Schweitzer Engineering Laboratories offers a complete range of solutions that improve how electric power is delivered. Our mission is simple—make electric power safer, more reliable, and more economical.
The learned observer: Part of the nature of a writer—but then again, perhaps I speak only for myself—is the constant reimagining of one’s self and context, the repeated immersion in myriad and esoteric subjects, all the while desperately hoping for infinite reincarnations in order to fulfill all the things one would like to understand, experience, and be. On the other hand, being a writer embraces the perfectly paradoxical satisfaction with one’s role as a learned observer.

Given the skeptical writer’s reluctance to rely on reincarnation, the only way to grasp these multitudinous desires and perspectives is to be the ultimate generalist. And what better place could there be for such a person than a university? Well, the only thing better is being with a magazine that covers a university in all its manifestations. How else would one have the opportunity to have breakfast with an esteemed poet or lunch the same day with an equally esteemed winemaker? Or snorkel with a marine scientist? Or be granted insights of a dissertation on atomic culture while the dissertation is in progress? Or immerse oneself in a tale of obsession, scholarly collecting, and crime? And at the end of the experience? Guaranteed publication. Well, almost guaranteed. The result does have to be literate, correct, and engaging. Spectacular, even.

Nevertheless, I admit to a certain perverse pleasure in breaking it to young writers, when given the opportunity, that writing never becomes any easier. In fact, I find the opposite true. One becomes more self-critical. The more you know the craft, the more aware you are of both shortcomings and potential. At a certain point, the process of putting one word after another becomes an indescribable mixture of the excitement of discovery and the pure slog of getting something down on paper within a deadline.

All you can do is continually hone an ability to observe, stripping away the distractions to focus on the matter at hand. Several years back, I quit taking a camera with me when working on a story. No matter how much I wanted to be both a writer and a capable photographer, I finally admitted you can’t do both. At least I can’t. Photography and writing are two very different crafts, two very different kinds of observation.

For any given story, a mere fraction of what you observe makes it into the text. And what does one do with the rest? Well, enjoy it. You have become a momentary expert. And then, given the writer’s relatively short attention span, you have the incredible opportunity to start all over on a new story.

And I do overstate. No matter how difficult—this is a job, after all—writing about the University and all its manifestations is an extraordinary opportunity to observe experts at work, to observe one’s understanding and insight, and to observe the truly exquisite sanctity of knowledge, vision, and professional skill and understanding.

Tim Steury, Editor
Three Great Ways to Belong to One Great Organization.

Today there are over 70% more members of the Washington State University Alumni Association (WSUAA) than just a few short years ago. That’s huge! They joined to support WSU, take advantage of the ten-fold increase in 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.

Introducing Platinum Life.

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 the 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 WSUAA and WSU. For information about the three great ways you can belong, and the many benefits and services members enjoy, contact the WSUAA.

Washington State University Alumni Association
12345678
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
GROWING A CLEAN TECHNOLOGY FUTURE AT THE ORGANIC SMART FARM

Imagine a farm where home-grown energy from windmills and solar panels powers everything from sensors to greenhouses. A place where computer science and architecture meet organic farming, where crops and animals sustain each other, and where students learn by living here. This is WSU’s new Organic Smart Farm, taking shape inside one of the nation’s leading programs in sustainable organic agriculture.

WSU. Big ideas grow here.

Bones of contention

by Eric Sorensen

Thirty-five years ago, Carl Gustafson, an associate professor of archaeology at WSU, rubbed his fingers over a muddy bone and found what looked and felt like a projectile tip. That simple discovery, and the eventual realization that humans hunted mastodons in North America, came to define Gustafson’s career. One can also argue that it is among the most significant discoveries ever to come out of Washington State University.

Last October, new research in the journal Science said the bone and its accompanying hand-hewn projectile dates North America’s earliest known inhabitants to 13,800 years ago, 800 years earlier than the Clovis people, long regarded as the New World’s oldest culture. That conclusion was vindication for Gustafson, who had faced several decades of skepticism. But it was only one in a series of discoveries, the sum of which makes one of the state’s great scientific stories.

First came Manny and Clare Manis’s discovery of Sequim while on their honeymoon in 1971. They bought 16 acres in Happy Valley and moved up from California in 1975, planning to homestead. Manny, a machinist by trade and handyman by vocation, laid the bricks for their house and fixed the pin-setting machines of the bowling alley they bought.

"Manny could do just about anything, including finding mastodons," says Clare Manis Hatler, who remarried after Manny died in 2000.

In 1977, Manny discovered that the dry summer had drained the bog in front of their house enough that he could start digging out a pond with a backhoe he had rebuilt. He had dug a trench halfway around the area when he pulled up what looked like a curved, four-foot-long log, followed by one six feet long. The second one had a chalky white end, and when he cleaned it off for a better look, he realized it was some sort of elephant tusk.

Clare tracked down Richard Daugherty, the WSU anthropology professor, and a little more than a week later a team that included Gustafson started picking through the earth Manis had dug up. A couple hours in, Gustafson chanced upon the rib fragment and felt a small piece of bone protruding from it. Sediment around the bones was deposited soon after the last Ice Age glaciers, so the researchers assumed the site was 13,000 to 14,000 years old. If that projectile point was indeed from a human, it was evidence of the oldest human settlement in the Northwest.

Three days after the researchers arrived, field supervisor Delbert Gilbow washed loose a molar tooth that he quickly realized came from a mastodon. Now the researchers were really on to something: the first evidence of humans hunting mastodons in North America.

Daugherty took Manny and Clare aside and explained that this was now an important find.
“They became a part of their land, which they willingly shared with us,” he writes in a book sold in Sequim’s Museum & Arts Center, which has an exhibit featuring a mastodon mural, bones, and a cross section of the dig. “We talked of ducks and geese and blueberries, and a pond that someone will be able to go of that still lurked around a pond that once was.”

Raising queens

by Haanel Saderman – Few things are as mysterious and amazing as the life of the queen bee, says bee breeder Sue Cobey. But a few days after she hatches from her cell, the queen’s fertility is optimal and she has a short time to mate to rest of her four-year life.

The timing is critical, says Cobey, as she describes the process to a roomful of Puget Sound area beekeepers. If the weather is warm and mild, she leaves the hive. Dying low at first to avoid her own colony’s drones before heading to a place where drones from other hives are waiting for a queen to fly by.

So many as 50,000 drones from 200 colonies could be in an area waiting for a queen, says Cobey, who splits her time between Washington State University and the University of California. There were the Harry H. Laidlaw Jr. Honey Bee Research Facility. Over her first few days the queen will make several flights, mating with up to 15 drones a trip. Cobey tells the beekeepers who, even with their years of bee experience, are still amazed to learn these new details. This takes place at least six feet above ground and supplies the queen with enough sperm to produce eggs for about four years. “She saves a little bit of sperm from all the drones she mated with,” Cobey explains.

Then, in about six more days, the queen is ready to lay eggs and start producing a new diverse generation of worker bees to tend to her and her hive. All this is accomplished enough, but then there are impediments provided by humankind.

The propensity was also tested for virus, and the offspring bees were kept in quarantine over winter in the Palouse, miles away from most honey bee enterprises. By doing this, Cobey hopes to improve the bee stock, with more resistance to diseases and less susceptibility to virus, mites, and the mysterious Colony Collapse Disorder.

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and either a restricted or absent queen. “Stuff the box with lots of bees,” Cobey tells the beekeepers. “I want a beard out the front.”

Detecting the lack of a queen, the nurse bees will feed royal jelly to the newly hatched worker bees. As Cobey explains the process, the larvae are completely clear. Using tiny tools, beekeepers can place their selected larvae in queen cups, larger cells created by the worker bees especially for raising queens. Then, “it’s all about the food,” she says. “Cobey. The workers have four days to feed the queen larvae an exclusive diet of royal jelly, a bee-produced food that is much higher in nutrition than the meal that is usually fed to the larval worker bees. The queen larva will require up to 1,800 feedings in the four days before she pupates. The workers, by contrast, each receive only 140 feedings over five days.

The queen emerges in 16 days and soon after is ready to mate and start producing her own larvae. After she lays some eggs, the beekeeper can move these larvae to the queen cups and new the queen to a new hive stocked with bees. Then the process of feeding royal jelly in the queen breeding setup can start all over again. It’s not that difficult, says Cobey. “There seems to be kind of a mystique about raising queens,” she says. “But it’s worth doing. You learn so much more about bee biology.”

With increasing challenges of pests and disease, selective breeding and genetic diversity offer the best long-term solutions, says Cobey. She says she still shares some of the lines she collected in Europe like the Caucasian subspecies, which gets most active in full summer and may be a key to developing hardier bees. “It’s not ideal for the California pollination season, which is earlier and warmer than ours, but on cooler or foggy days when the Italian bees wouldn’t think of leaving the hive, these bees will still work and hunt for flowers. “The goal is to get a bee that does very well in the Pacific Northwest.”

The company that eats together

by Larry Clark 94  Rebecca Portnoy started thinking about shared meals and came across a memory of closing time in a particular restaurant.

watch a video about Cobey’s work with queen bees at wsm.wsu.edu/wvideo/queenbee

“I had been at a Seattle sushi restaurant at the end of the night, and the leftover sushi was being moved to a communal table for a staff meal,” says Portnoy, an assistant professor of management at WSU Vancouver. “I worked at restaurants and was baffled and amazed that they were going to take the time at the end of their shift to eat together.”

