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Buried in hundreds of layers of rock are tales of fire, brimstone, destruction, and fragility.—Eric Sorensen

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On the cover: “Washington Road Trips” by John S. Dykes
This being my last "First Words," I have struggled to conjure something profound and insightful, or at least clever, to leave you with. But I am coming up short. So I'll just skip the philosophical and offer a few observations. Forgive me if I repeat myself. I'll try not to get sentimental.

From Washington State Magazine's inception, we have followed the simple principle that we would not produce anything we would not read ourselves. Add that to our tagline—"Connecting you to Washington State University, the State, the World"—and I believe we've created a pretty successful formula.

There are many things we deliberately decided not to be. We are not a long-winded brochure. Neither are we a fundraising vehicle. Most important, we are not produced by committee. Rather, we are a magazine. Which means, as our mission states, that we cover "news and issues of interest to Washington State University faculty, staff, students, and alumni and the people of Washington from Seattle to St. John."

Fortunately, you agree with our approach. In reader surveys and less formally, you have been very clear about what you are most interested in: research, statewide issues, and WSU's involvement in the affairs of the state and world.

I cannot imagine a more stimulating and fascinating challenge.

Beyond a shift in the masthead, not much about the magazine will change, at least immediately. I imagine there's a redesign on the horizon. There will probably be an increasing web presence, but as a complement rather than a substitute. I suspect the voice will change a bit. But not dramatically. You have been hearing that voice through all of us, not just yours truly.

Larry Clark '94 will continue to be "managing editor." But he will also become the one where the buck stops. Hannsfote Sudermann will share leadership with Larry and become the "content editor." John Paxson will continue, exquisitely, to art direct and more. Eric Sorensen will continue to report on university research in his unique and lively style. He will also share that overwhelming beat with a new staff member.

Nick Deshais joined us this fall. He will split his time between science writing for the magazine and bringing the popular Dr. W.S. Universe back from her extended sabbatical.

Telling the story of WSU has been a large part of my identity for the past 24 years. Much as I'm looking forward to my new ventures, it will be very strange to shut down my computer and close my office door for the last time. But it's time to direct my attention elsewhere.

In whatever direction my friends and colleagues take this magazine, I am confident it will continue to be lively, beautiful, and adept at interpreting the myriad endeavors of this great university and state. Indeed, I look forward to opening the May issue, having joined you as an engaged and expectant reader.

Tim Steury, Editor
Meet WSU’s

CHANGING FACE.

CRIMSON AND GRAY, OF COURSE.

And black, brown, yellow, white, and a full spectrum of other multi-colored hues.

That’s the face of Washington State University in 2014.

Students of all backgrounds are choosing WSU in record numbers because they’ve discovered our commitment to their success.

Here, students join a welcoming and supportive learning community driven to change the world. They find highly ranked academic programs, a can-do Cougar spirit, and unbelievable opportunities to actively engage in their education.

For nearly 124 years, tens of thousands of individuals have prepared for their future success by earning a WSU degree. Help others discover the rainbow of opportunities that await them.

Vanessa Reyes Romero
Seattle
Class of 2013

Mark Anthony Figueroa
Pasco
Class of 2016

Bree Harris-Burton
Gig Harbor
Class of 2015

All the Best to You

Washington State University alumni produce some of the finest wines available in the world, and they have received well-deserved national and global acclaim to prove it.

Join the Wine-By-Cougars wine club and enjoy the best of Cougar-connected wines delivered right to your doorstep.

www.winebycougars.com
Saddened to learn

We were stunned to learn of President Glenn Barnsley’s death while reading the most recent edition of Washington State Magazine. During the years I was a student at Washington State University, President Barnsley often walked by our dorm rooms as he went from his residence to his office. Whenever he saw me, he would smile, make eye contact, greet me by name, and often inquire about my studies. How he knew my name, I will never know. What I do know, is that the warm feeling of belonging that I felt on those many occasions when we met along the sidewalk.

Terry J. Smith 74, ’79 Ph.D.

Flood of fond memories

As I read your short article, “Gabriel Felding” (Winter issue) a flood of fond memories engulfed me. I was a student of Professor Barnsley’s for two years (1978-79). Tim Steury’s Barnsley (as I called him) for two years (1978-79). Tim Steury’s article brought a sense of culture, of worldliness, and of sensibility, brought a sense of culture, of worldliness, and of sensibility, which would come back to us. Alan Barnsley taught me something that cannot be expressed in words—maybe one affection. Thank you Tim Steury for reminding me of Gabriel Felding, the man on the other side of that name. Randal Stuiver 77

Not forgotten

It was a delight to read the article in the Winter 2013/4 about Helen Szablya. I was an assistant professor of military science at WSU from 1963 to 1966. I left Pullman in August 1966, leaving my family at home on NW State Street. John and Helen Szablya lived in the nearby Stateman Apartments. Their oldest daughter frequently baby-sat our children.

When I returned to Pullman from Vietnam in August 1967, the Szablyas were among the first to welcome me home. Matter of fact, they invited my wife and me to their home for dinner. They explained that they wanted to do something for me to show how much they appreciated our contribution, albeit small, to try to stem the advance of communism—from which they had suffered and escaped.

Their kindness and appreciation have not been forgotten! When things got tough during my 35-year career, I often thought of the Szablyas and was re-energized.

Thanks again, Helen!

Col. Roy R. Barns (Ret.)

Apples of my eyes

Love good Washington apples!

When I was growing up at Burien (by SeaTac airport), my high school—Highline HS—had an apple machine that dispensed Washington State delicious apples for a quarter.

It was wonderful and very popular. Perhaps the only vending machine that existed at that time. Now that the mind of vending machine schools today! It was a delight to read the article about branding apples and saw more of the world, his pearls of wisdom would come back to us.

How he knew my name, I will never know. What I do know, is that the warm feeling of belonging that I felt on those many occasions when we met along the sidewalk.

Terry J. Smith 74, ’79 Ph.D.

Backyard boarders

by Hannelore Sudermann — Last fall 40 Washington State University architecture students wandered into Seattle-area backyards to work with the notion of the backyard cottage.

In Seattle, they’re called DADUs or detached accessory dwelling units. These spaces could be homes for older family members, rentals for college students and others on a tight budget, or just homes for folks seeking a small dwelling in a big city.

Such structures were approved by the city in 2009 and have been options in communities all around the Puget Sound including Redmond, Shoreline, and Clyde Hill. Because of the high demand for low-cost housing, the Seattle City Council anticipated a flood of permit applications for these backyard cottages. Instead, fewer than 100 permits have been issued.

At the urging of a Seattle architect, associate professor Taiji Miyasaka had the students take this DADU idea and blend it with the need for transitional dwellings for the homeless. During a recent survey, the Seattle/King County Coalition on Homelessness counted more than 2,500 unsheltered homeless people on a particular night and another 8,000 in shelters. Another study, conducted by the City of Seattle, showed that a large portion of the homeless people surveyed said they would pay a monthly rent of $200-$400 to get off the streets. The idea of DADUs and affordable homes for the homeless came together.

To focus on the primary experiences of their potential clients, the students moved into Seattle’s Tent City 3 over a three-day weekend early last fall. The residents were more than happy to show them how to live there. “All they wanted to do was help us,” says student Cosie Lang.

“It was surprising to see how structured the camp was, how many rules there were,” says Shannon Coughlin.

When night came, the students slept on cots covered with cardboard in one big tent, hearing the noises of the camp. Once they were awakened by an ambulance that had come to help someone with a diabetic issue. “It was quite an adjustment to go home [to Pullman] and it was quiet and I could hear crickets,” says Mattus Cools.

The project drew a mixed response from the potential clients. The residents who hadn’t been at Tent City 3 for long were intrigued, but the long-timers were reluctant to leave. A few said they’d move if they could find a place out of the rain, maybe with a small sink and an area to prepare their own food.

Their projects designed over fall semester, the students returned to Seattle in November to present them to architects and designers at The Miller Hull Partnership.

Working with two different sites the students sought to design structures that were both stylish
and affordable. They also had to follow building codes and a guideline keeping the construction to 150 square feet or less. Normally, a single-room unit that could fit under the metal roofed shed in the Shoreline backyard, ‘it’s a pretty small shelter,” he says. And one of the requirements was that it could be fairly easy to dismantle and relocate if the owner moved.

When the students visited the Shoreline home, they arrived in a university van and poured into the yard, taking photographs and making house. Then they tacked a single room “home” under a second-story deck. The rooms could be an open space with a chair and table and a bed that pulled down from the ceiling.

The site offered different opportunities. Architect Rex Hohlbein, ’81, who has been putting his energies into finding items like coats and sleeping bags and moving the urgent needs of homeless individuals, offered his Capitol Hill home as the urban option. It has a small yard, of 150 square feet or less.

To better understand the needs of homeless residents who could make use of transitional backyard dwellings, 10 people could live in one for a semester of a year. The Clark’s work promises to do, the nuclear and mining industries could be transformed. Another area of research for Clark and her team deals with how people design these materials. Understanding solvent organization in a confined environment would help researchers better separate the water and alcohol involved in the manufacture of biofuel. When distilling a mixture of two, the mixtures is separated by distillation. To get around this, Clark says her research shows it's not a matter of repelling something from water, but the size of the area into which it is expelled. “We’re showing that the confinement effect itself is contributing to the mechanism behind separation,” she says. “That’s important. It changes how people design these materials.”

Clark’s work could have other implications, she says. In a time when high school and college chemistry labs are cut and mining industries could be transformed. Another area of research for Clark and her team deals with how people design these materials. Understanding solvent organization in a confined environment would help researchers better separate the water and alcohol involved in the manufacture of biofuel. When distilling a mixture of two, the mixtures is separated by distillation. To get around this, Clark says her research shows it's not a matter of repelling something from water, but the size of the area into which it is expelled. “We’re showing that the confinement effect itself is contributing to the mechanism behind separation,” she says. “That’s important. It changes how people design these materials.”

The second site was north of Seattle in the more suburban neighborhood of Shoreline. There the students had a much larger yard that already had an outbuilding to work with.
The calculus of caring and cooperation

by Eric Scherzer

Shortly after the September 11 attacks on the Pentagon and World Trade Center, the American Red Cross had to wrestle with an aversion to philanthropic success. So many people donated blood, there was far more than what was needed for the entire nation, let alone the attack’s survivors. Many people donated blood, more than $500 million. And after covering its immediate costs, the charity disbursed most of it to other Red Cross needs. Feeling they were winning, donors and families of the 9/11 victims were not happy. The head of the Red Cross explained that not before being called to account to Congress.

And Craig Parks started wondering how people decide to support some charities, but not others, and even actively oppose others. “Why can’t you predict what kinds of things people get behind and what kinds of things will people oppose?” he asked. It’s not a purely academic question. When it comes to keeping civilization on its feet, so much depends on a lot of people giving time, money, or other support for little or nothing in return. People approve bond issues for schools and playgrounds; they finance radio stations; they donate to radio stations they don’t listen to and people they never meet. They volunteer to fight and die in wars.

