvin Ogawa** ('61 Elect. Engr.), 72, March 12, 2012, Whittier, California.

**Carolyn Gallagher Spaulding** (x'61), 69, January 6, 2012, Anderson Island.

**Helga Wilkins** ('61 Fine Arts), 73, March 28, 2012, Boise, Idaho.

**Marvin O. Clement** ('62 Chem. Engr.), 73, May 3, 2012, Richland.

**Millard O. Swales** ('62 Ag.), 93, November 7, 2011, Hope, Idaho.

**Milton Dale Ahola** ('63 Elect. Engr.), 72, April 19, 2012, Vancouver.

two full-time jobs, and sometimes overwhelming. Fortunately, he was connected with a volunteer mentor. Damen "Gabby" Rodriguez urged Capers to experience the university, interact with other students and faculty, and develop that critically important network.

"He helped me grow to love Pullman," says Capers, "... everything, that is, except the snow. For a Florida guy like me, the snow has been a tough adjustment."

Capers found himself calling Rodriguez almost daily. There was that difficult day when he learned head basketball coach Tony Bennett was leaving WSU. Capers considered transferring, but Rodriguez helped him reason through it.

"There are certain things you can't tell your teammates, or that you don't really want to tell your friends," says Capers. "My mentor talked with me as 'Marcus the student,' not 'Marcus the athlete.' It made all the difference."

Capers closed his senior year at WSU amidst something of a whirlwind. The team played into the championship round of the CBI Basketball Tournament, extending their season into the final days of March. For



Marcus Capers participating in the the WSU Athletics Reading Buddies Program.

Capers, the eight weeks that followed were a blur of homework and final exams.

On the night of his graduation, with his family at his apartment, he stepped out onto his deck for a brief pause, only to be struck by the finality of it all. "I was no longer part of the team, and they would be moving on

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without me,” he says. “The realization that I was now a retired college basketball player hit me pretty hard.”



KIRBY LEE/US PRESSWIRE

met along the way. With the right timing, and a bit of luck, he might play in Europe, or maybe even in the NBA. But his long-term goal is still to coach.

“I believe I still have something left for the game,” says Capers. He hopes to be remembered at WSU “as a hard-working, humble guy—who was passionate and respectful about what I did. Not a flashy guy—but one that made the game fun to watch.

“I just wanted to make a mark on the game—to play so hard that people could see how much love I had for the game,” he says. “In some measure, it’s a mark that I was able to give back to WSU—to honor the gift I was given by the Rochestie family.”

Marcus Capers’ career in the WSU record books:

### Lifetime Achievements

- #1 in number of games played—135\*
- #7 in career minutes—3,447
- #13 in blocks—82
- #17 in assists—232
- #18 in rebounds—537

*\*Capers missed only one game in his four-year career, a 65-55 victory at Arizona State, Jan. 29, 2009 during his freshman season. <<*



Watch a video of highlights from Capers’ WSU career at [wsm.wsu.edu/extra/Marcus-Capers](http://wsm.wsu.edu/extra/Marcus-Capers).

Marcus Capers leaves Washington State University with a degree in social services and a minor in communications. This fall will be filled with tryouts for teams, discussions with agents, and networking with the players he’s

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Informed Advocates of Washington State University