When she as a waitress, Portnoy usually saw people take off right after their shifts. She wondered, what was going on in the sushi with custodians at the Pullman and Vancouver campuses. They wanted to see if the sharing of a family-style meal could shed light on the development of relationships.

They heard from all participants that the freedom to talk removed them from certain work constraints, allowed them to connect personally, and even let them disclose complaints about work. “It seemed no matter who we talked to, custodians or faculty, the experience of going out to a family-style meal could shed light on the development of relationships.”

The shared meal also equalizes relationships among coworkers. “There was this potential, because of the absence of a queen, the experience of employees who join together for a communal meal for a staff meal or a family-style meal could shed light on the development of relationships.”

Still, let us consider that little question, How do you create a world-class wine? Barrett knew his way around the wine business. He and his wife had been involved in the industry in various roles since 1994. “Our initial thinking was to get a number of boutique wineries that had excess capacity to work with us and craft wines.” So he went around to different wineries, tasting and thinking. “Most wineries in Washington are pretty good,” he says. “At first go through the wineries, they were all good. But often a wine or two would stand out. And the name ‘Cheryl Jones’ kept popping up.”

ABOUT THREE YEARS AGO, Monte Regier returned to Seattle from a year working on the hospital ship  *American* off the coast of Liberia. Suffering from culture shock, remembering friends who go to bed hungry every night, he sat with his friend Martin Barrett over a glass of wine and decided he wanted to find a way to make a wine better. And then came the idea. “You know, Monte,” said Barrett, “I think this glass of wine could feed a kid for a day.”

One can imagine Regier’s skeptical smile. “Give me 30 days,” said Barrett. So Regier started researching the idea of adding some to the blend and convinced himself that they could make world-class wine and “do it in a way that makes us feel good about ourselves.”

At this point, you might be pondering at least a couple of obvious questions: First, why would a reasonably nice winery even consider starting yet another winery in the midst of not only a recession, but also a worldwide glut of wine, world-class and otherwise? Second, if you did end up making a few thousand of wine, what would you do with it away? And then there’s that odd juxtaposition of wines and people going to bed hungry, concepts that don’t ordinarily occur on the same page.

Nevertheless, Regier bought the idea, and they started drawing up a business plan. And then, says Barrett, “We pulled together a gift the sharpest under-40-olds we could find around our dinner table for five or six hours” as a focus group.

“When we were through, we threw away 90 percent of the business plan,” says Barrett. “The only thing we kept was, the quality of wine has to stand on its own merit, and we have to be absolutely clear about what it does, what’s the benefit behind it. This glass of wine will feed a kid.”

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Cheryl Garber (JONES GRADUATE) received a degree in food science. She fully planned to go into the dairy industry.

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Within five years, she was the white-wine maker at Ste. Michelle. In another five, she was the head winemaker. But winemaking, even at Ste. Michelle, isn’t everything. She quit the vocation briefly, to raise her children, then was drawn back in. In 2001, when she was winemaker at Silver Lake and D’Stefano, Washington State Magazine featured her on the cover of our first issue.

Since then, she has built a reputation for her blending expertise, consulting and blending for numerous wineries around the state.

And that’s how Barrett found her.

“When I explained the idea to her,” he says, “she just lit up. ‘I get to craft great wines and feed people at the same time!’”

**KYLE DOHERTY ’07 POURS ME A GLASS of Generosity, one of the products of this merger of a great idea and great taste. They call that nonprofit Sozo. Nicola Towles ’13 runs through the Gnash: Generosity, a Syrah blend from the Yakima Valley and Horner Vintage Hills. Potential, a Pinot Noir from the Willamette Valley. Abundant, a Mourvèdre blend from the Wahluke slope. Bountiful, a Yamikna Cabernet; Humanity, a Riesling from vineyards north of Goose. On each bottle is a number, which represents how many meals the sale of that bottle will buy. Generosity buys 10, Bountiful buys 25, Humanity buys 5.

Have I mentioned that Sozo Friends, the nonprofit that produces these wines and distributes the proceeds to food banks, is a winery only on paper?

“Barrett explains how it came to be. Jones told him she found this great Tempranillo, a Spanish grape that is doing very well in Washington. She gave him a taste. ‘What do you think?’”

“Good.”

“I didn’t know anyone blended Tempranillo with Syrah,” says Barrett. Regardless, “Oh that is really good.”

“Except it’s got this big hole in the middle,” said Jones. He hadn’t noticed.

Another tweak.

“Now I see,” said Barrett.

“But I haven’t closed the hole, I just made it smaller.”

She remembered a Petit Verdot that she’d tasted a couple of months before. It became 1 percent of her blend, and she put it all in new oak for six weeks.

“The whole wine came together,” says Barrett. “It’s amazing to me.”

**WHEN DOHERTY OR TOWLES, whose job titles are “community developer,” walk into a restaurant to pitch Sozo wines, they first let the wine do the talking.**

Once a sommelier or chef or whoever makes the wine decisions decides he or she is interested, then they get the rest of the story. In the 18 months since Sozo launched, they have placed their wine in 75 restaurants in Seattle and Tacoma, including Canlis, Lark, Flying Fish, and other restaurants esteemed for both their menus and their wine lists. When the wine sells, Barrett writes out a check to the food bank or other charity of the restaurant’s choice, then delivers it personally to the restaurant, so they can send it. He does so both for the sake of transparency—”we said it was going to happen, and it’s happened”—and “to build a sense of community.”

In those 18 months, sales have produced just shy of 60,000 meals.

“WIN. WIN. everyone agrees. Indeed, who can lose?”

Yet there’s one more lingering, as yet not-quite-answered question: Sozo is indeed making a “boatload” of money. So why are they giving it away?

“We believe Jesus call us to love the poor,” says Barrett. “We are committed to great wine. Thanks to Cheryl, we can deliver on that. But our passion is the poor. That’s what drives us.”

“I want to combine my passion for business,” says Doherty, “with how I love serving and being with people.”

“It’s a different way of doing business. It’s not just the bottom line, but how it is affecting our community and people around us.”

**Sozo:** to save, keep safe and sound, to rescue from danger or destruction.

Opposite, from left: Martin Barrett, co-founder of Sozo Friends, and Kyle Doherty ’07, who as a “community developer” first promotes Sozo wine, and then more deeply its mission. Cheryl Barrett ’76 has turned her talents for blending wine toward feeding the poor. Photo: Matt Haggard
Mike Thomsen is the original seat at Tacoma's Cheney Stadium. Photo: Jeff Woodward

Thomsen's parents Donald '53 and Deyona '53 had met at freshmen orientation at Washington State College in 1949. They married as seniors. His father's enrollment through ROTC led to service in Korea. They settled into University Place, at the time a developing suburb of Tacoma. At that time, the town embarked on a project to woo the San Francisco Giants' Triple-A farm team to Tacoma. Donald Thomsen watched eagerly in the late 1950s as the town embarked on a project to woo the San Francisco Giants' Triple-A farm team to Tacoma. Local business leaders Bert Canton and Clay Huntington joined up with the local government to build Cheney Stadium. Thomsen's parents took him to the stadium. Thomsen was young, but he loved watching the games. His father took him there every season.

In the fall of 2010 when the Rainiers, with a newly-renovated stadium, went up for sale, Thomsen was ready. "Fierce City, the City of Tacoma, and some local folk had put about $1.5 million into the stadium there," he says. There were three times the number of places to buy food and four times the number of bathrooms. "And great seats," says Thomsen. "And more opportunities to attract fans."

"Of course, the price was a little bit higher than before," he says. Still, he liked the general manager. It was a package deal where he could buy the team and keep the management in place. He and his wife hired Wells. Wells W. at Trilogy, and quickly put his brain into organizing the purchase and getting through the bureaucratic process of buying a team. Wells was in charge of the overall purchase, giving Thomsen the time to focus on the Rainiers. "This is a business that I was going to a chat course in what is to buy a team in minor league baseball. Wells was up to the task. "It couldn't have been a better mentor to learn from while going through it," he says.

For the Seattle SuperSonics.

"And the new stadium is beautiful," Thomsen boasts. He also followed the team to many games at several other Triple-A stadiums. "I was able to steal good ideas from each of them," he says, citing firewalls, fanfare, and food.

Because the Rainiers are where the Mariners keep their extra players, "We can provide a real home to our minor league baseball," says Thomsen. "But it's just not a baseball park to us," he says. Thomsen is the perfect spot to spend a summer evening close to home.

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In 1962 Chinook

When the Murrows first arrived they made their home in a tent near Samish Bay. After a few months, they moved to the nearby community of Blanchard, hoping to find a better living for themselves and their family. They worked as farmers, and Edmund became a railroad brakeman and engineer for the Samish Bay Logging Company. While he was there, the Murrows had their first child, Lacey.

The Murrows' eldest son, Edward, was born in 1913. He was named after his father, who had already witnessed the dawn of the automobile and the beginning of the Second World War. Broadcasting from London when Lacey stepped away from the DOT, McAbee says, "There's so much more to their story, says McAbee. For example, at the young age of 28, Lacey was appointed the Washington State Director of Highways. Though it was during the Great Depression, a number of significant projects were built with his oversight, including the Deception Pass Bridge and the first Tacoma Narrows Bridge, now known as Galthrie Pass Bridge because of its bucking and breaking spot in a 1940s windstorm. While Ed and Lacey were ambitious, Dewey was the outgoing young man who dropped out of college to go to South America and prospect for gold, taking his young family with him. The Murrow boys 'Murrow Brothers,' is broken into several parts.