The day after our rural excursion we found Gimlet, which exists on an old three-story home. The music flows from open windows and fills the small compound. The faculty members teach six or seven days each week and students from around the country come to keep civilization on its feet, so much depends on a lot of people giving time, money, or other support for little or nothing in return. People approve bond issues for schools and playgrounds; they finance radio stations; they donate to radio stations they don’t listen to and people they never meet. They volunteer to fight and die in wars.

People were open about the country’s current difficulties—an oppressive government that could easily return to old habits and a government-sponsored discrimination against Muslims, who have been community members and good neighbors for centuries. They were cautious optimistic about the country’s future. I am too. What I know for certain about my trip is that it has changed the way I view my own space in the world. I am ready to return to Yangon in March, ready to play oboe and teach oboists, to encourage the traditions of Burmese music.

McCarthy is looking for oboes to bring on her next trip to Burma. Anyone willing to donate an old instrument from their attic or closet is encouraged to contact her at lmcCarthy@wsu.edu.

Sorting debitage from rubble

by Tim Story

Up until fairly recently, archaeology of the western hemisphere stopped at about 13,000 years ago. Since the discovery of the beautiful and finely worked Clovis points in 1932, and subsequent discoveries of Clovis technology across the United States, archaeologists generally adopted the “Clovis First” belief, that whoever created these tools must have been the first humans to populate North America. Over the last few decades, however, a series of dramatic discoveries have pushed the estimated arrival by humans in the Western Hemisphere further and further into the past. That dates were once considered only on the fringes of academic archaeology are now being discussed seriously within the mainstream.

The further back our archaeological reach, however, the more difficult it becomes to identify human-made artifacts. “We have a huge number of sites, that only have other these kinds of artifacts,” says archaeologist Bill Andrefsky, “dated to 20,000, and with Calico, 15,000 years ago.” Calico Early Man Site, located in the Mojave Desert, has generated claims of extreme antiquity. Current consensus is more caution.

Andrefsky, an expert in lithic (stone tool) analysis, has developed a series of controlled tests that differentiate between human-created artifacts and similar objects. His recommenda-
Some students finish school and never take the time to look back. The same goes, perhaps even more so, for student athletes, who often return to their home states or get caught up in either pursuing pro careers or lives outside of sports.

This year, though, one football player made a special effort to reconnect athletes whose names were once synonymous with WSU. Wanting to give back to the school that gave him a college career, Derek Sparks ’95 approached the WSU Athletic Department and asked if he could be of use in some way. Someone tossed out the idea of his reaching out to his teammates and bringing them back for Homecoming. It had been too long since he had seen some of his old friends, so he jumped on the notion. “I just got out my phonebook and started calling,” says Sparks. “I reached out to guys who hadn’t been back in 10 years, 15, years, 20 years.”

And they came—from Washington, California, and around the west. Some came by plane, some drove with their families—among them, many of the men who made up the Palouse Posse, the legendary 1990s defense secondary players. The homecoming efforts also drew athletes from other sports, including track and basketball.

DeWayne Patterson flew in from Oakland, returning to Pullman for the first time since 1995. Though he didn’t really bring it up over the weekend, the trip was particularly poignant to him because it was the 20th anniversary of him breaking the single season sack record, with 17 in 1993. He set the career record for WSU, too, with 17.5 sacks from 1991 to 1994.

It was great to relive some great memories, but the best part was catching up with everyone, says Patterson. “And the old-time guys got to meet up with the new faces around Pullman.” Shaumbe Wright-Fair ’92, the running back who sprinted into history during the 1992 Apple Cup, drove from central California with his three teenaged sons. “My kids have heard stories and watched videos of me. But this was different,” he says. Showing them old dorm rooms, walking the field, and driving by the apartment where he and his wife Kelly lived during school meant so much more. “When you’re living it, you’re just getting through it,” says Wright-Fair. “But now you realize the work you put in and how few people get the opportunities that we had.”

Defying expectations, the Cougar football team (6-7, 4-5 Pac-12) doubled their wins from 2012 in Coach Mike Leach’s second season as WSU head coach. Raised junior quarterback Connor Halliday (9), a bevy of talented receivers, and a scrappy defensive unit took the team to its first bowl game since 2003. Despite the small in-state clientele and the New Mexico Bowl, plenty of bright spots emerged from the season. Senior safety Deone Bucannon, the leading tackler in the Pac-12, was named as a first team AP All-American, becoming only the ninth Cougar to receive the honor. Halliday threw 34 touchdown passes, tied with Ryan Leaf for most in school history, and he broke conference records with 449 pass completions and 714 pass attempts in 2013. His six touchdown passes in the New Mexico Bowl also tied the all-time FBS record for bowl games.
When Sparks was on campus a week earlier, he ran into former WSU football coach Mike Price and convinced him to alter his schedule to accommodate a couple of the players who went with him to the 1982 Copper Bowl and the 1984 Alamo Bowl. The coach agreed. Having a flexible schedule is one of the benefits of being retired, says Price.

What made this reunion particularly special, says Sparks, was that it was a grand reunion experience, “with a former player doing most of the work reaching out to his teammates and coordinating the events.” It was so much fun seeing everyone. “Price was the only one who said, ‘Wow, all these players had never seen the school since they left in 1980.”

“Twas just a 7-year-old high school football player who had already taken cards, a collectible, as his passion and is now in high school as an athlete, says Price. “More and more athletes do not have an all-American experience.”

Rumors about his family’s meddling and information about his academic standing spread through Southern California and Sparks was snubbed by USC and UCLA. One school that was interested, even with his low SAT results, was Washington State. The school agreed to take him, and would sit him out until he raised his scores and become eligible.

Today Sparks has a nonprofit youth outreach organization and speaks at corporate events, sports camps and clinics, and high schools and universities, sharing his experiences with audiences, athletes and non-athletes alike. “I never set out to be a motivational speaker,” he says. “I don’t like that title. I’m not a motivational speaker.”

“I was just a 17-year-old high school football player. I was never a leader, never a captain, never a student.”

“Hey, what do you think’s going on there? Is that an old son looking at a print by Robert Longo in which he’s on a toilet,” asks Sparks.

“‘He thought for a minute, and he said, ‘I think it’s a picture of me,”’ says Sparks. “I usually say, ‘Hey, that’s the way the wind went off.’”

Schlitzer realized he could do more than collect. He could marry his passion for art with efforts to provide art to underserved communities. “So that children like that young boy would have a chance to see works by both local and national artists,” he says.

Pieers from Schlitzer’s collection have been used in 80 exhibitions in 50 museums around the country. That includes WSM, where in 2005 Bruce curated a major retrospective of Roy Lichtenstein’s work. “It would be very difficult for anyone to be a beacon of light,” she says.
us to assemble the sweep of an artist like that’s entire career,” says Bruco. “But Jordan has 100 Lichtenstein prints in his collection, from the very first he ever made to the last one he made.”

That exhibit traveled to seven other museums and led to a book distributed around the world. With Schnitzer’s gift, the museum project now has $9 million of the $15 million goal. Bruco says the new museum’s galleries will showcase traveling exhibitions and display works from the University’s permanent collection. One gallery could have a single focus piece, such as an 1860 George Innes landscape or a video installation. Another gallery will have new work and serve as “almost a laboratory space where an artist is creating something on site,” says Bruco. He believes people will find the space fascinating.

Nourishing the heart

“Now they come to see the current show. But this new museum is an open door to a creative expressions that can be 150 years old or 150 seconds old,” he says.

Schnitzer is excited about the direction of the new museum plans, especially if it can encourage more frequent public and student visits. “If we can train young people on the Washington State University campus to be world leaders, and also help them to be cultural leaders, then we’ve succeeded,” he says.

We want students to realize that to build successful communities they need jobs. But they also need to nourish their hearts and souls. That nourishment comes from the arts,” says Schnitzer.

According to President Elson S. Floyd, “meeting the needs of our students is our number one priority. With the success of the new museum, we have an opportunity to further our mission of becoming a world leader in the arts.”

A new museum would provide a single focus piece, such as an 1860 George Innes landscape or a video installation. Another gallery could have new work and serve as “almost a laboratory space where an artist is creating something on site,” says Bruco. He believes people will find the space fascinating.

A demonstrator from Team Gleason demonstrates technology that helps ALS patients to speak with their eyes. The technology allows them to operate computer programs, including text-to-speech software. This eye-tracking technology allows them to operate computer programs, including text-to-speech software. This eye-tracking technology helps them to communicate—the key to a social or productive life.

However, existing software and hardware are expensive and not accessible to most people with the disease. Led by Professor Dave Bakken ’91, a group of computer science students is working to develop a less expensive and more effective alternative.

Predictive software helps communication

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The students are working with Team Gleason, a nonprofit organization that helps raise awareness about ALS and provides valuable services to individuals with neuromuscular diseases or injuries. Steve Gleason ’00, a WSU alumna and former New Orleans Saints football player, is living with ALS.

In addition to high costs, another issue with existing software is how long it takes patients to type with their eyes.

“Very often it takes over 20 words to type a single word,” Gleason wrote in his book “The New Steve Gleason” and his website “Foreveralz.org.” "To type 4,500 words, that’s about four hours to finish this column.” This slow typing rate makes it difficult for ALS patients to actively participate in conversations even with the text-to-speech software.

As part of their senior design project, the students are combing that issue by programming eye-tracking software that is predictive.

Like a smartphone’s auto-complete function, it anticipates a word or phrase based on a couple of letters. Currently, the students are putting the software on PUPIL, a 3-D printed set of glasses that connects to a computer to translate eye movement into computer action. The program will be open source with no royalties, making it freely available to the public.

By May, the students aim to have prototype software that ALS patients could test.

“The scope and impact of this project drew us in,” says senior Calin Scott. “Traditionally, senior projects are done for a company, but this one could be life-changing for ALS patients and their families.”

“Making this kind of technology available to all ALS patients is important,” says Gail Gleason, Steve’s mother, who works for the WSU Athletic Department and is providing support for the senior project. “There is so much despair when a person loses their ability to speak to ALS, and this technology gives them the ability to communicate gives them some hope.”

The senior design team traveled to New Orleans in November and visited The Gleason House for Innovative Living, a new ALS residential facility that is the second of its kind in the world. Meeting with ALS patients there gave the team a better idea of what factors to consider when working on their project.

“Meeting with Steve was something I will never forget,” says student Forest Clay. “I believe we all came away from the trip inspired to keep working on this project.”

The students also received support and guidance from ALS patient Eric Valor. With a background in computer science and in the IT industry, Valor took developing technology for ALS and provides support for other patients with the disease.


Working with Valor and spending time with Gleason, the students saw firsthand the difference that predictive typing could make, says Adam Thompson. “Interacting with them really helps us see the whole picture.”

For more information about the project, please visit teamgleason.eecs.wsu.edu.

For more information on Team Gleason and the Team Gleason House for Innovative Living, visit teamgleason.org.

Jason Doss (PharmD ’09) is a pharmacist and vice president for pharmacy programs at the Community Health Association of Spokane (CHAS).