**John Lewis Lancaster** (’63 Zoo.), 76, May 17, 2011, Hillsboro, Oregon.

**Jess Lee Mast Jr.** (’63 Math), 71, April 22, 2012, Fort Wayne, Indiana.

**Kenneth Peacock** (’63 Sci., ’64 PhD Chem.), 78, March 18, 2012, White Bear Lake, Minnesota.

**Robert Henry Walker** (’63 Phys. Ed.), 72, January 22, 2012, Edmonds.

**Fredric A. Christiansen** (’64 Chem. Engr.), 69, April 11, 2012, Greer, South Carolina.

**Joan Christine Groude** (’64 Elem. Ed.), 69, February 20, 2012, Kirkland.

**Russell C. Magnuson** (’64 Math), 84, April 20, 2012, Winthrop.

**Michael Robert Sauvola** (’66 Geology), 69, March 5, 2012, Reno, Nevada.

**Ralph Dennis Velie** (’67 Hist.), 67, February 11, 2012, Lake Forest Park.

**Devon Robert Brinton** (’68 Fine Arts), 64, March 19, 2011, Spokane.

**Thomas Arte “Thos” Johnson** (’68 Civ. Engr.), 66, May 2, 2012, Vancouver.

**Julianne A. Johnson** (x’69), 61, April 5, 2012, Oak Harbor.

**Richard Leonard Price** (’69 Arch.), 66, January 6, 2012, Lakewood.

**David Lee Pritchard** (’69 DVM), 68, April 6, 2012, Sebastopol, California.

### 1970s

**Robert Arthur Hanson** (’70 EdD Higher Ed. Admin.), 76, November 12, 2010, Carson.

**Linda Granquist (Grani) Lamb** (’70 Rec.), 64, May 16, 2012, Richland.

**Kenneth Joe Capek** (’71 Acct.), 64, May 24, 2012, Olympia.

**John Arthur Lundin** (’71 Hotel & Rest. Admin.), 66, April 21, 2012, Hayden Lake, Idaho.

**Richard G. Audette** (’73 Hist.), 64, March 4, 2012, Las Cruces, New Mexico.

**Sheryl S. Blake** (’73 Soc., ’91 Nurs., ’95 MN), 63, April 26, 2012, Spokane.

**Suzanne Kathryn Dunn** (’73 MEX), 62, October 19, 2011, Centennial, Colorado.

**Dale. E. Ireland** (’73 Zoo.), 60, April 27, 2012, Silverdale.

**Marianne Straughan Feathers** (’74 MA Speech & Hearing), 76, May 14, 2012, Clarkston.

**Thomas J. Regimbal** (’74 Ed.), 60, March 31, 2012, Richland.

**John Dean Wyckoff** (’75 Arch.), 61, May 8, 2012, Vancouver.

**Harry A. Cooley** (’76 EdD Higher Ed. Admin.), 80, April 6, 2012, Hollandale, Mississippi.

**John Tarnai** (’76 MS, ’82 PhD Psych.), 65, May 6, 2012, Pullman.

**Kevin Wren O’Connell** (’77 MA Ag. Ec.), 59, March 14, 2012, Spokane.

**Patricia E. Thonney** (’77 MS Home Ec.), 58, April 9, 2012, Ithaca, New York.

**Loran Newel Cummings** (’78 Forest & Ranch Mgmt.), 57, May 2, 2012, Yacolt.

**Thomas A. Gnojek** (’78, ’80 MS Forest & Range Mgmt.), 60, April 17, 2012, New Mexico.

### 1980s

**Eric Grigsby** (’80 Econ.), 55, February 21, 2012, Birch Bay.

**Jill Ruth Gotzian** (’82 Elem. Ed.), 53, February 1, 2012, Spokane.

**John Wilson Keder** (’82 Math, ’83 Chem.), 53, March 30, 2012, Seattle.

**Kristine Weathermon** (’82 Comm.), 53, May 4, 2012, Seattle.

**Charles Burgess Ewing** (’83 PhD Comm.), 66, March 21, 2012, Modesto, California.

**William Rudolph Haase** (’83 MA Anthro.), 56, April 10, 2012, Gales Ferry, Connecticut.

**Scott David Fritz** (’86 Bus. Admin.), 51, March 15, 2012, Reno, Nevada.

**Janice Mano Lehman** (’86 Nursing), Army ROTC, Alpha Omicron Pi, 48, March 11, 2012, Olympia.

**Burke Andrew Melville** (’87 Elect. Engr.), 46, March 2012, Lamont.

**Billy Gene Robinson** (’88, ’90 MS Bio.), 47, April 11, 2012, Pasco.

**Robert James Densley** (’89 Liberal Arts), 46, May 10, 2012, Spokane.

**Fredrick E. Lewis** (’89 Elect. Engr.), 45, March 20, 2012, Mead.

### 1990s

**Pamela Ann (Erickson) Donovan** (’95 Bus. Admin.), 63, March 4, 2012, Vancouver.

### 2000s

**Matthew Dean Anway** (’00 PhD Vet Med Biochem.), 40, April 4, 2012, Clifton, Colorado.

**Kris Gaddy** (’02 DVM), 40, 2011, San Diego, California.

**Becky Moody** (’02 DVM), 41, April 20, 2012, Coupeville.

**Hunter Stephan Vissotzky** (’04 Fine Arts), 32, March 1, 2012, Spokane Valley.

**Joseph Thomas Nahan** (’06 Mech. Engr.), 55, March 4, 2012, Seattle.

**Kasey Nicole Skaggs** (’09 Nursing), 22, June 5, 2009, Spokane.

### Faculty and Staff

**Paul V. Barton**, 76, Electrician, March 29, 2012, Kennewick.

**Jean E. Blair**, 88, Housing & Dining 1962-1985, February 16, 2012, Surprise, Arizona.

**Frances M. Bone**, 74, Facility Op., May 3, 2012, Coeur d’Alene, Idaho.

**Helen Brelsford**, 78, Housing & Conf. Serv. 1966-1994, May 22, 2012, Pullman.

**Audrey Cain**, 85, Cap. Plan. & Dev. 1978-1988, March 11, 2012, Pullman.