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McIntyre is looking at the effects of stormwater in brake pads. State legislation phasing out the use of copper ‘great,’ and chomp!”

Predator.

Motion-sensitive cutthroat trout, a common presence of copper. The normal salmon will freeze in the frontal lobe, effectively hiding from its surroundings, “students get out of their cars to use something that also gives them physical activity and gets them more connected with their surroundings,” she says. Green bikes aren’t the only new sight around campus. Crimson-colored cargo-themed buses now prowl the hills and streets of Pullman, giving more than 1.5 million rides per year to students, faculty, Pullman residents, and visitors. Pullman Transit has

What moves you at WSU

by Larry Clark ’94 :: One fuzzy old photograph of construction in downtown Pullman shows images of early days in the city: a foundation by hand, a horse-drawn carriage on the street, a bicycle leaning on a post in the foreground. The photo has no date, but that bike, like a zeric dropped by a time traveler, looks remarkably modern.

You won’t see a horse-drawn anything on Pullman’s streets now, except in parades, but you still see bikes among the buses, pedestrians, and a lot of cars.

Bridgeitte Brady, director of Washington State University’s Transportation and Parking Services, envisions bike use on campus increasing over the next decade and sees a need to plan for it. In that vein, WSU hosted a bike forum last year with transportation expert Mia Birk, former manager of the City of Portland’s bicycle program and author of Journeys: Pedaling Toward a Healthier Planet. In her visit with local and university leaders, bike riders, and others, Birk praised Pullman’s trail system, but pointed out areas for improvement. Among them: “Stadium Way is very challenging,” says Brady. “And we only have one or two bike lanes on campus.”

So it’s time for a change, says Brady. “We want to help students, faculty, and staff avoid Wsu’s carbon footprint.”

The lightweight gray metal bikes are currently parked in seven locations around WSU, as well as ridden around Pullman and out on the Chipman Trail to Moscow.

The bikes are for students and university employees, who can use their Cougar card to unlock a bike and borrow it for up to 24 hours at no cost. Some long-term bikes are also available for up to seven days.

BIXI operates shared bike programs around the world, but WSU is the first university to use the bikes, according to Jamie Bentley, coordinator of the year-old program through University Recreation. The program has become extremely popular, says Bentley. “We’ve had about 6,000 users and 35,000 rides in the last year. Students love them.”

As an extra benefit, “students get out of their cars to use something that also gives them physical activity and gets them more connected with their surroundings,” she says. Green bikes aren’t the only new sight around campus. Crimson-colored cargo-themed buses now prowl the hills and streets of Pullman, giving more than 1.5 million rides per year to students, faculty, Pullman residents, and visitors. Pullman Transit has
operated the bus system—along with a popular Dial-a-Ride service—since 1979. Now the buses have a new look and lower emissions. According to Pullman Transit manager Rod Thornton, the system is one of the most efficient in the country. “Most transit systems run 20, 25, or maybe 30 passengers an hour. We average, year round, 40 passengers an hour. You get all the expenses, you’re looking at 100-150 passengers an hour,” he says. Students, faculty, and staff ride for free, as do visitors on football game days.

The bus system in Pullman has always been successful. “People said when we started, if we had 1,000 riders a day that would be good. We did that the first day,” says Thornton, who was Pullman Transit’s first employee.

The next generation will be even more efficient, with cleaner diesel hybrid engines.

Bikes and buses are just part of the story. Students sometimes need to travel farther. For that they can borrow a Zipcar. WSU signed a contract in August 2011 with the well-established car-sharing service. Students and others can pay a $25 annual fee and hourly costs to use a vehicle.

One Zipcar can take five single-occupancy vehicles off the road, another benefit for WSU’s sustainability initiative, says Brady.

Of course, many students still have cars, but often use an even older form of efficient transportation: sharing rides. With new system at WSU called Zimride, car-sharing has entered the era of social networks. Students sign up, fill out a profile, and post or search for rides. They can select riders or rides based on cost, destination, or even musical taste.

As many students and former students know, sharing a ride can lead to some lasting memories and serendipitous occasions. One Zimride from WSU caught a ride to the airport with Ethan, a University of Idaho student who told her a story about a backpacking trip with friends in north Idaho. They ran out of food and, while hitchhiking back to their cars, were picked up by an older gentleman and his nephew. The Zimride smiled and said that offer of a ride sounded like something her grandfather would do.

“Well, to see my Grandpa and my cousin. Ethan and his friends went back to our cabin for dinner and met my whole family,” she says. “You should have heard my Grandpa when I called to tell him who had the line waiting for him.”

THE CULTIVATION OF RASPBERRIES is, compared to that of other fruits, a relatively recent endeavor. Rubus idaeus, “the bramble bush of Ida,” purportedly grew on the slopes of Mount Ida and was enjoyed by the residents of the city of Troy. Ida, the nursemaid to the infant Zeus, pricked her finger while picking the original snow-white berries, staining them red from that time forth. But it was not until the last four or five hundred years, within D.L. Jennings in his Raspberries and Blackberries, that raspberries have been domesticated.

Today, nearly 60 percent of U.S. red raspberries are produced in Washington. Almost all of the state’s raspberries, which totaled 70 million pounds last year, are grown within a few miles of Lynden, in the northwest corner of the state, just south of the Canadian border.

And most of those approximately 5,500 acres of raspberries are one variety, the Meeker, which was released in 1967 by WSU’s first raspberry breeder, Chester Schwartze.

Schartze started breeding raspberries at Washington State College’s Puyallup Research and Extension Center in 1932. Area raspberry growers had approached the station four years earlier requesting help in developing a variety that had better winter hardness than the Cuthbert variety they were currently growing.

Meeker is obviously a fine variety, a real workhorse. It offers great fruit quality and yield, says current raspberry breeder Patrick Moore. Its only problem is it is susceptible to raspberry bushy dwarf virus. The virus, which is transmitted on pollen, causes partial sterility and degrades the berry. Raspberries are composed of small sections called drupelets. Instead of a normal hundred or so drupelets, says Moore, a berry afflicted by the virus will have far fewer, causing it to crumble when harvested.

This means the fruit cannot be sold as “individual quick frozen,” the highest grade of processed berries.

This results in a huge financial hit, says Moore. To offset its effect, fields must be replanted every six years instead of a normal 10 to 12, an enormously expensive procedure.

It is no wonder then that a top priority in Moore’s breeding is virus resistance.

“My top priority is virus resistance,” says Moore. “Flavor, color, firmness, yield, machine harvestability, root rot tolerance, virus resistance,” says Moore, listing off the traits he seeks in a new variety, not necessarily in that order.

Nearly ninetynine percent of Washington’s raspberries are harvested by machines for processing, so the berries of a commercial variety must be firm enough to stay intact through harvest.

Plant breeding is a matter of compromise and tradeoffs. A breeder pursues as many of the desired traits as he or she can get, says Moore. WSU has released 12 raspberry varieties over the years. Besides Meeker and Schwartze, Bruce Barret was the raspberry breeder from 1979 to 1980 and Tom Stiles from 1981 to 1987. Moore has released six raspberry varieties since he started in 1987. He is responsible for breeding strawberries and has authored three varieties, out of a total of 13 developed by WSU breeders.

Breeding a new variety is clearly a long process, generally taking around 14 years. It entails not only the reward of a successful new variety, but also a share of frustration.

When I ask Moore if he has a favorite taste, his answer is immediate. “Cascade Dawn,” a variety that he released in 2005. Undeniably, the berry does not come off the cane easily, making it hard to harvest. As a result, it is not being propagated.

Tulalip, from British Columbia, has good flavor, says Moore, but is pretty susceptible to root rot.

“One of my technicians prefers Meeker,” he says. “The freshest berries, and that’s tantamount, of course, come from one’s own patch.”

The first thing to look for in planning a raspberry patch is the raspberry variety, says Moore. New choices for the backyard grower are Meeker, Conewax, Childwax, and Willamette, all of which are adapted to a Northwest climate. Others include fall-bearing Summit, Prelude, Jaclyn, and Josephine and summer-bearing Cascade Delight.

Perhaps the ultimate in raspberry flavor comes in a bottle. Winemaker Nicolau Quillé makes an intense framboise dessert wine at Pacific Rim’s winery in the Tri-Cities from raspberries grown by Mike Vil and Jeanne ‘67 Youngquist in Mount Vernon.

Quillé uses a hybrid clone selected for its rich flavor and color. Grown on 14 acres of the Youngquist farm, the ‘Morsion’ clone grows nowhere else. Quillé first fermenters the raspberries just a bit, then soaks them in high-proof grape alcohol for 30 to 35 days. The final product is 16.5 percent alcohol and defines “raspberry.”

Find recipes for raspberry drinks at Read more about WSU’s sustainability plan at www.wsu.edu/extra/sustainability.
MANAGING NEMO

THE ISLAND OF HAWAII, lest it be confused with the state of Hawaii, is often referred to as the Big Island. In fact, it is the biggest of the Hawaiian Islands. But in many ways, it is like a small town, as Brian Tissot has once again realized upon returning earlier this year.