“When I was an undergraduate at WSU I didn’t have a major but I always liked science and so I did a summer research project in a pharmaceutical sciences lab and it was there I started to learn more about pharmacy.

I saw that pharmacy is where science and health and people all meet, and I like all those things, so I decided I wanted to become a pharmacist.”

CHAS pharmacists – through collaborative practice agreements – prescribe medications, manage the treatment of some diabetes and HIV patients, refill prescriptions independently, and operate an anticoagulation (blood clot prevention) clinic.

Careers for pharmacists are expanding and changing. Pharmacists today can expect to be called upon to care for patients with chronic conditions and assure medication is used safely and effectively. If you like science and helping others, pharmacy may be a good career for you.

By Alyssa Patrick ’13

To learn more about pharmacy programs at the Community Health Association of Spokane (CHAS), visit pharmacy.wsu.edu.
“Oh, no, no, no,” says Sonoko Sakai as she jets across the test kitchen at the WSU Mount Vernon Research Station to school a student on the proper technique of draining a freshly cooked hand-cut soba noodle. “Don’t sit it. You have to put it like this,” she says as she firmly whacks the bottom of the strainer.

Sakai, a former film industry executive, changed course dramatically a few years ago and left LA for Japan to learn the art of making soba, a traditional Japanese noodle made primarily of buckwheat. She found her way to soba master Takashi Hosokawa and now travels the country sharing her soba expertise.

One afternoon last fall she led a class of 12 students and a number of onlookers in a soba-making clinic during a bread and grain conference at the research center.

Soba can be made solely with buckwheat flour and water, says Sakai. But it’s difficult to form the dough, especially if you’re a novice. So on this day she cheats the recipe with a little all-purpose flour. It’s still a true soba noodle, she says. But the addition of wheat flour helps the dough bind together more easily. It also affects the throat feel, creating a slippery sensation called nodogoshi.

Wheat flour or no, soba is a deliciously sort of nutty-tasting noodle with just a bit of chew. And that texture and flavor is thanks to the primary ingredient—buckwheat. It’s a pseudo-cereal, according to WSU’s Kevin Murphy, who recently won a study examining the nutritional composition of buckwheat groats and hulks.

Buckwheat is a bee-pollinated broadleaf plant that produces small triangular seeds that look like grains. The crop is believed to have originated in the Himalayas and is cultivated around the world, primarily in Eastern Europe and Asia, but also in France, Italy, Canada, and the United States. In their study, the WSU team determined there is a growing interest in buckwheat in North America because of the health benefits. It’s nutritious, high in dietary fiber and protein. It is also rich in minerals like manganese, potassium, copper, and zinc.

Again, note Murphy and his co-authors, the crop has potential for greater consumer interest, but hasn’t been studied much.

Despite its name, the plant has little to do with wheat, says Darrell Otteson, who contracts with Columbia Basin farmers to grow buckwheat for sale to Japan. The plant is more related to rhubarb. But the farmers like it because they can plant and harvest it with their grain equipment.

Washington state is the country’s largest producer of buckwheat for export to Japan, says Otteson. It is a popular crop with the farmers he works with because it’s a second crop, one they can plant in mid-summer after they harvest their primary crop of wheat or Timothy hay. “They can get a second paycheck from that same piece of ground,” he says.

The better Japanese mills won’t use buckwheat that has been stored longer than a year. And it’s recommended that the flour be used within 30 days of milling.

Farmer Mike Glenn-Leland, 74, of Mattawa plant their buckwheat seed in July and harvest it in October. “Put it in for the first time in 1984,” says Leland. “It was kind of an experiment. But there was a learning curve.” That first year, a late planting and some other issues resulted in low yield. Using the lessons of ‘84, Leland tried the crop again the following year with greater success and has been growing it ever since. “Farmers never give up, you know,” he says.

In the Columbia Basin buckwheat is grown under irrigation, but over the rest of the world it’s typically a dryland crop. It’s fairly easy to grow, but at a ton per acre, the yields are far lower than they would be for corn or wheat, says Leland.

The fields in bloom with white flowers are pretty, but they have quite a small scent. It’s not sweet so much as off. Kind of “kunito,” says the farmer. But that scent may help it attract the bees it needs to pollinate. In fact, the bees need the buckwheat, too. Since it has a long flowering period and it blossoms through September, it gives the bees a necessary food source for storing up honey for the winter. Beekeepers are delighted to park their hives near Leland’s fields.

“Now I’m bringing it back here to make noodles.”

Back in Mount Vernon, Sakai’s students use their fingers to evenly distribute water into their carefully measured mixture of wheat and buckwheat flour in large wide metal bowls. Sakai rushes in to test the hydration and urges a couple students to add a little more water. Then they knead the dough and shape and roll it into a smooth ball. Then they flatten it into a disk, roll it out into very large squares, and then sprinkle flour, fold it, and fold it again. Then using a board as a guide and a fierce-looking soba knife, Sakai shows them how to cut the thin noodles.

A little more than a minute in boiling water and then a quick bath in a dashi broth and the students are happily slurping their handiwork.

Know your buckwheat:

Groats (Europe) : A heart shaped seed made from buckwheat and served with cheese, greens like chard, bread crumbs, and butter.

Grits (France) : A short square pasta made primarily from buckwheat flour and served with cheese, greens like chard, bread crumbs, and butter.

Grits (Russia) : Small buckwheat pancakes, traditional vehicles for crème fraîche and caviar.

For sakai’s soba noodle and dashi recipes, visit wsm.wsu.edu/extra/soba-recipes.

Sakai and Murphy lead a workshop in making traditional Japanese soba noodles during a bread and grain conference at WSU Mount Vernon. The process includes preparing a mixture of buckwheat and all-purpose flour with water, hand shaping a dough, rolling it, folding it, and then using a soba knife to cut it into long, fresh noodles. The noodles are boiled immediately and enjoyed in a dashi broth. Photo courtesy Martha Holmberg
It is absolutely still down here in the river valley on a crystalline October day, still except for the occasional magpie and the soft murmur of the Palouse and the ghosts that Scheuerman has evoked. To journey down to the Palouse with Scheuerman is to be immersed in his landscape. His Volga German ancestors immigrated to the Endicott area in the late 1800s. They and other families still populate the area. This is but a shallow immersion, however. Scheuerman’s many books do not begin with European exploration and settlement, but are often about the interaction of European settlers and the region’s native peoples. Even his most recent, *Harvest Heritage*, written with Alex McGregor, which purports to be about “the agricultural origins and heirloom crops of the Pacific Northwest,” embraces native participation. Scheuerman can never exclude the pertinent detail, the context, the predecessors, the meaning. The Palouse River was a thoroughfare for the native people, he says. After European settlement, they regularly met up at the DeLong farm, upriver, toward St. John.
Growing up, Scheuerman wondered who these people were, this parallel culture alongside the growing European settlement.

Having determined to go to the source, one day while he was in high school, Scheuerman and his grandfather drove north to Nespelem, the headquarters of the displaced Colville Confederated Tribes. He announced himself to a tribal secretary, Annie Cleveland George, who directed him to Arthur Tomoe Kamiakin, who gave him the first of a priceless trove of oral histories Scheuerman has gathered from native elders over the years.

Scheuerman’s eastern Washington landscape is rich with stories, of his ancestors trading fruit for salmon from the local Indians, of Norwegians and trappers, of Chief Kamiakin and Washington State College scientist William Spillman. All are part of the dense landscape that he narrates.

“This is so much more,” he says as we arrive at another part of the valley, a site that still shows the remains of the settlement he founds in his book “The Rainbow Bridge,” one of a series of short stories about the Volga German settlers.

“One of the Ochs family, who had a beautiful voice, he would climb into the attic, pull out some music, and sing,” Scheuerman says. “That is why I want to show this landscape in terms of the people who lived here.”

CATAclysm, LIGHT, and PASSion

If there were a scientific way to measure the grandeur and diversity of landscape within a given area, Washington has the stuff to rival any region in the world. But diversity and grandeur are only a part of that landscape’s appeal.

Lovely and unusual as the Palouse hills and its river canyons may be, their deeper beauty emerges only as we learn to interpret their stories, of the ancestors trading fruit for salmon from the local Indians, of Norwegians and trappers, of Chief Kamiakin and Washington State College scientist William Spillman. All are part of the dense landscape that he narrates.

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Indeed, if it is the spatial element that gives landscape its body, so to speak, it is the temporal, its story, that gives it its soul.

Although the southeastern Washington landscape is still dominated by the wheat that first supplantled the sagebrush and bunchgrass, vineyards have further Europeanized our wild western hills.

The first wine grapes were probably planted by the Hudson’s Bay Company at Fort Vancouver in 1823, and French trappers may well have planted wine grapes in the Walla Walla Valley. However, no one really imagined the transformation of the landscape until Walt Clore, Chas Nagel, and others started experimenting.

Clore joined Washington State College in 1934 and was appointed assistant state climatologist at the Prosser research station three years later. Whatever it was that stirred his imagination, Clore immediately began planting wine grapes in the Walla Walla Valley. However, his vision would not be realized until Chas Nagel arrived in Pullman in 1960. A microbiologist, Nagel arrived from the Napa Valley with a vision of a wine landscape.

In an interview for our first issue in 2001, Nagel recalled touring the state with Clore, talking grapes with farmers, exploring the next phase of Washington’s agricultural landscape. Clore had variety trials of vinifera growing all over the state.

“Vahl was Johnny Gospodarow,” said Nagel. “It was a wonderful time.”

Though Clore, Nagel, and a few adventurous farmers understood the capability of the landscape and climate for producing wine, it was Larry Meinert and Alan Busacca who explained the deeper, most elemental aspect of the landscape that would produce Washington wine.

In “Terroirs of the Walla Walla Valley appellation,” Meinert, a geologist, and Busacca, a soil scientist, both with Washington State University at the time and wine devotees, took eastern Washington’s terroir deeper than amount of farmland, the impact of wine on the landscape is profound, starting with the careful geometry of the trellised rows, lending the taste of its grapes to palates and imaginations throughout the world.

WINThROP TO MARBLeMOUNT—NORTH CASCADeS HIGHWY 87.4 miles

Yes, I was running late, headed for Marblemount over Washington Pass. As I drove daylight through thick, swirling clouds, the dark would part, revealing a jagged peak, then close quickly, then reveal another. It was dizzying and magical, the road before me disappearing and reapPEARing. Yes, it was only in 1972 that State Route 20 made the 87-mile drive from Winthrop to Marblemount possible. The highway passes through extraordinary landscape and ecological transitions, from the upland meadows of the Klickitat Valley to swale-forest around Marblemount. Be sure to stop at the Mt. Baker-Snoqualmie National Forest visitor center, a short walk from the highway, the rockshelter was occupied by locals who hunted mountain goats. 19 July. “Of Time and Wildness in the North Cascades.” Spring 2010

Mountains & Rivers & Prairies Without End

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FIRST INHABITANTS
What has made much of Washington’s agriculture possible, what has helped create a garden out of a desert, is irrigation—irrigation and cheap hydroelectricity for pumping made possible by dams. Those dams, however, particularly the Snake River dams, obliterated much of the canyon landscapes, including hundreds of village and burial sites. This destruction, ironically, greatly magnified our understanding of the region’s cultural landscape. Money flowed from the federal government to salvage archaeological sites that would soon be under water. The Marmes Rockshelter was one of those sites. In the late 1950s, Richard Daugherty, Carl Gustafson, Roald Fryxell, and other faculty and graduate students worked desperately through a harsh winter to glean what they could before the floor of the cave disappeared beneath the dammed Snake’s water. The Marmes shelter is located near the mouth of the Palouse River, where it joins the Snake. Bill Andrefsky, an archaeologist who specializes in little technology, or stone tools, cites Marmes in explaining the evolution of archaeology toward an appreciation of the landscape.