**Wade J. Davis**, 70, Bus. Services 1976-2010, April 14, 2012, Pullman.

**Ed A. Giovannetti**, 62, Captain, Fire Services, April 7, 2012, Troy, Idaho.

**Howard L. Hosick**, 68, Professor Emeritus, Bio. Sci. 1973-2008, March 31, 2012, Pullman.

**Marjorie L. Hunt**, 90, Ag. Chem. and Phys. Chem., March 30, 2012, Selah.

**Barbara Knutson**, 71, Bus. Services 1989-2010, April 21, 2012, Pullman.

**Sherman G. LeFors**, 86, Physical Plant 1972-1987, April 29, 2012, Moscow.

**Warren L. Libey**, 68, Dining Services 1991-2005, March 21, 2012, Spokane.

**Jack R. Nelson**, 77, Nat. Resc. Sci., 2012, Pullman.

**Donald H. Ross**, 77, Professor Emeritus, English, November 23, 2005, East Wenatchee.

**Barbara Scott-Dory**, 69, WSU Extension 1964-1998, March 2012, San Diego, California.

**John Tarnai**, 65, Social & Economics Sciences Research Center 1982-2012, May 6, 2012, Pullman.

**Maryruth Williams**, 76, March 22, 2012, Pullman.

## WSU Alumni Association News

## The Future’s So Bright:

**New WSUAA President Lisa Steele Haberly ’99**

*by Malia Jacobson ’00, ’04 ::* New WSUAA president Lisa Steele Haberly ’99 has a sunny outlook, and it’s no wonder. She makes her home in Tucson, Arizona, where the sun shines nearly year-round. It’s a long way—both geographically and environmentally—from the cool, damp climate of her native Federal Way or the icy winters of Pullman, her college home. But the distance hasn’t dimmed her enthusiasm for her alma mater. “I’m more excited and passionate about WSU than I was when I was in school,” she says.



COURTESY LISA STEELE HABERLY

As an undergraduate communication student, she wasn’t involved with the Alumni Association. It wasn’t until she relocated to Arizona in 1999 that the homesick young graduate recognized the power of strong alumni bonds. At local WSU alumni events, she discovered a home away from home in the company of her fellow desert-dwelling Cougars.

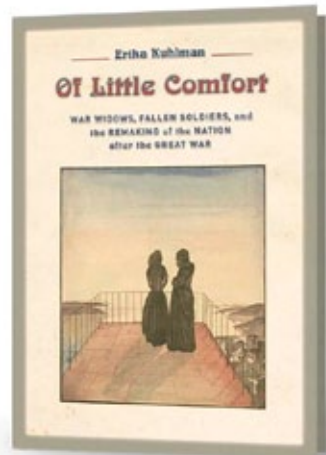
Soon she was lending a hand. By 2006 she’d taken a leadership role in the Arizona and Southern Nevada Chapter. During her four-year stint as chapter president she worked tirelessly to engage more Cougars, increasing the number of events five-fold, recruiting six additional chapter representatives to help grow membership, and founding the popular Cougars at Spring Training Event in Peoria, Arizona.

“My favorite part of leading my local chapter was hands-on community involvement,” she says. As president of the WSUAA, she’ll serve a much larger community, a factor that boosts the challenges along with the rewards. “Volunteering for my local chapter helped me meet my neighbors, essentially,” she says. “I learned so much about my community and it was satisfying to help build and strengthen the Cougar family. Now, I’m looking forward to helping connect more Cougars nationwide.”

When she’s not working as a technical support engineer for Raytheon Missile Systems, Steele Haberly still soaks up the Tucson sunshine at local WSU events with husband Jeff Haberly ’99 and their children Mason and Isla. Her presidential duties mean she’ll spend more time in Pullman and Seattle this year engaging alumni in support of the University’s goals. “Outreach is key to the success of any organization, especially a university,” she says. “I’m looking forward to helping keep alumni connected and helping out-of-state alumni feel like part of the team.”

To join and learn more about WSUAA, visit [alumni.wsu.edu](http://alumni.wsu.edu).





**Of Little Comfort: War Widows, Fallen Soldiers, and the Remaking of the Nation after the Great War** by **Erika Kuhlman '95 PhD** NEW YORK UNIVERSITY PRESS, 2012 :: Review by **Larry Clark '94** :: In World War I, or the Great War, more than nine million combatants died, leaving behind approximately a million and a half widows. The war widows not only mourned their losses, they also faced quandaries about their new post-war roles in Germany, the United States, and other countries embroiled in the conflict. Would they perform as models of national self-sacrifice and patriotism? How should they support families, by work or by welfare? How should they even mourn and bury their lost spouses?