On short notice, he has scheduled a talk in the Kealakehe High School Library in Kailua-Kona, the largest town on the island’s west coast, also known as West Hawaii. And in the days leading up to the talk, most everyone he meets has heard he will be speaking. Even an old acquaintance from across the island in Hilo, where Tissot was once a University of Hawaii professor, caught wind of the talk. A traveling companion swimming off the town’s waterfront met a woman from Alberta, Canada, who has also heard about it.

Tissot, accustomed to crowds of ten or so people on the WSU Vancouver campus, is excited about the prospect of a full room. He is nervous, too. His subject—the West Hawaii aquarium fishery, home to an array of charismatic, brightly colored creatures like those in the movie Finding Nemo—has for years been the subject of often bitter debate and worse.

“There were death threats,” he says on the flight over, recalling a particularly intractable period in the ’90s. “People were going on collectors’ boats and letting fish out while the collectors were underwater. All sorts of bad stuff was going on.”

Since then, Tissot, a marine scientist, has become a key figure in the fishery. He has documented the impacts of aquarium collectors and the ability of the reef to recover when areas are closed to collecting. He and his colleagues have shown how protected areas can “seed” unprotected areas with fish and larvae. In the first study of its kind, they mapped genetic connections between fish and their offspring—“a needle-in-a-haystack accomplishment with acres of thousands of square miles of water.”

Brian Walsh, an aquatic biologist for the Division of Aquatic Resources and the state’s top fish scientist in West Hawaii, has also heard about it. A traveling companion swimming off the town’s waterfront met a woman from Alberta, Canada, who has also heard about it.

To Tissot, the West Hawaii fishery shows how a mix of science- and community-based management can reconcile competing interests and points of view to conserve a treasured ocean resource. Alongside similar efforts off Florida and Australia’s Great Barrier Reef, it could be a model for conservation activities elsewhere. In particular, Tissot and a number of other researchers are concerned about the trade in aquarium fish, corals, and other items from the western Pacific’s Coral Triangle, home to the richest, most diverse reefs in the world and a region of relatively laxers collecting. So while Hawaii is relatively small, he says, “what we learned there is helping us think about the big picture.”

Central to that is the network of people needed to forge a consensus on what directions to take.

“We’re studying people as much as we’re studying organisms,” he says. “Fishery management is more than just fish.”

In a way, the fishery is a tidy, self-contained example—an aquarium unto itself—filled with the elements common to so many other fisheries struggling to responsibly manage stocks in the face of a hungry, growing, and interconnected global economy. It is subjected to deep and responsive scientific study from the likes of Tissot, Walsh, and others. It has several marine protected areas, landings of the conservation world whose value reaches well outside their borders. And its voluntary management council has poured thousands of hours into smoothing out more than a decade of controversy to reach a consensus on the fishery’s direction.

To Tissot, the West Hawaii fishery is a marvel of modern marine policy, an admirable blend of conservation science and sociology, or “integral ecology,” capable of pointing the way for embattled fisheries around the world.
San Diego. Footage of a spring break surfing trip in 1975, while dad the younger Tissot. Rear admiral. This had several implications for aircraft carrier USS Korea and Vietnam, was the third Navy aviator end of my career."

ous, impartial, redundant, and peer-reviewed scrutiny of science. He has opinions, but he rules. His terms of engagement call for acknowledging and giving suits him and blows off the rest. A scientist has to play by different rules. He is an outlier among the aquarium trade’s critics: brash, hyperbolic, unyielding, and prone to ego-flavored pronouncements that begin "I, Snorkel Bob." His website links to a warehouse summer movie camera, or thought he had before realizing he forgot to load it with film.

"Just figured I'd have to remember it," he says. "And I have." And in a more familiar to many Hawaii visitors, from snail to hare to the out of Lost, he got back to the island. In 1992, not long after he got his doctorate, he was hired as the first faculty member in a new marine science group at the University of Hawaii at Hilo. It was a busy time. He taught 15 different classes in the first two years, sometimes staying just a chapter ahead of the class. He started teaching two-week summer workshops in quantitative underwater ecological surveying techniques, or QUEST, training scores of divers to monitor the health of reef communities. He also gave public talks about coral reef conservation, ecology, and human impacts like pollution and overfishing. At a meeting in 1994, Lisa Choquette’s Dive Miami, a scuba tour operator, told him aquarium collectors were destroying the West Hawaii reef, with yellow tang on one hand," she says, referring to the most frequently collected fish. "Those were dark years, but that’s when people started getting upset about it."

Furthermore, a lack of legislative action, Owens formed The Lost Fish Coalition and began pushing for a total ban on fish collecting. She got 4,000 petition signatures in favor of the ban and wrangled 400 pieces of testimony to committees weighing the proposal. Shortly before a hearing on the ban, she picked up the phone and heard a voice say, "You’re dead. You just don’t know it yet."

A strong ocean surge sent water in and out of the black lava cliffs and underwater caves. Against this backdrop, sheets of fish swelled back and forth, going with the flow, moving in pick at rocks before streaming out. Tissot documented the scene with an underwater Millennium movie camera, or thought he had before realizing he forgot to load it with film.

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ABOVE THE WATER, scores of tourists are taking advantage of the 65-foot-long Truck II’s sybaritic delights: the high-dive platform, the 20-foot water slide, Mai Tai specials at the bar, lunch.

Underwater, a fair number of guests in snorkels and scuba gear are drinking in the scenery that gives Hawaii’s coral reefs an Up to that point, Tissot was focused on the nitty-gritty of the research: homesies, taxonomy and evolution, diet. But as the abalone withered, Tissot’s conservation ethic grew, shifting "from science for science’s sake to protecting the things Have."

EN 1979, Tissot was basking in one of the Seven Hoods of Hana, on the island of Maui, when he spotted a long form in the distance. He wondered out loud what it was.

“That’s the Big Island,” said his brother.

"You go to a place where life was just teeming and suddenly it was empty,” he says. “It was haunting. It was very sad.”

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Tissot is navigating his rented Chevrolet Impala along the waterfront’s Ali‘i Drive on his way to a dive shop, then to Kahuhalu Beach Park for some snorkeling. He passes one of Snorkel Bob’s ubiquitous dive shops, and the thought of its owner and namesake, Robert Wintner, has Tissot seeing red. And purple. And green.

As the aquarium fishery issue continued to simmer, Tissot started thinking about the reef’s people as well as its fish. He used something called “integral ecology,” which applies the theories of biocentric and New Age philosopher Ken Wilber and others to the human-nature interface, in this case, marine protected areas and their management.

Wilber’s philosophy can be a bit hard on the mind, so sit tight for a second. As Tissot explains in an article for the Journal of General Evolution, the Integral Model describes evolution as taking place in four dimensions or “quadrants”: the exterior-individual quadrant (behavioral), the exterior-collective quadrant (cultural), and the interior-collective quadrant (cultural); and the interior-individual quadrant (experience). It gets even more systems, which is what one should expect from an author with a book subtitled, “A Brief History of Everything.”

Woven into the map of quadrants are color-coded stages of development. They start with beige, which is akin to the selfish early years of a human’s life built around survival, warmth, and shelter. Two stages up is red—the impulsive self, aligning with power, taking what you need, being what you are, and doing what you want. The blue stage sees a life of meaning bounded by rules and law. In here, says Tissot, you can find politicians, law and order, organized religion, environmental regulation. Orange features incentive-based achievement, rationalism, science and knowledge. Stages above that start to recognize stages below and move toward a sort of broad-minded enlightenment.

Ten minutes before it is scheduled to start, the sign-in sheet for Tissot’s talk has a handful of signatures. But when it comes time to speak, nearly 50 people have filled the chairs.

Their body language suggests they are a circumstantial lot. One woman videotapes the proceedings with a small handheld camera. Tissot is wearing one of his dozen-plus aloha shirts, this featuring the sustainability of the system as a whole. "We are a part of a bigger picture that has 30 million aquarium fish coming from some 30 countries, but mostly the Philippines and Indonesia. Fishers will still fish with cyanide and dynamite; run rough over reefs, and row over, flouting local laws. If the trade is banned in Hawaii, ‘probably one of the best managed..."
systems in the world,” says Tissot, even more of it will move to less regulated areas of the globe.

He recalled the late-90s research showing that seven of ten aquarium species were down in collected areas.

“That says, ‘Yeah, collection does have a big impact,’” he says. But later, he shows how much that story changed once 35 percent of West Hawai’i was closed and the fish had a chance to rebound. In less than three years, fish densities in replenishment areas shot up to even those of no-take areas. From there, the densities in each went up and down together in a cyclical pattern. Overall, the fish in the newly protected areas went up 74 percent.

“They replenish fish very quickly,” Tissot says. Even more striking is work showing genetic relationships between parents and offspring that end up 15, 49, 140, even 184 kilometers away.

“What it demonstrates is all these populations are all connected, which is really good,” Tissot says. “So if you wipe out a population in one area, it will be reseeded from somewhere else...what you want.