“The whole concept of landscape archaeology,” he says, “has been generated from a very small find that looks at settlement patterns or analysis from a spatial level to one where landscapes not only provide resources for food and how people use the land over time to one where the landscape is part of why people select to live in certain locations, has political meaning, has religious meaning, has all of these other kinds of meaning. One of the most interesting things I’ve come to start believing in,” he continues, “there are certain spaces, locations out there, places that

LANDSCAPE IS US
“Landscape ecology as a discipline,” says landscape ecologist Mark Swanson, “if you care to define it in a very liberal sense, goes back to our hunter-gatherer ancestors. They had to understand things at a landscape scale in order to escape harsh weather or escape predators or find water.”

Poemly, Plym the Elder, and Plym the Younger all thought and wrote about how landscapes are structured, he says. But the term was not coined until German geographer Carl Troll introduced the term as part of his work, which consisted of using aerial photography to interpret interactions between environment and vegetation.

The European school of landscape ecology grew out of this work and focused largely on the settled environment. The discipline’s interaction of process, pattern, and scale occurs at four primary levels. First is the geophysical, says Swanson, the topological and lithological. What kind of rocks gird a landscape? For example, granite decomposes as acidic, while limestone decomposes as basic, either of which affect large-scale outcomes such as plant community composition. Second is the available biota: the plant, animal, and microorganism population of an area. The third level of interaction is disturbance: winds, the Missoula Flood, forest fire, Mount St. Helens. The fourth is the cultural landscape, that vista, is pretty much the same. Maybe the vegetation is different, but definitely that landscape was there.”

are very special, and people live there, not only their entire lives, and their immediate family’s entire lives, but people lived there for thousands and thousands of years.”

For thousands of years, residents of the Marmes rock shelter led their lives and buried their dead. Excavation, as far as the archaeologists were able to accomplish, proved occupation at the shelter back more than 9,000 years, which is considerably older than was thought at the time to be the oldest occupation in the United States. What intrigues Andrefsky is what kept people at the site for all those thousands of years. Yes, it was a great shelter, at the confluence of two rivers. Food was bountiful. But Andrefsky feels there is something even more special about the Marmes landscape, something we haven’t yet discovered.

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WASHTUCNA – POUCE FALLS – STARBUCK – WALLA WALLA

From Onondo, north of Wenatchee, head up the Corbaley Canyon grade toward Waterville. Stop at every pull-off for views of the Cascades to the west. Step in Waterville for lunch at Kopey’s Cafe and get the story on the miniature working jet airplane hanging from the ceiling. On across the Waterville Flats, a small patch surrounded by semi-arid badlands left from the southeastern part of past glaciers. Turn southward for Moses Coulee, one of the most spectacular highway descents known. Moses Coulee, less well-known than the parallel Grand Coulee but perhaps even more magnificent, was cut by Glacial Lake Columbia. On to Grand Coulee and north, though you might want to take a brief side trip south to the spectacular Dry Falls. Read “Waters in the Promised Land” Fall 2013.

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This landscape may be wild, Mierendorf argues, but it is no wilderness.

**THE HOME OF MY FAMILY**

Ed Claplanhoo really didn’t understand at first what the young hippie teacher was trying to tell him over the phone in the winter of 1970. That “people” were taking “artifacts” from the “house.” As chairman of the Makah tribe, Claplanhoo kept close track of things and knew his territory well. The persistent pleas from the teacher made no sense. But then, finally, he realized it was not Noah Ray, current home of great Makahs, that the young man was talking about, but Ozette, an ancestral village down the coast, on Cape Alava, reachable only by boat or a four-mile hike from the nearest road.

Until archaeologist Richard Daugherty set out in the late 1940s to explore the Washington coast, no systematic survey had yet been done of archaeological sites. One of the sites he noted was Ozette, and in the late ’60s, he began a preliminary excavation. But diverted by the Marmes excavation back in eastern Washington, and convinced that the Ozette site was exceptional and would need full-blown attention, he returned to more urgent work.

Makahs had lived at the Ozette site until the 1920s. But oral history told of an older village that had been buried by a landslide, probably when a magnitude 9 earthquake released the saturated bluffs above it in 1700.

In 1970 a winter storm uncovered a longhouse. Now, forty-some years later, if you hike the four miles from Ozette Lake down to the coast, you will find no trace of the village or the 11-year excavation that revealed an extraordinary wealth of knowledge about the Makahs and the coastal landscape. Their ancestors had lived at Ozette for probably 2,000 years. Their knowledge of the sea and of whales, their craftsmanship in toolmaking and skill in hunting gave them a rich and wondrous life out of a dramatic coast humming with centuries of stories.

Finally, there is us. Even though we are part of the available biota and are certainly a disturbance, says Swanson, “We are unique in global coverage.”

**OF TIME AND WILDERNESS**

Bob Mierendorf understands that last premise quite well.

“This landscape is my PhD,” he said when I first interviewed him about his work in the North Cascades and the upper Skagit River. To call it Uptiver University. A 3-million-acre campus. Colors are green and gray. On a really good day it’s all gray.

Mierendorf never finished his dissertation at WSU. “They gave me the tools,” he said. Rather than complete his dissertation on campus, he became the first National Park archaeologist in the Pacific Northwest. He set out to reveal the remarkable landscape that reaches along the very wet upper Skagit and up, up to the reaches of the North Cascades, some of the most dramatic landscape in the world.

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This landscape may be wild, Mierendorf argues, but it is no wilderness.

**What Endures**

Remember the first time you drove across Washington from east to west on State Route 26 or Interstate 90, or more likely west to east. Regardless, that first time is a study in contrasts. East and west. Dry and wet. Lonesome and populous.

From the Palouse, through the Scablands and Columbia Basin, the annual precipitation as you push west drops by an inch every 10 miles. And then you start rising: Columbia River, foothills, Cascades, Seattle. And then maybe you realize, now five or six hours later, you’re still nowhere near across Washington. So you keep going, by ferry or down through Olympia and west. If you continue all the way to Long Beach or Guys Harbor, what is just a coy and crooked scratch across the map, the drive has become an overwhelming primer on our state, offering glimpses of, even insight into, the enormous and complex landscape that is Washington.

The second time across, things look a bit familiar. The Scablands, still scarred and scabbed from the flood, stretch into Washinia—a, and if you hit it at the right time, in mid-April, it is a tremendous green, wagon tracks stretched across the coulee in early morning.

But on to the vastness of the Columbia Basin, frighteningly endless and mesmerizing. The radio drifts from NWPR translator to translator up to the plateau. And then it’s Christian talk and Mexican music. Beyond Othello, the ridge of the Saddle Mountains to the south parallels the traveler down the long Royal Slope to the Columbia, the ridge splitting abruptly. Sentinal Gap, for the Columbia into which all the rivers of the Columbia Basin flow.

The Columbia, damned and damned and damned and threatened by the phrase of Cold War waste downstream, is still wild and mighty. That ten-mile climb back up to plateau and then maybe, if the weather is right, the surprise of Rainier. But we could go on forever.

For the curious traveler, there is still a near-infinite landscape to learn. For the focused and ubiquitous land grant university, there is much landscape not only to learn, but to re-imagine and shape. Just as it has done, with deliberation, trial, and error, shaping the human time in its life and effect on a landscape full of meaning, stories, and wonder.
across whole swaths of Washington state, where time and again, hot lava paved the late Miocene paradise of exotic hardwoods, replacing it with a vast, hot, black parking lot.

"By the time the lavas cooled," says Steve Reidel '78 PhD, "you would have had nothing from Pullman to the coast but wet lava rock."

Now, Columbia River flood basalts cover roughly half the land area of Washington and Oregon. On average, it is a kilometer thick. In Pasco, it is more than two miles thick.

"I like to tell visitors here that we're actually in the Rocky Mountains," says Wolff, head of Washington State University's Peter Hooper GeoAnalytical Laboratory and coeditor with Reidel and others of a new scientific tome on the Columbia River basalts. "You just don't know it because they've been covered up by basalt."

Basalt is one of the most common rocks on Earth, making up the bulk of the sea floor and having a hand in some of the planet's most spectacular catastrophes. Siberian flows coincided with the epic Permian-Triassic "mass dying" that wiped out 96 percent of the earth's marine species 250 million years ago. A mass extinction at the end of the Triassic Period 200 million years ago coincided with lava coming out between what is now northeastern South America and eastern North America. Gases from flows on India's Deccan plateau started a mass extinction some 65 million years ago. The Yucatán meteoroid credited with wiping out the dinosaurs then may have simply been a coup de grâce.

The Columbia River basalt province is among the smaller, but it's the most studied in the world, in large part because federal officials in the mid-'70s thought all that deep rock might be good for storing radioactive nuclear waste. It helped that the Hanford Nuclear Reservation is parked on top of some of the deepest basalts. But first, scientists and regulators needed to know just what they were getting into, particularly if they risked putting waste where it might leak into an aquifer or the nearby Columbia River.

"You can't do that without knowing the architecture of the whole pile," says Wolff, "and that means being able to identify the layers."

### A True Story Fraught with Peril

By Eric Sorensen

Buried in hundreds of layers of rock are tales of fire, brimstone, destruction, and fragility. Between 60 and 80 million years ago, vents opened up on the eastern edges of Oregon and Washington and poured hot lava across the gently sloping plain to the west. It moved slowly enough that most animals could outrun it, even out-walk it. But most trees and plants in its path were incinerated.

In a matter of weeks, if not days, one of the flows could reach across the state to Portland. It could take 50 years to cool, with its rising heat drawing moisture from the Pacific to create tremendous storms and monsoonal rains. Sulphurous gases could block out the sun, changing the earth's climate and dramatically altering habitats around the world. The change was most dramatic along the Columbia River, where time and again, hot lava paved the late Miocene paradise of exotic hardwoods, replacing it with a vast, hot, black parking lot.

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"You can't do that without knowing the architecture of the whole pile," says Wolff, "and that means being able to identify the layers."
Forty years of science on 10 million years of volcanic eruptions can turn up some impressive revelations. Perhaps the biggest is that nearly three-fourths of the Columbia Basin basalt is from a series called the Grande Ronde. Starting 16 million years ago, it served up 100 or so flows over a few hundred thousand years. They sunk the Earth’s crust, creating the Columbia River Plateau. They are the largest known flows on Earth.