The traditional roles of widows in those societies faced a massive shift as the definitions and structure of marriage and gender were transforming. Even the mourning of widows and other survivors was disrupted by a lack of knowledge of when their loved ones died and where their bodies were. The war exacerbated the questions around the roles of these widows, and in Germany and the United States, the governments attempted to use the “army of widows” to emphasize the loss and build a sense of national pride.

As historian Erika Kuhlman '95 writes, the widows didn't always cooperate with the national goals. In Berlin, more than 10,000 widows marched in protest in 1918 demanding compensation for their losses. Many widows publicly and privately criticized their governments' response to the death of soldiers. Economic hardship contrasted with ideas of who widows should be in the aftermath of the Great War—remarried and having babies, symbols of wartime bravery, or “new women” engaged in rebuilding the nations.

Kuhlman uses letters, diaries, popular magazine articles, and correspondence between widows and their governments in the United States and Germany to examine the ways war widows coped with their roles after World War I. She writes about the war widows of France and England, and then looks at the transnational aspects of widowhood, where women who lost their soldier-husbands compared experiences and sometimes engaged in cross-border activities like providing aid to former combatants.

The book takes a deep look at the opinions of widows themselves, through their own words, and puts those experiences and struggles into the context of national efforts to define the war for both vanquished and victorious countries, such as using ceremonial mourning for soldiers and the plight of war widows to reinforce their national identity. ☒



**Finding the River** by **Jeff Crane '04 PhD, '98** OREGON STATE UNIVERSITY PRESS, 2011 :: Review by **Hannelore Sudermann** :: In 1992, President George H. W. Bush signed into law the Elwha Act, which called for the removal of two hydroelectric dams from the 45-mile river that flows from Washington's Olympic Range to the Strait of Juan de Fuca. Over the past year, the Elwha and Glines Canyon dams have been removed and now the decades of sediment behind them are being managed in a way to limit damage to the river downstream.

Just in time comes *Finding the River*, the story of the river from its geological formation to the removal of the dams and the efforts to restore the salmon and trout that once dominated the waterway. Crane, an associate professor of

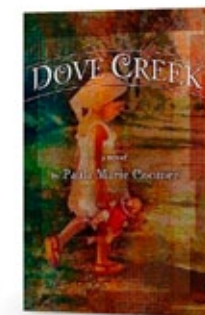
history at Sam Houston State University, not only gives a rich history of the dams but details the efforts of environmentalists and Elwha Klallam Indians to draw attention to the damage they caused.

Crane mixes vivid descriptions of the landscape with an understanding of the natural, cultural, and political forces affecting the development, use, and removal of the dams. He brings up interesting details, including the blowout in 1912 during the construction of the first dam. The water surged 30 feet. Barking dogs saved the Lower Elwha Klallam Indians from drowning.

Crane also details the early and failed efforts to transport the salmon past the dams, including a fish trap and elevator to carry fish to the river above, and later the construction of a fish hatchery below one of the dams.

In his conclusion Crane suggests the restoration of

the Elwha River could open the discussion of removing other dams in the United States. He even goes on to name a few. *Finding the River* is what Crane hopes the native salmon will do, but he also hopes that others will find it as a landmark in our environmental history and example for efforts to restore other rivers around the country. ☒



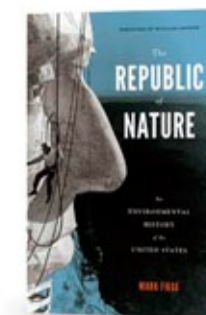
**Dove Creek** by **Paula Marie Coomer** BOOKTROPE (FORMERLY LIBERTARY), SEATTLE, 2010 :: Review by **Hannelore Sudermann** :: While more known for her short stories, Paula Coomer takes the novel form to tell the story of Patricia Morrison, the daughter of Kentucky hill folk who

leaves her hardscrabble life in Appalachia to discover a new existence in the West. After an unpleasant divorce, she lands on the Nez Perce Indian reservation to work as a nurse. The book, told in the main character's voice, incorporates an exploration of the landscape and landmarks quite familiar to those of us who have spent time in Eastern Washington and North Idaho. The details are informed by Coomer's own experiences as a daughter of Appalachia, rural nurse, wife of a police officer, and resident of the Palouse.