Still, there are some species that have continued to fall off, a reason some managers and fish advocates are pushing regulators to create a “white list” of fish that can be caught. And both the number of permits and number of fish caught have roughly doubled since 1999, building the case to limit the entry of collectors into the trade. Such changes would be in keeping with adaptive management, the iterative decision-making process advocated by, among others, Compass and Gyroscope author Kai Lee. Near the end of his talk, Tissot puts up an image of Lee’s book. The compass, he explains, is science, data, monitoring. But the gyroscope comes from the public, which is all over the West Hawai’i fishery—in the dozens of Fisheries Council members putting in tens of thousands of hours, in the local Division of Aquatic Resources workers, in the network of people swimming the Big Island, living with their faces in the water, and turning out for talks like this and others put on by the local Sea Grant.

The resilience of the community, says Tissot, is key to the fishery’s sustainability.

“You’ve got to have good science, but you have to have a resilient community, one that is engaged, engaged together,” says Tissot. “With these things, you’re going to keep this fishery going. You’re going to keep the reefs healthy; you’re going to keep the fish in high abundances. If something goes wrong and you see big declines, you do something different, but that’s what management is about. And most fisheries don’t respond like this.”

The crowd is a mix of tough and perceptive, noting small details like the difference between the average change in fish numbers and absolute change. But given the heat that surrounded the fishery 15 years earlier, it’s a remarkably calm, even encouraging reception. Two collectors even thanked Tissot, and one said Tissot’s research has become “a cornerstone of the debate.”

“I’ve never had two aquarium collectors in one night thank me,” Tissot says the next day. Snorkel Bob was a no-show. Read about a conversation with Snorkel Bob at wsm.wsu.edu-extra/snorkel-bob.
The papers were yellowed, fragile, and disorganized, but in December of 1941, on a search for rare books and documents in Mexico, Spanish professor J. Horace Nunemaker found his treasure.

A long-time collector who spent many hours searching for old Spanish texts and papers through booksellers and dealers in Spain and the United States, Nunemaker had just turned his efforts to Mexico City. There he made the find of his life, a collection that dated almost as far back as the Spanish conquest of the Aztec Empire and contained the business dealings of one central elite family and several families who had intermarried.

Nunemaker’s wouldn’t be the only quest for these papers. Four decades later, a portion of them were hauled out and picked from the University’s locked archives by a notorious book thief. That led to a police investigation and ultimately a third quest, this one involving a WSU police officer, the FBI, and a nephew.

But first, how they came to Pullman.

**DURING NUNEMAKER’S TIME.** President E.O. Holland was the ultimate collector at Washington State College, aiding faculty from a variety of disciplines in their efforts to acquire art and literature that would enhance the school’s museums and library. In one vein, he envisioned the state college as a center for Central American studies. With that in mind he both encouraged and, at times, financially supported Nunemaker’s acquisitions.

Nunemaker had come to Washington State to teach and be chair of the foreign languages department in 1928. He had honed his passion for travel and collecting as a young faculty member at Lehigh University, voyaging to Spain and leading summer tours through a program in New York. “His Spanish was perfect,” says his son John Horace Nunemaker ’43. For his doctoral thesis, he found the papers, but the professor was well-known to antiquarian book sellers and dealers who specialized in Spanish-language materials. With money from the Early Birds, a civic club he found the papers, but the professor was well-known to antiquarian book sellers and dealers who specialized in Spanish-language materials. With money from the Early Birds, a civic club

Acquiring the papers was only the first hurdle. Getting them to a better, more permanent space in the library was another concern. It took some doing and a full year of delays while the Mexican government reviewed the deal, but he was able to get them back in a diplomatic pouch, says his son. Nunemaker’s wouldn’t be the only quest for these papers. Four decades later, a portion of the collection was made available for sale, according to Couturier.

**IN THE WINTER OF 1941-42.** Nunemaker arrived to buy it. There aren’t many details in our archives about how he found the papers, but the professor was well-known to antiquarian booksellers and dealers who specialized in Spanish-language materials. With money from the Early Birds, a civic club in Spokane, he was able to buy the collection of about 22,000 pages for $9,030.83.

Holland credits him for his find in a 1948 letter. “Very likely we would never have been able to get the Regla collection if you had not been in Mexico City at the time this great quantity of source material was placed on the market,” he wrote.

Back in Pullman the professor was provided a space to house the collection in the basement of the Home Economics building. In 1949, at the end of the Spanish Civil War, Holland sent him back to Spain to find books for the library. His trip, supported by the Friends of the Library, was a great success. He obtained 2,000 books and 26 manuscripts. But then he ran into trouble with the outbreak of World War II. He lost his passage home on a German ship. “We were pretty worried,” says his daughter Mary Emma Erikson ’48. Fortunately, after a few weeks, he found berth on a Greek ship from Lisbon.

Since war had made Europe so difficult to reach, Holland and Nunemaker turned their sights to Mexico. Erikson has memories of her father in his study—upstairs in a converted bedroom of their brick home on B Street. “He would sit in a chair cross-legged. I would often go up to see him,” she says. He would talk about his discoveries, details he found in his translation of a rare book or document. “He had a way of making historical information very interesting.” Of the stories he told, there was one of Spanish-born Pedro Romero de Terreros, the Count of Regla, who was at the core of the Mexican collection he procured in Mexico the winter of 1941.

As his own fortunes grew, he lobbied for greater recognition from his homeland, eventually earning the title of Conde de Santa Maria de Regla (Count of Regla) from King Carlos III. The count was, in Nunemaker’s words, “one of the wealthiest men in all the ladies.” Mexico’s silver mines were “the source of his wealth and generosity, which included even a fully-equipped battlefield as a gift to the king.”

Four generations of Romero de Terreros descendants married into other long-standing elite families, managed their businesses, estates, and silver mines, and contributed to the Catholic Church and local charities. As Regla and his heirs journeyed through time they left a trail of documents that not only help us understand the families, but also offer land records, business transactions, estate inventories, and community events, throwing light on many aspects of life and history in Colonial Mexico.

In 1918, the Regla archive was moved from a country estate into a descendant’s home in Mexico City where they were organized by a family member, according to historian Edith Couturier, who wrote *The Silver King: The Remarkable Life of the Count of Regla in Colonial Mexico*. In 1939, a portion of it was made available for sale, according to Couturier.

**ROMERO DE TERREROS.** The loose papers were all mixed up in these drawers,” she says. “The loose papers were all mixed up in these drawers,” she says. “My job was to try to get them in chronological order.” It wasn’t an easy task, since the documents were both fragile and incoherent. “Eventually you got used to a particular scribe,” says Gaines. Some of the papers carried prominent signatures. “To find the signatures of the kings of Spain, that was really impressive,” she says. “Then figuring out which king it was made it even more thrilling.”

In 1939, a portion of it was made available for sale, according to Couturier. Nunemaker eventually hand-picked Jacquesine Melcher Gaines ‘47 to be his research assistant. She was a student from Lummi Island who had done well with her Spanish major and decided to continue to graduate school. She took great care

Particularly difficult was the formal and sometimes antiquated language with the help of her better students. “They were very fragile,” says Genevieve Devlemining ‘48, who took a turn translating for her instructor. “With some of these documents, you had to guess at what they meant.” The language came in different versions. Particularly difficult was the formal and sometimes antiquated Spanish.
She also enjoyed seeing her mentor at work. “I think there was nothing he liked more than to work on a manuscript which had the most illegible writing,” she wrote about Nunemaker in a memorial. “He told us, ‘We know there must be something that makes sense there; it is only a question of solving the puzzle of the handwriting.’”

Nunemaker printed the papers and had planned a career with them. “It was to be his life’s work, if he had been spared,” wrote his colleague A.W. Thompson. But his plans were cut short by leukemia. Even with failing health, he tried to spend time with the documents. “He kept coming in to check on me,” says Gaines. “But he looked so pale.”

Gaines was able to finish her degree and complete what is now known as the Gaines Calendar, a chronological organization of the loose-leaf papers. Her work was so extensive she was told by the faculty she could publish a few papers on her work and easily complete her doctorate.

After Nunemaker’s death in 1949, the materials were absorbed into the archives. In 1963 the Gaines Calendar was published, making it possible for scholars to know of and access portions of the collection. The 1970s saw a new approach to history, one that brought the Regla Papers new attention. This “new social history” considered daily life, family business, contracts, and official business and government papers in looking at the past by building a context of time and culture.

Historians of social and occupational groups, regions, communities, and enterprises began to better appreciate the centrality—and often indispensability—of the undistilled and immediate documentation found so abundantly in collections such as the Regla Papers to the study of these topics,” writes historian John Kicza. When he joined the Department of History faculty in 1980, he was very interested in spending time with the Regla collection since it fit with his expertise in Latin American history. While Kicza and other scholars have dipped into the Regla collection since it fit with his expertise in Latin American history, one that brought the Regla Papers new attention. This "new social history" considered daily life, family business, contracts, and official business and government papers in looking at the past by building a context of time and culture.

Kicza and the Archivist’s had plans to further explore the Regla Papers, but those plans were interrupted in 1988, when a portion of the collection disappeared.

Officer J. Stephen Huntsberry (Steve to his friends), was called to Holland Library in the early winter of 1988. He thought it was yet another report of a missing book. He’d dealt with these before: pages razored out of rare volumes, or entire books smuggled away in a backpack.

The first indication of this theft likely came when a job candidate asked to see an item from the archives for his own interests. The librarians weren’t able to find it. Later at a meeting, it came out that another item was missing. In a building of thousands of books, materials can often be misplaced or simply mishandled.