Three years ago, Reidel and Hooper, working with a colleague at Britain’s Open University, found the main pulse of eruptions happened much more quickly than previously thought, and with an intensity that may have changed the earth’s climate.

To get some idea of just how awful that might be, you only have to look back two or three centuries. There was the 1815 eruption of Mount Tambora in Indonesia, which contributed to the subsequent “Year Without a Summer”—frozen crops, icy Pennsylvania rivers in August, food riots, famine. Iceland’s Laki eruption, a succession of lava flows and eruptions starting in 1783, produced an acidic rain that wiped out the island’s grass. More than half the livestock died. In the ensuing famine, the country lost one-fourth of its population.

The eruption’s atmospheric emissions, says Wolff, were one-tenth to one-hundredth of some of the Columbia River basalt flows. But for major firepower, you only have to look back two million years and a little to the east, to the Yellowstone Super Volcano. A paper published in 2012 by Ben Ellis, then a postdoctoral researcher in Wolff’s lab, found that the volcano’s biggest eruption was actually two eruptions 6,000 or so years apart. The first blast remains one of the largest known on Earth, producing 2,200 cubic kilometers of ash. That’s more than 2,000 Mount St. Helens. It darkened skies from California to the Mississippi River.

For years, one of the main tools for identifying different basalt flows had been the orientation of magnetized particles in the rock. Every few thousand years, the Earth’s magnetic pole wanders around the geographic pole and even reverses. By tying the orientation of a rock’s magnetic particles with the location of the magnetic pole, geologists can estimate the age of the rock and, in the case of the Columbia basalts, which flows they are a part of.

The federal Basalt Waste Isolation Project brought chemical identification into the mix by funding WSU’s GeoAnalytical Laboratory, led by the late WSU geologist Peter Hooper. The nation’s search for a nuclear waste repository turned to Nevada’s Yucca Mountain in the late ’80s, but by then the Hooper lab was firmly established, with the lab analyzing numerous basalts from throughout the region while taking on enough other work to become self-sustaining.

“In the process, we did learn an awful lot about the basalts,” says Wolff.

For 40 years now, one part of the lab has been analyzing basalt that has been ground and melted to create quarter-sized beads that Wolff calls “atoms in a glass.” A fluorescence machine can then bombard the beads with x-rays. This causes electrons to jump to a higher energy level. As they return to a lower level, the bead’s various elements give off a unique “x-ray fingerprint” used to discern the original rock’s makeup.

“The whole CRB stratigraphy has been developed using this technique,” says Wolff, using the shorthand for Columbia River Basalt.

“For even greater detail, two mass spectrometers can measure trace elements in fractions of a part per million, while an electron-probe microanalyzer can analyze the individual grains in a rock. Crystals can also trap gases from an eruption.

“You have an estimate of that, you can then go on and try and calculate what the environmental effects of the eruption would be,” says Wolff.

There was the 1815 eruption of Mount Tambora in Indonesia, which contributed to the subsequent “Year Without a Summer”—frozen crops, icy Pennsylvania rivers in August, food riots, famine. Iceland’s Laki eruption, a succession of lava flows and eruptions starting in 1783, produced an acidic rain that wiped out the island’s grass. More than half the livestock died. In the ensuing famine, the country lost one-fourth of its population.

The eruption’s atmospheric emissions, says Wolff, were one-tenth to one-hundredth of some of the Columbia River basalt flows.

But for major firepower, you only have to look back two million years and a little to the east, to the Yellowstone Super Volcano. A paper published in 2012 by Ben Ellis, then a postdoctoral researcher in Wolff’s lab, found that the volcano’s biggest eruption was actually two eruptions 6,000 or so years apart. The first blast remains one of the largest known on Earth, producing 2,200 cubic kilometers of ash. That’s more than 2,000 Mount St. Helens. It darkened skies from California to the Mississippi River.

In a way, it was yet another iteration of the Columbia basalt flows, stemming from the same magma hotspot that migrated eastward over 16 million years.
Calorie for calcarie, the basalt flows packed more punch.

“The amount of heat that was coming out during these eruptions was even more than the more punch,” says Rick Conney, a research tech with 30 years in the geosynthetic lab. He’s referring to basalt’s use as a road surface, like the spectacular chip-sealed carpet he’s standing on alongside the Snake River, with thousands of feet of flows rising on each side.

Indeed, the state Department of Transportation reports using basalt on virtually all its roads south of the Spokane and Columbia rivers. It’s also used for road ballast, base rock, garden paths, gravel roads, driveways, riprap, structural fill, ornamental boulders, and the occasional decorative hexagonal column.

People have struggled to find other uses for basalt and Steve Reidel has had a front seat to many of the attempts. He got his doctorate in Hooper’s lab just as the Basalt Waste Isolation Project was getting started. After a period of fieldwork in Alaska, he went to the Tri-Cities to work on the project for Rockwell, then Battelle. Between research with the Pacific Northwest National Laboratory and consultant work, he has sampled basalt throughout the region. He figures he has camped out, or at least slept in the back of a pickup truck, one-fourth of his life.

He once served as the road-side geologist, writing columns later compiled in the book, Big Black River Rock: Essays on Northwest Geology. It’s a tongue-in-cheek title. The rock is black to begin with, but browns as its iron oxides weather to hematite, picking up an oxygen atom and, in effect, rusting. And he’s yet to be bored, smitten by a landscape that is itself a book that slowly reveals the stories of an ancient past.

Over the years, Reidel has seen entrepreneurs try to make fiberglass from basalt, which is less expensive than silica but harder to melt. He’s seen oil companies drill into the basalt at enormous expense, vainly seeking economic quantities of natural gas that might be trapped in sediments from before the earliest flows.

Working with the Bonneville Power Administration, he has looked into converting wind power into compressed air that could be stored in basalt for later use. He is still working on a project to inject liquid carbon dioxide into basalt, where the rock’s calcium and iron can convert the CO₂ into calcite and siderite. If it works, a coal-fired power plant could turn its greenhouse-gas emissions into rock.

Like most geologists, Reidel is a fan of roadcuts. Passing at one near the Twin Sisters—two monoliths near Wallula Gap—he points to a band of red, crumbly rock. It’s called an interflow, a section of crumbled basalt and ancient soil between the Grande Ronde and Ginkgo flows.

“The way, this is where water comes from,” he says, pointing to small holes in the rock. “This is where all the water comes out of the basalt.”

For all our local basalt’s uses, its most vital is as a water source for Spokane, Pullman, and dozens of smaller, drier towns deeper in the Cascade rain shadow.

And for all that researchers have learned about the basalt, their water-bearing ability remains one of their greatest mysteries. More than 1.3 million people get their water from the Columbia Basin Regional Aquifer System, including agricultural irrigators. A recent U.S. Geological Survey report found water levels in nearly three out of four wells were declining, with an average drop of nearly two feet a year. Meanwhile, the system gets only an average of 17 inches of rain a year, with parts that are downright arid.

In the long term, says Guy Gregory (’79 Geology), it’s unsustainable.

“Basalt is a good water-storage medium in that where you encounter water in basalt, it tends to yield it fairly well, so you don’t have to spend a lot of energy and engineering to get water out of it,” says Gregory, technical unit supervisor for the water resources program in the Department of Ecology’s eastern regional office. “Wells yield pretty well. But it’s kind of fickle. You have a well that’s 80 feet deep and most laymen think, ‘Wow, 80 feet of water.’ Well, no, there’s only maybe
30 feet or 80 feet of that 800 that yield water. The rest of it is pretty bloody solid.”

Researchers have gathered data from thousands of wells to plot groundwater flows, vertical gradients, and the general underground geology. Asked when some supplies might run out, Gregory said the right question is, “When are you going to start doing something?”

“From a municipal standpoint,” he says, “it’s a lot easier to plan for needs now and finance them over a number of years than it is to have to respond in an emergency. And nobody can do without water. Communities dry up pretty fast when they run out of water. That’s why they call it ‘drying up.’”

For his part, Reidel is willing to conjecture when some communities might indeed meet such a fate.

“My guess is that within 10 or 20 years, towns like Othello are just going to dry up and blow away,” he says. “Same thing with Ritzville and Connell. All these cities in eastern Washington, they’re relying on groundwater.”

The region’s basalts do perform at least one other function, providing some of the Pacific Northwest’s most striking vistas.

There’s the Gorge Amphitheatre above the Columbia River, Wallula Gap, Palouse Falls, Moses Coulee, Oregon’s Multnomah Falls, and Yaquina Head, whose original lava flowed 300 miles from Klahotus.

“They too come from catastrophe, not of fire, but of ice and water.

As recently as 10,000 years ago, in the waning days of the last Ice Age, as much as 500 cubic miles of water broke through an ice dam in western Montana and surged across the Columbia Plateau. Dozens of floods swept away topsoil and all but the most resistive and protected pieces of basalt. The floods’ handiwork is particularly striking at Frenchman Coulee, where the waters made a final plunge to the Columbia River, working around a rib of basalt into two alcoves.

The coulee sits just off Interstate 90 and Silica Road, the route to the Gorge Amphitheatre. A two-lane road follows the edge of its northern alcove, serving up an expansive view of a flat bench fringed by massive cliffs of stout and occasionally twisted basalt columns.

It is the roadcut of roadcuts, a frozen, crystalline reminder of a world overrun by molten rock, then rent by hydraulic forces bordering on the biblical.

“You’re looking at about a million years here,” says Reidel. Toward the top sits the Roza Member, the result of about five flows from just under 15 million years ago. Below that is the Wanapum basalt, which had some 68 flows between 15 and 15.6 million years ago. At the bottom, flat and defiant, sits the 15.6- to 16-million-years-old Grande Ronde, whose massive, 100-plus flows came so frequently that one might still be warm when the next arrived, letting material from one flow weld to the next.

“The Grande Ronde is like a set of bricks cemented together,” says Reidel. Greater cataclysms may someday come this way, but in the battle of old basalts and young floods, the Grande Ronde won out.

“It must have been spectacular,” says Reidel. “Certainly a place you would not want to be.”

Read more about roadside geology at wsm.wsu.edu/extra/basalt.
ALTHOUGH MY PARENTS lived in the same house in Richland, Washington—for 50 years, they never stopped being proud, relentless Oregonians. But in 1989 Mother and Dad celebrated Washington’s centennial in a big way. They dreamed up one of those projects that makes sense to retired couples but boggles their children: visiting and photographing all 39 Washington county courthouses. They were even written up in the centenary in a big way. They dreamed up one of those projects that makes sense to retired couples but bemuses their children: bird-watching, wildflower identification, and listening to classical music on the radio (fortunately, mostly out of range in those days). And I had a tendency toward carelessness. As I’ve aged, time has sped up, and I’m the one steering, so those once interminable drives are so much quicker and infinitely more interesting.

My appointment is two years and to date I’ve visited 22 counties. This fall and winter I will reach the final 17. The counties in eastern Washington are generally more dependent on the happy fact I can offer my programs for free. Education to Humanities Washington and ArtsWA (formerly the Washington State Arts Commission) who jointly manage the Poet Laureate Program, and who have secured private and federal funding (no state funding) to support my position.