Bookended by a camping trip along the Lostine River, the narrator unfolds Patricia's quest through both time and place, visiting the Nez Perce and Coeur d'Alene reservations and spots around Washington as she meets and cares for her Public Health Service clients and deals with her own personal life. The complex of characters and encounters over more than two decades culminate in

an understanding of a multitude of things, including life on the reservation, her divorce, her relationship with her two sons, and her own heritage and identity. ☒

*Coomer teaches composition and technical and professional writing in the WSU English department.*



**The Republic of Nature: An Environmental History of the United States** by **Mark Fiege '85 MA** UNIVERSITY OF WASHINGTON PRESS, 2012 :: Review by **Tim Steury** :: Contemplate the founding of the United States, a budding democracy carved out of a vast and unknown (to everyone other than its

original inhabitants) wilderness. At some point, one might find oneself unable to extricate American history from Nature and its effects and implications. But we haven't really, not until Fiege's remarkable analysis.

Although he is keenly aware of Thomas Jefferson's warning that “The moment a person forms a theory, his imagination sees ... only the traits which favor that theory,” Mark Fiege's examination of American history through the lens of nature and environmental history produced many jolts of understanding. From the early colonists struggling both to survive and to understand the nature around them to his question of why Teddy Roosevelt is always cited as a conservationist while W.E.B. Du Bois is not, Fiege's analysis is an insightful and exhilarating intellectual journey back through the history we all think we know. ☒

## new & noteworthy

**Images That Injure** edited by **Susan Dente Ross and Paul Martin Lester** PRAEGER, 2011 :: WSU English professor Ross and her colleagues examine pictorial stereotypes in the media. ☒

**Seaside Stories** by **S.R. Martin, Jr. '74** BLUE NILE PRESS, 2009 :: Short stories of life in Seaside, on California's Monterey Peninsula. ☒

**Life Histories of Cascadia Butterflies** by **David G. James and David Nunnallee** OREGON STATE UNIVERSITY PRESS, 2011 :: A unique chronicle of the life cycles of the butterfly species native to Cascadia. See feature article page 39. ☒





## Mural, mural, on the wall

*Pine Street Plaza Mural, 2009-2012*  
Artwork by Patrick Siler  
Pullman, Washington

Artist and WSU fine arts faculty member for 32 years, Patrick Siler's outdoor wall mural "Pine Street Plaza Mural" holds a prominent position in downtown Pullman. He completes the third and final panel this summer.

The WSU Museum of Art presented an exhibition this summer—*Curator's Choice: Patrick Siler Mural*—showcasing the sketches and finished drawings that were a part of the project.

For more information on the artist and project, see article "On the wall" on page 47.



Watch a video of Siler and his work on the mural at [wsm.wsu.edu/extra/Patrick-Siler](http://wsm.wsu.edu/extra/Patrick-Siler).

PHOTO ZACH MAZUR/WSU MUSEUM OF ART

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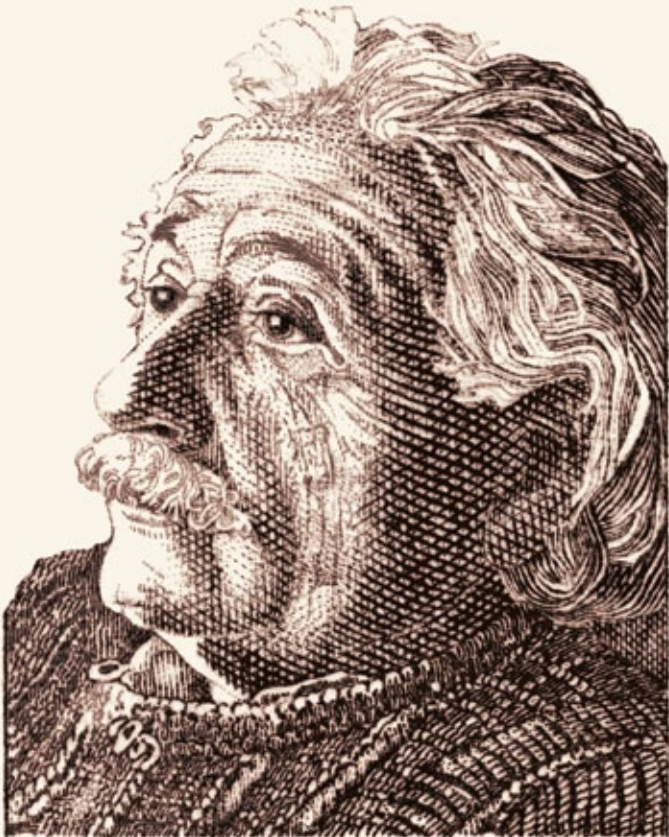
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his name is synonymous with genius. 



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