So, without much ado, the archivists set out on a shelf-by-shelf hunt for those things, only to discover that still more materials were gone. These included a first edition 1589 book by Richard Hakluyt, The Principall Navigations, Voyages, and Discoveries of the English Nation. The extremely rare and valuable book was key in promoting British settlement of North America. Gone as well was William Butler Yeats’s 1917 Responsibilities and Other Poems with annotations and corrections in the author’s own hand. So were Hudson’s Bay Company documents, 40 books from the fifteenth and sixteenth centuries, and a very large chunk of the Regla Papers.

"I think it was a sickening feeling for everybody involved," says Gaines. "No other, she says. "The theory is that most thefts like these are inside jobs.”

Archivist John Guido, a small character with a goatee, ushered the much taller Huntsberry into the collection and handed him examples similar to the things that were gone. Crudging a document that was created before 1501, at the dawn of printing, Huntsberry was charmed. "I suddenly understood the attraction of rare books and documents," he says. "And I realized this was not simply somebody misplacing documents. It seemed as each day passed, new losses were discovered. "I think it was a sickening feeling for everybody involved," says Eileen Brady, a librarian who then was on the Faculty Senate Library Committee. At first, they must have all looked at each other, she says. "The theory is that most thefts like these are inside jobs."
Paul Kies, English professor and consummate collector, loved books and autographs. "I've had a lifetime of accumulation of autographs," says Kies, "the kind of autographs that are in the history of Oxford, Iowa." When they entered his home they discovered the greatest cache of stolen books and manuscripts from the FBI warehouse. With the help of the librarians, Huntsberry traced Blumberg's steps in Pullman. He had stolen a set of "sub-masters" for the University from a desk in an employee area of the library.

"I called them back right away and said 'Don't let him go.' But they had," says Huntsberry. Still, they had recorded a driver's license containing the name of the Minnesota professor, as well as fingerprints. Huntsberry forwarded his materials to the FBI. They weren't that interested, he says. He also sent his report to authorities in Minnesota and several other states. What he got back was not the Minnesota professor, who was able to prove he wasn't in the places where his ID had turned up, but the name of Stephen Blumberg, a Minnesota native in his 40s who had prior arrests for trespassing and burglary. The WSU officer was pretty sure he had his man.

What Smawley remembers most about the professor is the sight of him with a camera. "He 'bit' on a Shaw item, and has been hooked ever since," wrote O'Connor.

Historically Yours
by Hananel Suderman

Paul Philemon Kies, a popular professor of English, was one of the keenest collectors in Washington State College. When he wasn't teaching, advising, or shooting photographs on campus, he was filling his office and home with rare books, autographs, letters, and photographs.

Robert O. Connor, a student, professed Kies in 1970: "It's a portrait of a 'unique personality' whose 'office was so ceaselessly alive with literature and ideas that one couldn't imagine that there was never any available chairspace.'"

At a young scholar from the rural Midwest, Kies learned his culture in Chicago from the Ringling family and in the Ringling Brothers Circus in the late 1920s. He was the personal music teacher of their son Robert. It was, in a way, a finishing school for the young man who was also studying for a doctorate in English at the University of Chicago. "I was with the family and not the servants because his parents wanted him to respect me," Kies once said. "That's how I learned the proper attentions to use."

In Pullman, Kies assumed the life of a bachelor scholar. He rented a room from chemistry professor Larry Cole. "He lived there for something like 35 years," says Cole's nephew Bob Smawley. "So as not to inconvenience the family, he rarely ate or showered at the house, instead preparing his meals at the student commons. Sometimes, he was known to sleep in his office, amid his books. "It was filled with shelves built from boards from the lumberyard and books everywhere," says Smawley.

What Smawley remembers most about the professor is the sight of him with a camera. "He was known to shop in his neck, eagerly documenting the events of college life whether they were basketball games or concerts in Bryan Hall. Blumberg had set out three great passions: photography, music, and autographs. He jokingly called them his 'hobbies.'"
Seven decades later, we consider our plutonium legacy

by Tim Steury :: photos on subsequent pages from “Chain Reaction: Circumnavigating the Hanford Nuclear Reservation” by Zach Mazur

The Regla Papers and WSU’s rich collection of rare books and manuscripts are today kept behind several layers of security in locked underground storerooms at the Terrell Library. To access them you have to go through the Manuscripts and Archives offices and have keys to both elevators and doors.

But scholars, students, and members of the public who want to work directly with the materials, in the way Nunemaker and Gaines once did, can certainly do so. There is a small glass-walled reading room where they can peruse the documents under the watchful eyes of the archives staff.

See some of the Regla Papers and historical photos at wsm.wsu.edu

The Atomic Landscape

Work considered in this article:

- Plume
  - Kathleen Flenniken
  - University of Washington Press 2012

- Made in Hanford: The Bomb that Changed the World
  - Hill Williams
  - Washington State University Press 2011

  - Lee Ann Powell

IN BLOMBERG’S HOUSE in Iowa, the FBI found 16,000 rare books and manuscripts valued at the time between $25 million and $35 million. Blumberg was tried in 1991. His lawyers argued that that his stealing was a symptom of mental illness. He later told a writer that he believed he was protecting the books and manuscripts from neglect or worse in the hands of the libraries.

The book thief spent four and a half years in prison. At the end of that time, Huntsberry and WSU librarian Eileen Brady were called to testify at his parole hearing. Huntsberry told the court that he thought Blumberg would reoffend. Brady testified about the damage he had done taking original documents. “The original material tells you a lot of things that you cannot get from a photocopy,” she says, noting writing in the margins, ink and paper used. Even the smell and the feel of them tell you something, she says. She also testified that simply posting a photo of the thief in libraries around the country would not much help librarians if Blumberg continued to steal. “Once you look at a picture long enough, you get used to seeing it and then you don’t really see it anymore,” she says. “Besides, he’s a rather unimposing person.” The latter statement, she says, was the only time he looked at her during the hearing.

Blumberg is now out of prison and may be living near his family in the Midwest.

Huntsberry lives in Arizona and works on contract with the border patrol. Since the Blumberg affair, he has been invited to consult with libraries and museums around the country about security and investigating thefts. He admits that during his time at WSU, his dogged pursuit of Blumberg and the books might have ruffled a few feathers. Back then, federal law enforcement and others didn’t value rare books the way they did artwork or other stolen artifacts, he says. “If I did anything right by being stubborn and obnoxious about this, they’re over that now.”

Today almost all of the books and papers recovered from Blumberg’s house have been returned to their libraries. And many of those libraries have changed the way they house and use their rare materials.

The Regla Papers and WSU’s rich collection of rare books and manuscripts are today kept behind several layers of security in locked underground storerooms at the Terrell Library. To access them you have to go through the Manuscripts and Archives offices and have keys to both elevators and doors. But scholars, students, and members of the public who want to work directly with the materials, in the way Nunemaker and Gaines once did, can certainly do so. There is a small glass-walled reading room where they can peruse the documents under the watchful eyes of the archives staff.

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The Atomic Landscape

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  - Lee Ann Powell
WHEN PRESIDENT FRANKLIN D. ROOSEVELT gave the go-ahead for the Manhattan Project, he set in motion an extraordinary collaboration amongst scientists and the military to develop an atomic bomb, driven by fears of Hitler’s creating one first. Whether or not the eventual dropping of the bombs on Japan was necessary to end the war in the Pacific will probably never be resolved. But the bomb undoubtedly changed the world, as well as the cultural, historical, and physical landscape of southeastern Washington.

On the afternoon of February 26, 1943, Lt. Col. Franklin Matthias appeared in the office of the Pacific Herald and asked to talk with the editor. The editor, Hill Williams ’36, invited him in.

After asking that the door be closed for privacy, “Matthias told him a secret project of utmost importance to the war effort would be built nearby,” writes Williams’s son Hill in The Atomic Landscape. “He gave no hint as to the nature of the project but said it would be huge and stressed again its importance to the war effort and the necessary secrecy.”

Having undoubtedly commanded Williams’s full attention, Matthias then made his request, that Williams not publish anything about the top-secret project.

Twenty years later, a young Kathleen (Dillon) Flenniken sits on her father’s shoulders as they watch President Kennedy dedicate a ninth reactor at Hanford, as Flenniken ’83 now recalls in her volume Plume. “I wrote the book so I could figure out what I thought,” says Flenniken.

For anyone interested in understanding the atomic legacy of both Washington and the nation—which I would urge you to do, not out of moral obligation or such, but simply because it is so fascinating—an excellent way to start would be to combine Flenniken’s work with Williams’s. True to his newspaper sensibility, Hill Williams, who was science writer for The Seattle Times for 35 years, has produced a volume about as succinct as can possibly be, considering the scope of the work runs from Leo Szilard’s realization in 1933 of how a nuclear chain reaction might be feasible to the revolution of identity and emotion that the Hanford phenomenon has produced.

Other works, including the fine oral history, Making the Bomb (S.L. Sanger, Portland State University Continuing Education Press, 1995), present a fascinating and sweeping account of the era. To get a sense of the time, from the urgency of the scientists rushing to head off Hitler’s presumed nuclear progress to the revolution of science involved, to the toxic hangover of a landscape dedicated to producing bombs with insufficient caution and foresight, these three slim and very approachable works lend concise history and insight to our understanding.