Many of my travel opportunities come to me like gifts. In April 2012 I attended a monthly poetry-and-music open mic in Goldendale after a great day in the local elementary and middle schools and another spent celebrating “Put a Poem in Your Pocket Day” with my generous hosts at the Maryhill Museum of Art. I was approached by Jackie McManus from Bickleton, a community of fewer than 100 just 35 miles east of Goldendale. Jackie taught in the Bickleton School and wondered if I could visit them next year. We framed up our plans over the next months. I invited Juniper White—a lively poet, the force behind Dewel Press, and owner of a “portable” printing press perfect for projects in the schools. Bickleton School is a K-12 school housed in a beautiful new building at the outskirts of town. Juniper and I worked our way through every classroom, grades 1-12, which are taught in two-grade splits—1-2, 3-4, etc., including 11-12. The students were curious and great fun, and I had the sense, as I so often do when I’m working in the schools, that the way to really learn about a community is through their children. While “all children are the same,” they’re not living the same lives. Some write about what they’ve abandoned farms, others winter beaches, bus rides, or Minecraft. And some—and this goes back to the magic ingredient of class chemistry—are easier than others to convince. Hey, let’s play a little with language? That’s my task and I enjoy it, though I never fail to feel a little nervous walking in.

Despite a little snow, the town of Bickleton came out on a parking lot in the warm, wood-paneled Grange Hall, and a crowd of 60 listened attentively to Juniper and me as we read our poems. The rest of the program belonged to the locals: the old poems of an original homesteader, read by his gray-haired granddaughter, and several recitations—The Cremation of Sam Magee” and “Gallop” by a local farmer, and—no doubt the reason the crowd was so large and young—five high school students reciting marvelously Yeats and Wordsworth and others, followed by cookies and coffee and a lingering crowd. Jackie put Juniper and me up in the local bed-and-breakfast, and because the town restaurant was under repair, we found a homemade casserole in the fridge along with plenty of milk, juice, coffee, and breakfast makings.

I think of my Bickleton trip often, and of that young high school teacher, Silvia Navarre, whose classroom was full of art and who inspired her students to memorize great poetry and really think about our English language (and—small school, teachers wearing many hats—German too). It’s clear to me that my greatest contribution to the community of Bickleton and several others has been the promise of my visit, that date on their civic calendar, that date that brought me into their classrooms, that date 50 women were signed up, there was a waiting list, inmates kept asking. When we finally got through security that afternoon, and after an unscheduled lockdown, our audience came in, smiling, excited. I have to say I’ve never heard an audience listen as hard as those women did that day, like their lives depended on it. I began by reading poems by a variety of Washington women poets, and handed the program to Merna and Storme, who in turn turned the audience with their powerful poems. I sat behind the readers facing the crowd and could watch the nodding heads, tears, laughter. Afterward, a number of women came up and visited with us and begged for more poetry, workshops please, more poets, more books. The librarian informed me that their poetry section gets vigorous use. I was able to supply a number of poetry collections donated by the poets themselves, which felt good. When my appoint-
On the Road

On our colors, at least not this year, and cannot touch the mythic beauty of our river and gorge. Hard to keep my eyes on the road.

I brought hands-on programs too. Very active poetry communities (and there are many in Washington: poets, contrary to myth, tend to seek out other poets) ask for writing workshops. I spent a sunny April afternoon at the Port Angeles Public Library with two dozen poets asking informed questions, writing intensely to a prompt I provided, and sharing their drafts—which were remarkable; poet after poet proving again that talent is among us and everywhere. Sometimes my most important contribution is drawing renewed attention to local poets in small communities. It’s hard to come out as a poet in a culture that doesn’t quite know what to make of us or whether to take us seriously. If the poet laureate thinks my neighbor Abbé Miller is good (and she’s very good), maybe it’s time to break down and buy Abbé’s book.

Road trips have turned out to be one of the great pleasures of my poet laureate appointment, especially when I have the privilege of purpose, and when each mile seems to take me deeper into my future and past. A chance to be alone with my thoughts, a chance to watch the landscape change and see myself riding its undulations, driving beneath its forest canopies or through miles of wheat fields, basalt outcroppings, imagining the lives inside those farmhouses, both dilapidated and tidy, counting wineries, river views, climbing mountains while I steer, and slides, almost stopping for roadside cherries, roadside strawberries, roadside dahlias, $3 per bouquet, please don’t take the vase.

But necessary! — It’s mostly two lane. —

I crossed Snoqualmie, then Umtanum Ridge (a Washington scenic byway) between Ellensburg and Yakima, and then Route 97 south, windy but glorious Satus Pass through Goldendale and Vancouver is breathtaking, and the color, even in November, was gorgeous.

Kathleen Flenniken ’83 studied engineering at WSU, then worked as a civil engineer and hydrologist, including three years at Hanford. Her first collection of poetry, Famous (U. Nebraska 2006), “flirted with the sublime” and featured characters as various as Marianne Moore and Flenniken’s deceased parents. Plume (UW Press 2012) is a powerful meditation on Hanford. For more about Flenniken and to read some of her poems, visit kathleenflenniken.com. Video here courtesy Hanelore Sudermann Washington State University Press.

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AS THE CHIEF OF PEDIATRIC INFECTIOUS DISEASES at the University of Chicago’s Comer Children’s Hospital, Ken Alexander ’82 is no stranger to the measles, pertussis, or chicken pox. He also works with children with HIV-related illness, pneumonia, and respiratory infections. He and his colleagues identify and treat infections caused by the typical viruses and bacteria as well as the little-known parasites and even fungi.

But when we sit down to visit near his offices on the north end of UCHC’s campus, Alexander wants to talk about something that isn’t a children’s disease at all. He learns a little more, with the gentle manner of, well, a child’s doctor. He answers questions about his childhood in Pullman, growing up watching his father work in the College of Veterinary Medicine, his decision to have his own career in medicine before even enrolling at Washington State University, and his life as a pediatric specialist. But instead of continuing this conversation about his subject.

This is where it gets—to use a term particular to Alexander’s patients—icky.

Alexander wants to talk about a vaccine for adolescents to prevent human papillomavirus (HPV), a sexually transmitted disease with many serotypes, two strains of which are known to cause cervical cancers. Recently HPV has been connected to a range of other cancers affecting both women and men. The vaccine was introduced in 2006 and was recommended for girls before they are sexually active. In 2011, it was recommended for boys as well. The vaccine is widely accepted and encouraged by the Centers for Disease Control and Prevention and our nation’s medical community in general. But since its introduction, the rate of HPV vaccination has leveled off. The general notion of vaccination has been brought into question among the general public. Despite numerous studies, no association has ever been made between autism and bowel disease. Celebrities like Jenny McCarthy might be linked to autism and bowel disease. Celebrities like Jenny McCarthy and her classmates landed on the notion of immunization. “Vaccines are a key issue in pediatrics,” says Tellelsbo. Knowing that Washington had a larger number of parents opting out, the students decided to reach out to families who had refused vaccines. They communicated with a number of people in Washington and Montana willing to talk about why they chose not to vaccinate their children. “For some it was religion, others their individual philosophy,” says Tellelsbo. Some of these families may have had different decisions had they talked about it more with their health care providers, the students note. “Mostly, people were getting their information from family, friends, and providers,” says Kristina Starckrantz. “Friends and family may have the highest impact, but they’re not always reliable.”

In some cases “they thought they were correct, or very even ask,” says Tellelsbo. One mother believed the shots triggered allergies in her children. Another was concerned multiple vaccinations at once would be hard on her infant. A few parents said they did not trust the pharmaceutical industry. “And some said they thought the vaccine was more dangerous than the actual disease,” says Tellelsbo.

The more numbers of communities who go immunized, the greater the potential for an outbreak. In 2012, Washington led the nation in the worst whooping cough outbreak in 70 years. In 2013, measles made its way to the Puget Sound region.

Since that CDC report of 2011 and the outbreaks, our numbers have greatly improved, says Karen Caines, a pediatric nurse practitioner and assistant professor in the WSU College of Nursing. Now, before parents can opt out, a new law requires them to discuss it with a medical provider. "Teenagers don’t go to the doctor because they’re healthy,” says Alexander. “But that’s the problem.”

It’s exactly the critical age for a flight of vaccinations: one protecting them from diphtheria, tetanus, and pertussis (Tdap), one for meningitis, and one for HPV. The CDC recommends these vaccines always require multiple doses, with the first dose priming the immune system, and the second and/or third dose prompting the protective immune response.

As Caines and I look over copies of the CDC’s Morbidity and Mortality reports on vaccination coverage among children, two nursing students make their way into her WSU Spokane office to talk about a project to help new parents learn more about immunization.

“We like kids. We all want to do pediatrics,” says student Hailey Tellelsbo. “We tried to think of a problem and who we could talk to.” She and her classmates landed on the notion of immunization. “Vaccines are a key issue in pediatrics,” says Tellelsbo. Knowing that Washington had a larger number of parents opting out, the students decided to reach out to families who had refused vaccines. They communicated with a number of people in Washington and Montana willing to talk about why they chose not to vaccinate their children. “For some it was religion, others their individual philosophy,” says Tellelsbo. Some of these families may have had different decisions had they talked about it more with their health care providers, the students note. “Mostly, people were getting their information from family, friends, and providers,” says Kristina Starckrantz. “Friends and family may have the highest impact, but they’re not always reliable.”

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The students decided to focus their project on a large Spokane hospital. They are contacting administrators and doctors, asking them to provide information about vaccines to new parents. And for those families who want to do more research, offer them reliable sources for more information.

“Many parents would like to do some research before they introduce a vaccine,” says Caines. “That’s fine, if they’re going to credible sources.” It’s not always about choice, says Alexander. Some parents simply lack the resources and access. “They have the desire to do it,” he says. “But they just can’t get it done.”

WHO IS MORE ROBUST THAN AN ADOLESCENT?

Early-childhood vaccines are just half of the challenge, says Caines. Far less attention is given to the series of shots recommended for pre-teens and teens. “Around 10, kids get pretty healthy,” says Caines. “It’s pretty exciting. They don’t get every cold, they grow out of some of their early issues like our infections, they have strong bones, good metabolisms, and tend to heal quickly.”

“Teenagers don’t go to the doctor because they’re healthy,” says Alexander. “But that’s the problem.”

The rate of immunization of children in Washington’s counties in 2012–2013 based on the average percentage of students in all grades who have one or more exemptions to school immunization requirements. Source: Washington State Department of Health Office of Immunization

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Ken Alexander ’82 is chief of pediatric infectious diseases at the University of Chicago’s Comer Children’s Hospital. Photos Zach Mazur

An inquiring mind

administer them. “If we can do it in Chicago, we can do it in...”

serve 100 families. And he has created a program for international...”

He now performs research, teaches, runs clinics, and consults with other doctors. He has expanded the hospital’s HIV clinic to...”

The NEWEST VACCINE

vaccines for children aged 11 to 12. “And while all three are included in...”