To our families all came from elsewhere, and regarded the desert as empty, and ugly, which gave us permission to savage the land.

Excerpt from “Rattlesnake Mountain”

What Williams recounts as a journalist, Flenniken tries to make sense of.

Although Hanford might be a classic example of how history gets made and remade, an WSU Tri-Cities historian Robert Bauman puts it, the area has yet to produce a big, definitive book about itself. Michele Stoichita-Gerber’s excellent history of the area’s toxic legacy, On the Flannfront (University of Nebraska, 2002), follows a timeline from the creation of the B Reactor—the reactor that produced the plutonium for Fat Man, the bomb that was dropped on Nagasaki in 1945—through the development of and resulting waste of an additional eight reactors during the Cold War. But it does not attempt to encompass the complexity of identity and emotion that the Hanford phenomenon has produced.

Our families all came from elsewhere, and regarded the desert as empty, and ugly, which gave us permission to savage the land.

Excerpt from “Rattlesnake Mountain”

What Williams recounts as a journalist, Flenniken tries to make sense of.

Flenniken’s Plume is a remarkable volume of poetry that presents a vital and gripping blend of documentary and her emotional history of Cold War Hanford. Flenniken’s father, a doctoral chemist, started working at the “area” in 1951. As with many of Richland’s scientists and engineers, the actual nature of R.L. Dillon’s job was shielded from his...
children by Cold War secrecy. Although she found a few references to her father’s work in technical papers, all she originally knew about it, primarily in the site’s 100 Area, was his description of himself as a “manager.”

You’re eighteen. It’s August brim to brim and your father is at the wheel. He points proudly at distant reactors and spires, sun-baked highway and barbed wire, and offers them to you.

You’ve waited all your life.

A gate patrolman waves you across the threshold into the Cold War world...

Excerpt from “Self-Portrait with Father as Tour Guide”

Flenniken’s parents would tell the story that sometimes in the middle of the night, her father would get a phone call from a security guard, who had found a filing cabinet open. He would drive the 50 miles to his office to lock the cabinet, then drive back.

After graduating in civil engineering from WSU in 1982, Flenniken himself took a job, in hydrology, in the 200 Area, rising each morning at 5:30 to catch a bus for the 45-minute ride to her laboratory.

Perhaps the key to understanding the cultural history of Richland is intense pride over its accomplishments in both WWII and the Cold War. But Flenniken suggests the emotional part of Hanford is as complicated as the science behind fission. As Richland native Lee Ann (Hall) Powell recounts in her thesis, Hanford workers were considered war heroes. “Almost immediately after the Americans dropped the atomic bombs on Japan, the national spotlight focused on Hanford, its people, and its secret wartime mission. The government and the nation recognized HEW [Hanford Engineering Works] workers as war heroes... by helping to make the bomb they had won the peace. General Groves reinforced this identity when in October 1945 he visited the Village to congratulate HEW workers and present all of them with the Army-Navy ‘E’ award, the highest civilian production commendation of World War II.” Powell discusses three eras of Richland history: “the Indian history, the pioneer history or pre-atomic era, and the history that begins with the Manhattan Project. Synthesizing these parts is difficult. "The complex histories of the region are "wonderfully rich but fragmented.”

Throughout the Cold War, residents transformed that sense of historic accomplishment to a patriotic certainty. Part of the area’s creation myth, as historians refer to it, involved a distinct separation. A sonorous program from the 1948 Atomic Frontier Days noted that “the old farming center of Richland was evacuated and transformed into a modern community.”

Indeed, the transformation accompanying that accomplishment was so dramatic; it required a disassociation with the region’s past.

“The impact of the Hanford project on a relatively undeveloped central Washington, even while land was still being acquired,” writes Williams, “seemed astounding to those whose memories of the Great Depression were vivid.” The Hanford landscape changed almost literally overnight. In April 1943 work began on facilities for an estimated 25,000 workers. By July 1944, some 1,200 buildings had been erected and nearly 53,000 people were living in the construction camp. At its peak, the construction camp was the third most populous town in Washington state, and Hanford operated a fleet of more than 900 buses, bigger than Chicago’s. Hardly anyone knew what was being produced at Hanford except that it was part of the war effort. Since DuPont was the civilian contractor, some guessed that nylon stockings would be one eventual product.

Regardless, because the project progressed so unbelievably quickly, the secrecy was also short-lived. The older Hill Williams was at the press conference hurriedly organized on August 6, 1945, by Colonel Matthias Powell of the Pasco Herald headlined the biggest type that Williams owned: “IT’S ATOMIC BOMBS!”

On August 9, the bomb containing plutonium produced at Hanford was dropped on Nagasaki. Shortly after, but before Japan surrendered, the “Smyth Report” was released. Written by physicist Henry D. Smyth, the report had been commissioned by the director of the Manhattan Project, Major General Leslie Groves, to explain to the public the general science involved in the bomb. Williams believes it is the first time the word “plutonium” was used publicly.

The next issue of the Pasco Herald headlined the biggest type that Williams owned: “IT’S ATOMIC BOMBS!” Following the startling announcement by President Truman that an American plane had dropped a bomb on Hiroshima with “more power than 20,000 tons of TNT... an atomic bomb... a smashing of the power of the universe.”

"THAT SENSE OF PURPOSE AND PRIDE in its role toward winning the war and changing the world became an integral to the cultural landscape as Rattlesnake Mountain is to the geographic landscape."
On the morning I got plucked out of third grade
by Principal Wellman because I’d written on command
an impassioned letter for the life of our nuclear plants
that the government threatened to shut down
and I put on my rabbit-trimmed green plaid coat
because it was cold and I’d be on the televised news
overseeing delivery of several hundred pounds of mail
onto an airplane bound for Washington DC addressed
to President Nixon who obviously didn’t care about your job

Excerpt from “To Carolyn’s Father”

But that cultural pride also included a set of blunders.
Prior to the dropping of the Nagasaki bomb, which finally revealed to all what was actually going on at Hanford, most who worked there had no understanding whatsoever about what they were building.

But in the Cold War years, with the destructive power of the area’s plutonium now a matter of history, residents faced another part of the site’s dark side. “When I was growing up people just didn’t talk about that part of it,” says Flenniken. “It was never about the actual bombs and what happened. It was more about the race to create it and the amazing feat that people could do under these circumstances, these hardships, come up with this amazing new technology, human miracle.

The story just ends right there.”

I remember the red phone, and missile codes,
how every movie hinged
on a clock ticking down.

We call it the arms race
and there were two sides.

It was simple.

Excerpt from “The Cold War”

Although the selection of Hanford to produce plutonium was not a foregone conclusion, it ultimately met the criteria determined essential by Leslie Groves.

The B Reactor produced plutonium for the Trinity test in New Mexico and for Fat Man, the bomb that was dropped on Nagasaki in 1945 and, with its predecessor the uranium-fueled Little Boy, was dropped on Hiroshima, hastened Japan’s surrender.

The B Reactor is an engineering marvel. Built in only 13 months, it was completed less than two years after President Franklin Roosevelt approved the Manhattan Project. Enrico Fermi managed the first sustained nuclear chain reaction at the University of Chicago in 1942, then supervised the design of the B Reactor. On February 3, 1945, B Reactor plutonium was delivered to Los Alamos, New Mexico.

According to the Department of Energy’s history division, the reactor core is a 1,200-ton, 28-by 36-foot graphite cylinder, penetrated horizontally by 2,004 aluminum tubes. Two hundred tons of uranium slugs, the size of rolls of quarters, were inserted into the tubes. Cooling the reactor core required water pumped from the Columbia at the rate of 75,000 gallons per minute.

As Williams writes, when that water was first pumped through the reactor core to cool it, it marked the first time large quantities of radioactive material were deliberately released into environment.

The most noxious byproduct of plutonium production at Hanford was the highly radioactive waste deposited, temporarily, in underground tanks. According to Williams, each ton of uranium slugs produced 30,000 gallons of liquid waste containing, among other products, fission products.

If you visit Richland’s Columbia River Exhibition of History, Science, and Technology (formerly the Hanford Science Museum) and examine the replica cross-section of the storage tanks, your worries about that waste might be temporarily assuaged. Thick concrete is faced with thick plate steel in the single wall tanks. The double wall tanks, with room for inspection, would reassure even the most skeptical—unless, of course, as Williams suggests, one thinks too much about the definition of “temporary”.

But military demand for plutonium during the Cold War... took precedence over finding a permanent solution. Hanford ended up with a much greater volume of waste than anyone anticipated in 1945 and temporary storage turned into semi-permanent. Twenty or so years after the end of the war, tank waste was leaking into Hanford’s dry soil and drifting toward the river, causing problems we still face today.

If production had ended with the dropping of Fat Man, the waste would likely still be problematic. But, Williams points out, that initial waste was dwarfed by the combined production of eight reactors during the Cold War years. A plume of radioactive waste moves menacingly toward the Columbia, underlying a stark and transformed terrain with a legacy against which we seem powerless. And a grand plan for turning Hanford’s tank wastes into stable glass has so far been stymied by the complexity of the problem and process, an unfortunate mirror to the fascinating complexity of the area’s landscape.
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There has never been a better time to join the WSU Alumni Association (WSUAA). The 10,000 new members who have joined in the last few years took advantage of 2010’s tax incentives. Join today and enjoy:

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- No membership fees when joining the Wine-By-Cougars wine club
- Savings on Cougar gear at The Bookie, Crimson & Gray, and the Washington State Connections store
- Special rates at many preferred hotel chains and car rental agencies
- Discounted rates to play Palouse Ridge Golf Club in Pullman
- Free access to WSUAA Career Support Services
- And many more...