Kenneth was interested in everything,” says Alexander’s mother...”

in an interesting time for infectious disease,” says Alexander. While he was in medical school at the University of Washington, the early cases of HIV and AIDS were appearing. Alexander had started medical school with the goal of being an internist, but then he had a fascination for chemistry, and for infectious disease. He ultimately found his calling during his pediatric rotation. “I liked these doctors,” he says. “We had the...”

in the Recommended Childhood Immunization Schedule, only the...”

in this than doctors,” says Alexander. “Providers really need to make the case that all three are needed. And that’s difficult if you’re doing it in a 10-15 minute office visit.”

We take on so much during this visit: sexuality, safety, sports participation, peer issues,” says Caines. “Where does vaccination fit into all the priorities?”

In an exploration of vaccine decision making, Caines recently set up an in-house pilot study with junior and senior nursing students to look at how providing more information might affect the parents’ decision about vaccination. The seniors were lectured on basic safety questions and concerns about vaccination, and then they met up with the juniors who were prepared to ask questions. The result was that the juniors who may or may not have thought vaccination was important had moved toward thinking it was more important as a result of the encounter with the more knowledgeable seniors. “We’re not talking about arm twisting,” she says. “We want them to give good information and feel comfortable giving that information.”

Nurses can also advocate for vaccination, sharing their own personal decisions, something Caines advises her students and colleagues to do. “If you vaccinate your child, you should tell your patients.”

“We need to shift immunization best practices,” says Caines. For a long time the discussion between provider and parent was brief and about making sure the parent was aware of the side effects and benefits of the immunization, and staying on schedule. “But we need to have a lot of a conversation around vaccines. We need to address their safety concerns, explaining how the vaccines are developed and how they are put through rigorous safety tests.”

These types of questions can be answered by nurses if they have the right training,” she says. “Nurses, who provide the immunizations and often spend the most time with patients and parents, are probably more important advocates in this than doctors,” says Alexander.

The Alexanders now have two grown daughters and...”

He graduated from the honors program and had a choice of...”

I grew up in an interesting time for infectious disease,” says Alexander. “My dad said pediatrics is very much like veterinary medicine,” he says. “You have non-verbal patients and very worried parents.”

As a medical student, he met his wife-to-be Michelle Buchholz, ’83 Nursing. The Alexanders now have two grown daughters and...”

After medical school, Alexander completed a residency in pediatrics and infectious diseases at Harvard Medical School and then moved to Duke University for his postdoctoral work, eventually joining the faculty there before moving to Chicago. He now performs research, teaches, runs clinics, and consults with other doctors. He has expanded the hospital’s HIV clinic to serve 200 families, and he has created a program for international admissions. “We see children with health issues like a soft palate or cerebral palsy,” as well as acute medical concerns like worsened tuberculosis. Alexander is now working on an immunization program with Chicago Public Schools and the city’s health department to provide children with affordable vaccinations and make the process easier. “If we can do it in Chicago, we can do it in Detroit or Seattle,” he says.

vaccines for children aged 11 to 12. “And while all three are included in the Recommended Childhood Immunization Schedule, only the Tdap vaccine is a school immunization requirement,” says Caines. “Providers really need to make the case that all three are needed. And that’s difficult if you’re doing it in a 10-15 minute office visit.” Most of the time, the kids come into the doctor for a sports physical and the provider has to squeeze in a number of other points. “We take on so much during this visit: sexuality, safety, sports participation, peer issues,” says Caines. “Where does vaccination fit into all the priorities?”

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The NEWEST VACCINE

More than 5 percent of cancers worldwide are caused by persistent infection of human papillomavirus. It affects at least 50 percent of the world population. There are more than 100 types known. Two are linked to cervical cancer. Often people who contract the virus never know they have it, says Alexander, Or if they have symptoms, they often clear up on their own.

With support from the National Institutes of Health, Alexander has researched the development of HPV infections. He has also worked on developing antiviral agents. He has authored and coauthored studies on both the scientific and sociological sides of the virus and vaccination against it. He has served as a paid advisor and consultant for the pharmaceutical company Merck & Co., Inc. He also leads continuing medical education classes for doctors and nurses on preventing HPV-related disease.
Part of the problem, says Alexander, is that this virus isn’t something that children get. “It’s not like chicken pox or measles, or even ear infections, that you might associate with childhood,” he says. “It’s something people encounter as adults, after they are sexually active.

The release of the vaccine, one that could prevent cancer, was big news a few years ago, with national impact. A series of three shots could encounter as adults, after they are sexually active.

As a graduate student in the College of Nursing at WSU in 2009, Kristi Ridgeway looked at the issues of perception and immunization for her master’s thesis. Ridgeway, now a health care administrator in Oregon, focused on vaccination rates of college-age females, a group for which HPV infection is prevalent due to their sexual activity. At the outset she noted that there hadn’t been much study as to whether this group found the HPV vaccination acceptable. She wanted to look at their personal health beliefs and see if there were changes to be made to encourage more to seek and accept the vaccine.

Ridgeway focused on freshman women. The participants in her study filled out a 54-question anonymous questionnaire. About a third of them had received at least one dose of the vaccine, though only 12 percent had completed the series. About half of the respondents said they thought they were not at risk of getting HPV. Forty-three percent were unsure if they were not at risk of getting HPV. Forty-three percent were unsure whether the vaccine would be risky to their health. Many thought they had the ability to prevent HPV infection by other means.

“Marketing of the immunization does not tell females of their susceptibility,” she noted. She, too, drew the conclusion that nurses could play a vital role in helping young women develop a realistic view of the virus and of cervical cancer. The nurses could also encourage them to put a high value on their health and recognize their authority to make their own health decisions.

“There’s a lot of people who are going to say it’s about sex,” says Alexander, who has encountered people who worry the vaccine may trigger an increase in unsafe sexual behaviors or give teenaged girls a cause of becoming sexually active.

“But I think this grossly underestimates the intelligence of women,” says Alexander. “Making the vaccine available won’t affect their sexual behavior.” A recent study published in the journal Pediatrics supports his statement. The study found that of nearly 1,400 girls, those who received the HPV vaccine did not show any increase in sexual activity.

“It’s not about sex, it’s about health,” he says. “We need to take the judgment out of it.

“Let’s take it out of the realm of sexually transmitted infection and put it in line with the normal flu...like the flu,” he says. “Who wouldn’t want to protect their children from getting sick?”

Control HPV — control cervical cancer

HPV causes cervical cancer

CERVICAL CANCER

begins on cells on the surface of the cervix.

It usually a slow-growing cancer that has few symptoms but can be detected with Pap tests.

99% of cervical cancers are caused by HPV.

Risk factors include:

HPV infection
Weakened immune system
Lack of exams and Pap screening
Smoking
Family history of cervical cancer

Cervical cancer causes about 4,000 deaths in women each year in the United States.

The vaccine is recommended for girls and boys aged 11 or 12.

Young adults aged 13 through 26 should get the vaccine if they didn’t receive it or complete it earlier.

Dealing disease — the efficacy of vaccines in the US

Coordinated immunization programs have dramatically reduced incidences of a number of infectious diseases. One great success reported was not only eliminating cases of polio in the United States, but also polio cases worldwide in 1962.

The last naturally occurring U.S. cases were in 1979.

Source: Centers for Disease Control and Prevention. Staff illustration

In 2013, an estimated 12,340 women were projected to be diagnosed with cervical cancer.

Death rate continues to decline by about 30% each year due to increased screenings.

HIV is prevalent due to their sexual activity. At the outset she noted that there hadn’t been much study as to whether this group found the HPV vaccination acceptable. She wanted to look at their personal health beliefs and see if there were changes to be made to encourage more to seek and accept the vaccine.
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.

Join Today.
Membership Matters.
1-800-ALUM-WSU alumni.wsu.edu

CLASS NOTES

1950s
Florence Dorothy Picha Wzko ('58 Home Ec.) celebrated her 100th birthday in August, proclaiming her slogan, “Don’t let the rocking chair get you!”

1970s
Bill Jordan ('70 Hotel and Restaurant Admin.) was appointed by Governor Jay Inslee to the board of Columbia Basin College.
Sara (Sally) Baurman ('71 Sec.) was honored as Washington’s Head Start/Early Childhood Education and Assistance Program Director of the Year in October.
Judith Bense ('72 PhD Anthro.) recently published a book: Hera: God Made Good by the Florida State University Alumni Association and the Phi Sigma Circle of Omicron Delta Kappa National Leadership Honor Society on November 16. She is a president of the University of West Florida.
Barbara Stevenson Jackson ('76 Ani. Sci.), co-owner of her family’s 10,000-head southern Arizona feedyard and ANCW president, spoke at the Washington Cattlemen and Cattlewomen’s Convention in Pasco in November.
Rick Rogers ('76 Ed.) has retired from his position as superintendent of the Oakley School District in Oakley, California.
Peter Anderson ('81 DVM) was selected for a Fulbright Specialist project. He will lead faculty-development programs and hands-on workshops at the Tsai-Chi University College of Medicine in Taiwan for two weeks.

1980s
Ronald F. Marshall ('71 Publ.) was honored as Oregon’s Distinguished Veterinary Alumni Award. “We’ve got to look at what’s in the best interests of the animals we take care of.”

Robert Franklin ’75, ’76, ’79
A new leash on life

by Eric Apalategui:

Over more than three decades, veterinarian Dr. Robert Franklin has advocated for animal welfare—even when those animals never set paw into his specialty practice in Beaverton, Oregon.

Franklin ’75 BS, ’76 BS, ’79 DVM is at the forefront of animal wellness and companionship issues in the Pacific Northwest, whether he’s working behind the scenes to save a stray or squarely in the spotlight ensuring that famed orca Keiko was getting appropriate medical care.

“Veterinarian Robert Franklin has helped change Oregon animal welfare laws. Photo Bill Wagner

The benefit of animals is far more a reality than I think the human medical community is willing to admit,” Franklin says. When he served on the executive board of the Oregon Veterinary Medical Association (OVMA), including a term as president in 1998, he helped convince state legislators to make animal abuse a Class C felony. He also

“He’s making it a better world for animals, and he’s making it a better world for people,” says Frei, who met Franklin when they both served on the board of what is now Pet Partners, a Bellevue-based nonprofit organization that promotes pet companionship, therapy, and service to improve people’s lives.

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helped change the state law for dogs who kill livestock, giving them a chance to avoid a death sentence if they could be retrained out of temptation’s way. Franklin later pushed for a law that required veterinarians to report suspected cases of animal abuse.

“We do know that there is a direct relationship between people who abuse animals and their tendency to be violent,” says people, such as Franklin.

“He’s always challenging the profession to reconsider our points of view on animal welfare,” says Kolb.

Franklin was really at the forefront of getting the organization to move in the right direction,” says Kolb.

Franklin was leading the state veterinary board when Keiko was at the Oregon Coast Aquarium, following his star turn in the movie Free Willy, recovering from living in poor conditions at a Mexican amusement park.

A rift over his medical care developed between the Newport aquarium’s vet and a California-based vet for the Free Willy-Kiko Foundation, which was planning to release him back into the North Atlantic Ocean in 2002, where he was captured as a youngster in 1979. Franklin and the WVMA demanded that an independent veterinary panel be brought in to make a recommendation about Keiko’s health.

“It wasn’t a yes or no, engineered-recovery, self-assembling panel,” says Trish Clark, a psychologist who started out as a pet behaviorist.

“We think Leo would be looking down and saying, you have to have passion and drive,” says Franklin.

Pavel Rudenko is producing a lubricant with nano-scale particles. Courtesy Hydro Research Foundation
could be conserved and his technology used in existing transportation systems, it would provide more energy than all that is generated by wind, hydroelectric and other renewable sources combined. He said the lubricant can delay the need for repair or replacement, then it may be widely adopted.

If his work goes as planned, Rudenko hopes the lubricant will save money for high-risk, high-reward private sector ventures.

With the support of the SBIR grant, Rudenko is building his business. The highly competitive grant program provides seed money for high-risk, high-reward private sector ventures.

Rudenko envisions starting off by targeting gear boxes in windmills. The gear boxes require high-gear boxes in windmills. The gear boxes would be for high-risk, high-reward private sector ventures.

Before WSU, Gillett returned to Nevada as a research scientist and then to a top-level executive overseeing 5,000 people at Genentech.

After WSU, Gillett returned to Nevada as a practicing veterinarian. However, “the romanticism that veterinary practice was starting to wear off,” she says. She knew she wanted to make a change when, on the same day in 1979, one older woman wanted a kidney transplant for her dog in renal failure and another owner wanted to know if it was cheaper to lance his cat’s abscess or euthanize the animal. The euthanasia was cheap, but Gillett lanced the abscess for a discount.

After completing her doctorate in comparative pathology at UC Davis in 1984, Gillett was recruited by Roger McClellan to work at the Albuquerque, New Mexico-based Lovelace Inhalation Toxicology Research Institute.

Dr. Gillett was one of the most productive scientists among a highly talented group of more than 50 scientists I recruited to the Lovelace Institute,” writes McClellan in his nomination letter.

Gillett published 37 papers for peer-reviewed journals or book chapters, many of them with multiple authors in different disciplines. She also contributed significantly to knowledge of the effects of inhaled radionuclides, especially their ability to cause cancer. At that time, Gillett passed the rigorous examination of the American College of Veterinary Pathologists.

She left Lovelace and joined Genentech in 1990. Over the next few years, her research there added the development of in situ hybridization techniques for studying tissue-damage and repair.

In the mid-1990s when Gillett left for Sierra Biomedical in Sparks, Nevada, contract research companies were considering the dangers of second-class scientists. But Gillett and her colleagues had a different vision and staffed the company with experts in multiple disciplines such as comparative medicine and pathology.

1950s


Hugh P. Crawford ('50 Ag., E.), 87, July 12, 2013, Ontario, Canada.

Donald Bruce Daview ('50 Mech. Eng.), 86, October 2, 2013, Seattle.


Betty Marjorie (Spiegleberg) Hyman ('50 Soc., Delta Gamma), 85, September 28, 2013, Spokane.


William Baxter Bowen ('52 Eng.), 82, October 27, 2013, Bellingham.


Richard A. Moore ('52 Ag.), 82, September 7, 2013, Spokane.

B. Russell Smith ('52 Arch. Eng.), 84, November 2, 2013, Deer Park.


Mary Sue Thompson ('53 Pharm.), 82, September 28, 2013, Collin.


Janet Lee Lancaster ('55 H.), 80, October 29, 2013, Neenah, Wisconsin.

Carlos Colmenares ('56 M.S. Chem. Eng.), 81, September 8, 2013, Tri-Valley, California.

Donald Sanford Olson ('56 Arch. Eng.), 79, August 20, 2013, Seattle.

John C. White ('56 Econ., Sigma Phi Epsilon), 89, September 13, 2013, Westport, Connecticut.

Jack H. Whitney ('57 Eng.), 82, Cheney, Idaho.

M. Helen Wood ('57 MA Ed.), 89, August 13, 2013, Spokane.


Halfford J. Yse ('58 Ag. Econ., Alpha Kappa Lambda), 79, October 23, 2013, Vancouver.


Barbara Ann Wilcox ('61 Music), 72, October 29, 2013, Oakland, California.

Alma Lucille Morris ('61 Ed.), 70, September 12, 2013, Spokane.

Kathleen Leavel (Ostby) Gallagher ('66 M.S.), 69, September 26, 2013, Elkfort, Indiana.

David Scott Senter ('66 Ed.), 70, July 26, 2013, Kirkland.


Dean Arnold Haugen ('66 MED Course), 77, October 22, 2013, Tarentum.

1960s

John Kingday Novell ('60 Bus. Admin., Sigma Chi), 76, October 2, 2013, Spokane.

C. David Burgess ('61 Ag. Eng.), 74, November 7, 2013, Walla Walla.


Barbara Ann Wilcox ('61 Music), 72, October 29, 2013, Oakland, California.

Alma Lucille Morris ('61 Ed.), 70, September 12, 2013, Spokane.

Kathleen Leavel (Ostby) Gallagher ('66 M.S.), 69, September 26, 2013, Elkfort, Indiana.

David Scott Senter ('66 Ed.), 70, July 26, 2013, Kirkland.


Dean Arnold Haugen ('66 MED Course), 77, October 22, 2013, Tarentum.
Tracking

“Since we started in 1952, we’ve never had a failure. We’ve never had a client come back and say, ‘We’re not happy.’”

Deborah Jan Peppone


1990s

Robert Craig Lollaba (’70 Psych.), 51, November 5, 2013, Mount Vernon.


Lynn Mardock Dudley (’70 PhD Soil Sci.), 58, September 2013, Logan, Utah.

Dale C. Mar (’67 Engr.), 50, September 22, 2013, Dallas, Texas.


2010s


Deborah Jan Peppone


For more information about WSUAA and alumni chapters visit alumni.wsu.edu or call 1-800-258-6978.
Climbing hills, and falling in the trenches, the “English Channel” (a small reservoir), soldiers jumping from landing boats from and the improvisation of commanders drama into the crackle of paintball guns. Players become World War II troops, Germany, and numerous other places, camaraderie in the documentary film captured in all of its chaos and gather for this monumental event, reenactment of D-Day on 710 private. The largest paintball game, an annual money or trophy to win, the participants of this magnitude. For a game with no competition, Gritzmacher wanted to be a filmmaker because they saw the potential for making an documentary. A Yankee on Puget Sound by Karen L. Johnson ’78 and Dennis M. Larsen ’68. The book is a good read, built on the lively first-person narrative of Allen’s letters home to Pittsburgh. Although it’s hard to match Allen’s adventurous storytelling, the authors’ own story of searching high and low for Allen’s adventures may be as exciting. The book is available online, found through public libraries and other institutions, as well as booksellers. But Edward Jay Allen is not a name most people will recognize. As is the case in much of history, momentous occasions have many witnesses, but we don’t always know their names. Most times we don’t hear their telling, either. But thanks to Allen’s, the letters he had preserved during his thirty years in the Pacific Northwest in A Yankee On Puget Sound. The book is a good read, built on the lively first-person narrative of Allen’s letters home to Pittsburgh. Although it’s hard to match Allen’s adventurous storytelling, the authors’ own story of searching high and low for Allen’s adventures may be as exciting. The book is available online, found through public libraries and other institutions, as well as booksellers.
Everyone could use a lift

by Julie Eckardt ’13

It’s 9:58 a.m. and Joleen Magers, program coordinator at Career Development, says that, in general, buildings are placed on top of a hill as a sign of importance, and some of the most resourceful have discovered an alternative, a special secret elevator that can be reached by zigzagging up the ramped areas. Otherwise, straight up you face a grade of 12 percent.

Some hills are steeper than others, of course, but it seems like no matter the point of origin or the destination, the elevation change is a brutal reality that students and faculty must face daily. But this generation of students has developed some tricks, tactics, and techniques to skirt some of the steepest of climbs.

A few are unavoidable. Off of Stadium Way, B Street, with its uneven sidewalks and lengthy route through Greek Row, clocks in with a grade of 14 percent at its steepest. The hill up from Rooney Park, appropriately named Suicide Hill because of its spirally staircased sidewalk and overall unpleasantness, is made especially painful by its average 13 percent grade. Those who continue up this path all the way to Thompson Hall face a grade of 15 percent.

But that comes with the steep price of a physically challenging campus. Still, if anything, Cougs are resourceful. To avoid the hills, or at least their steeper parts, many students and some faculty have adopted a series of shortcuts so they don’t have to dash into class breathless and sweaty, or spoiled by the elements. Some involve climbing aboard a bus and starting campus instead of hiking over the hill. Others include cutting through buildings instead of walking around them. And quite a few involve elevators.

The elevator from the parking lot beneath the Fine Arts Building, and its winter transport next door in the CUE building, provide an excellent means of shooting up the east side of campus.

Joleen Magers, program coordinator at Maintenance and Utilities Services, said the CUE elevator sees the most traffic. “CUE has classrooms that are used throughout the day, large groups of students are coming and going at the same times as classes start and end. It’s in the heart of campus so students use them to go up or down the hill to get to their next class, and there’s only one elevator in the building to accommodate everyone,” she says.

Tarr’s favorite, the CUB elevator, runs from the football practice field up past the steep slope and two stories of the CUB. But this elevator can be crowded and temperamental, especially if people are trying to be courteous and hold the door too long.

Some of the most resourceful have discovered an alternative, a special secret elevator that originates deep inside the parking garage under Terrill Library and goes right up to the mall, one of the highest outside points on campus. While the physics and geography of this elevator may confuse riders the first few times—it seems like you enter the elevator on the north side of campus and exit in the center—eventually they just accept the Cougar magic.

When traveling from Webster Physical Sciences Building to Glenn Terrell Mall, many consider rocketing through Todd Hall in its elevator. However, the wise are wary of the building’s heat during the colder months; they soon develop a habit of resting on their jackets during the ride.

Some elevators are just elevators, while others have their own character. Rather than take the seemingly endless stair to the fourth floor in Bryan, students and faculty opt for the elevator across the floor from the portrait of Dr. E.A. Bryan. Much like its similarly aged friends in Avery, Johnson, and Commons (the oldest elevator on campus, installed in 1924), this elevator could be a horror movie. Creaky, with flickering lights and old carpet, riders are left thinking, “When will they find my body?”

Terrible attempts at phone communications are sometimes met with an unapologetic signal to hang up.

While it takes a few years, and the development of a good set of “Coug caloris,” eventually students learn the best routes to almost everywhere on campus.

“I think by now I have all the shortcuts figured out,” says Tarr. “But I’m always amazed by the places people will go just to avoid the hills or stairs.”

Julie Eckardt interned with Washington State Magazine for two semesters. She graduated in December with an English degree with an emphasis in rhetoric and professional writing.

Shoki Pham also interned last fall as a digital technology and culture major, minoring in computer science, and has now graduated.

Take a video tour up the WSU campus at www.wsu.edu/campus/maps/home.html.
MYTH #44 in the PLANNING YOUR ESTATE SERIES

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