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WSM Summer 2012

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very important on the baseball field, having all the bat play, pick-off plays, the relays where you can have the little things that matter help. You had to work as a student, even with his success at baseball, he longed to pursue a childhood dream of becoming a doctor. "When I was a boy in Lisbon, North Dakota, there was a family doctor whose kids were about the same age as me," he says. "I was always fascinated by being around his office and looking through his microscope."

Olerud followed that path with encourage-

ment from his academic mentor Herb Eckfield.

"He took some ownership in getting me pointed in the right direction in terms of medical school," he says. "He and taught him some of the same lessons as Bob. He would tell you there was something that you could be doing better," he says. When Olerud graduated with a bachelor's degree in zoology in 1965, he wasn't ready to choose one course over the other. So he pursued his medical degree at the University of Washington, at the same time playing professional baseball in the minor leagues with teams like the Seattle Angels, the San Jose Bees, and the Tulsa Oilers. The UW program made special arrangements to accommodate his sports career. "I could take two quarters of medical school and arrange to accommodate his sports career."

Olerud and his team are looking at that relationship and the strategies to get the new skin cells to migrate faster onto wounds. He is also working with other medical scientists and bioengineers to look at devices put through the skin, such as catheters, as well as connections between tissue and prosthesis. "The problem is always the interface between the skin and the device that goes through the skin," he explains. Skin cells don't tend to seal around an intradermal device such as a titanium rod. Instead the skin hits the device and goes down into the body, followed by bacteria that can create dangerous infections around the implant.

The trick, says Olerud, was to figure out how to get the skin cells to attach. Part of the answer: holes in the device. In the create little holes or little pores in the material, the skin cells migrate in and set up housekeeping inside the material," he says. Olerud's eye lit up as he describes the research.

Naturally, baseball continues to be part of Olerud's life. Many associates the name "John Olerud" with his son and nameake, the stand-

out Major League Baseball player and Corvallis baseball star John Olerud '88. The senior Olerud recognized young John's ability and passion early. "I'd go to spring training and he was a little kid who really loved balls and to hit," he says. "I remember once in spring training I was with the Montreal Expo organization, and we were in West Palm Beach, he'd be down there with this little plastic bat, he'd be throwing his balls and he'd be tipping the balls into the sun. People would stop and say, 'Wow, that little kid is good!'"
He grew up on the farm with four sisters and a brother, his mother Ruth ’45, and his father Irv. But he was always familiar with the state capital. From a very young age he was involved in campaigns, and as he got older he got a lot more involved in the issues he was involved with,” says Newhouse, who eventually became president of the Hop Growers of Washington and Hop Growers of America.

Washington State University was also an important part of the family. All of Newhouse’s siblings attended Pullman. Newhouse earned his degree in agricultural economics in 1977. But it wasn’t all work, he admits. He smiles as he remembers being a Cougar Loudmouth.

“George Ransford had an idea of a student cheering section for all the basketball games. We got shirts that certified that we were Cougar Loudmouths. We got to sit in the court side bleachers and it was our job to make lots of noise,” he says.

He loved at the Alpha Gamma Rho fraternity, which led to his first post-college job with the AGR national organization. Coincidentally, one of his friends and co-workers at the headquarters in Kansas City, Missouri, was Walter Whitcomb from Maine, a dairy farmer’s son who served in the Maine legislature and knew head of Maine’s agriculture department.

“When a couple of years, I made the decision to come back to the farm. I never looked back,” Newhouse recalls.

reired in 1998, and state lawmakers named the Senate building after him. He passed away in 2001 at age 80.

I was nine years old when my father first ran for office. In his very first term he was involved in campaigns, and as I got older I got a lot more involved in the issues he was involved with,” says Newhouse, who eventually became president of the Hop Growers of Washington and Hop Growers of America.

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“George Ransford had an idea of a student cheering section for all the basketball games. We got shirts that certified that we were Cougar Loudmouths. We got to sit in the court side bleachers and it was our job to make lots of noise,” he says.

He loved at the Alpha Gamma Rho fraternity, which led to his first post-college job with the AGR national organization. Coincidentally, one of his friends and co-workers at the headquarters in Kansas City, Missouri, was Walter Whitcomb from Maine, a dairy farmer’s son who served in the Maine legislature and knew head of Maine’s agriculture department.

“When a couple of years, I made the decision to come back to the farm. I never looked back,” Newhouse recalls.

“Telling should be an unending process,” said Don Bauhau in an interview some years back. Anyone who knew him at all will know this was no idle observation. Bauhau, who first arrived at Washington State College in 1943 as a 17-year-old freshman and returned, a mathematician from Princeton in hand, to teach and lead for a distinguished 43 years, passed away in Portland, Oregon, on January 15, 2012, surrounded by his wife and children.

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I don’t know anybody on our faculty who’s bright and knowledgeable across the board. “There is simply nobody I’ve known who is as knowledgeable as Donald W. Bushaw, his colleague, Bushaw’s 50 years at WSU, Cal Long, who delivered the Faculty Invited Address (1968) in mathematics, and mathematical biographies. Among many other awards, Bushaw delivered the Faculty Invited Address (1968) and was the first recipient of the WSU Faculty Excellence Award. For his contributions in 1983. Apart from the time Don spent on family and professional activities, he had a passionate lifelong interest in traveling and learning languages. He had good friends all around the world. He also translated books and research articles in a variety of languages, including Russian and Chinese.

In a 1993 Daily News article celebrating Bushaw’s 50 years at WSU, Cal Long, who joined WSU’s math department in 1956, four years after Bushaw, said of his colleague: “There is simply nobody I’ve known who is as bright and knowledgeable across the board. I don’t know anybody on our faculty who’s...”

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Winning the West for Women: The Life of Suffragist Emma Smith DeVoe by Jennifer M. Zerbetz ‘82

The University of Alaska, Anchorage Press, 2011

“...For more reviews and sample tracks, go to wsm.wsu.edu....”

Advertising does influence the votes people cast, and how much depends on the circumstances of the race. For example, they found television ads had a more powerful impact in open races and for challengers against incumbents.

Those are critical questions asked by Washington State University associate professor of political science Travis Ridout and his colleague Michael Franz, an associate professor of government and legal studies at Bowdoin College, in their empirical study of televised political advertising.

Ridout and Franz examine several aspects of campaign ads to determine their effects—context of the political race (general or primary, incumbent or challenger), tone or emotional appeal of the ad, characteristics of an ad’s viewers, and influence of news media reporting or listened-to ads about a race.

The results of their work show that indeed, political advertising does influence the votes people cast, and how much depends on the circumstances of the race. For example, they found television ads had a more powerful impact in open races and for challengers against incumbents.

One surprising finding shows that even political partisans can be affected by the advertising. Ridout and Franz write: “The largest message we draw from this is that political advertising is broadly influential in American politics and for a wide segment of the voting public.”

The Persuasive Power of Campaign Advertising, an edited volume that focuses on campaign advertising for students of political science, journalists, and anyone involved or interested in political campaigns. As a major source of information on candidates, television advertising has a strong effect on American democracy, and this work gives a basis for understanding how it works.

Dog Days, Raven Nights, by John and Colleen Marshall, illustrated by Evon Zerbetz ’82

University of Alaska, Anchorage Press, 2011

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Distant Alaska didn’t truly enter the imagination of many Americans until gold fever took hold in the late 1890s. New settlers flooded into the state, eventually leading to its territorial status and in 1959, statehood. The story of Alaska has become one of boom-bust cycles, discovery and misunderstanding of Native rights, military significance, and the struggle of the U.S. government to manage or support such a large and remote land. Following the discovery of oil, that story continues today.

This comprehensive text, now in its third edition, covers the vast expanse of time and geography of the northernmost state, beginning with the earliest known origins of Native peoples and stretching to ongoing debates about use of Alaska’s natural resources and dispensation of Native lands. Clem M. Naile ’70 PhD and the late Herman E. Skolnick, both retired history professors at the University of Alaska, tell the story of the largest U.S. state with fascinating detail and the nuanced explanations of expert historians.

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Coyote

—Pronunciation: kī’ō-tē, chiefly Western kī’ōtē

After years away,
I met you again on the tongue
of an old friend from home. Kī’ōtē.

Trotting through sagebrush. Wild
by any name. I’d moved to a green isle city
that pronounced you kī’ō-tē
and abandoned you by the side of the road.
I’d forgotten your silver, slope-shouldered form
and gaze.

You’re not a citizen of language or memory,
but I am. Changing your name
was a betrayal of home

born of living among outsiders,
born of looking back through outsiders’ eyes
at interchangeable houses landscaped

with wishing wells and pansies.
I could never love the brown hills around us.
Now, in the city, who can love the desert in me?
Kī’ōtē.

Kī’ō’-tē.
You live outside pronunciation.
I’m become like you
and can’t say your name either way.
MYTH #11 in the PLANNING YOUR ESTATE SERIES

I CAN’T CONTROL MY GIFT

- OR CAN I?-

Truth is, you can specify how, where, and when you’d like your gift to be used. It’s up to you.

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