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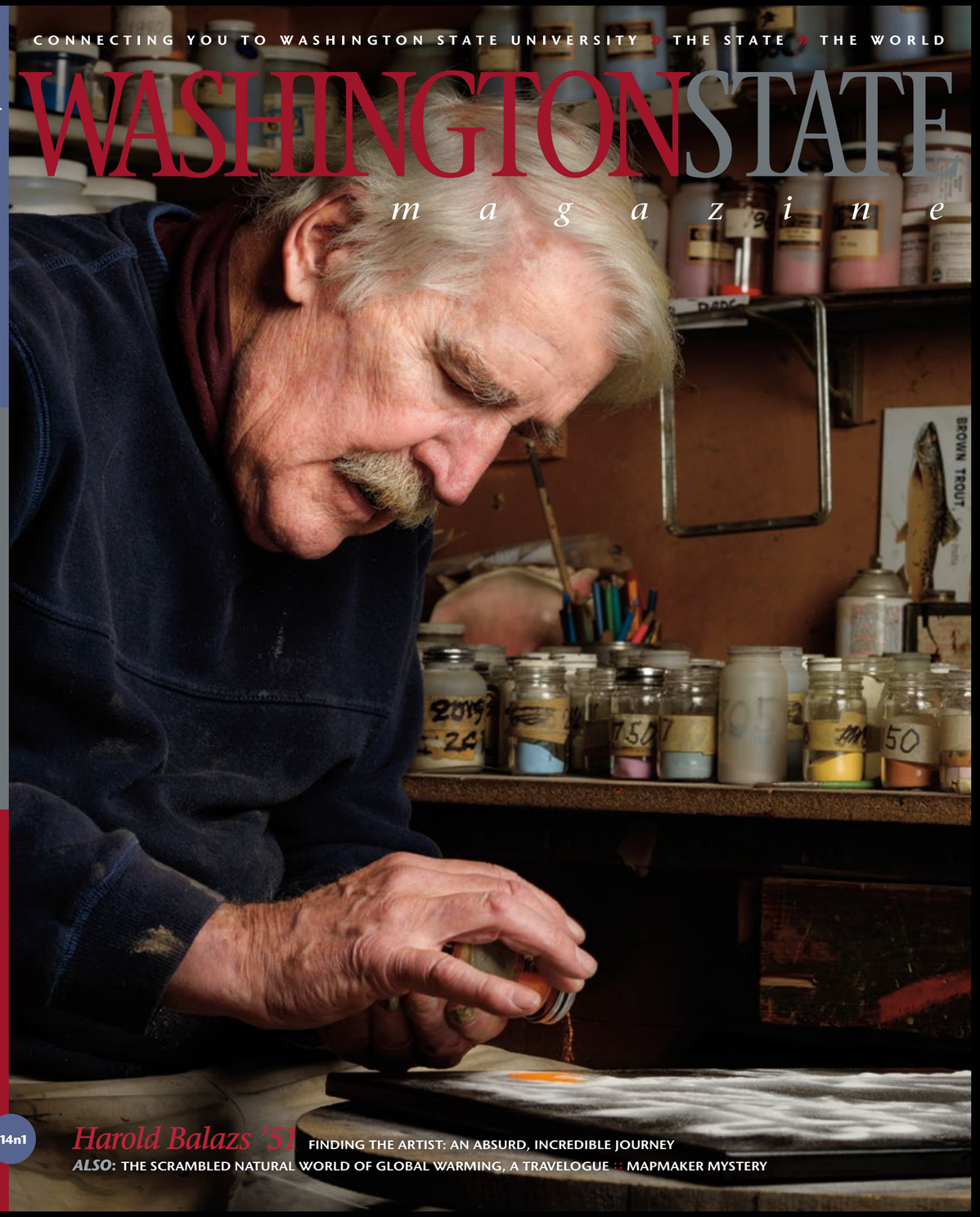

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Harold Balazs '51 FINDING THE ARTIST: AN ABSURD, INCREDIBLE JOURNEY

ALSO: THE SCRAMBLED NATURAL WORLD OF GLOBAL WARMING, A TRAVELOGUE :: MAPMAKER MYSTERY

WINTER 2014/15

v14n1

WASHINGTON STATE magazine

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FEATURES

PANORAMAS

DEPARTMENTS

TRACKING

Cover photo Tim Halloran/Creative Life Spokane

first words

Seeing and Knowing : : "The relation between what we see and what we know is never settled," writes art critic and author John Berger in his 1970s *Ways of Seeing*.

Berger, a mainstay for students of art and Western culture, examines how a large part of what we see when we look at something depends on our habits and conventions, the things we think we know.

As men and women, Berger notes, we may see things differently. Our teachers, our books, even our communities tell us what we're looking at and what it means. Children see things differently, again. Lacking preconceptions, they may recognize qualities in a work of art that we adults do not. "It is seeing which establishes our place in the surrounding world; we explain the world with words, but words can never undo the fact that we are surrounded by it," Berger writes.

With this issue, we try to set aside expectations and conventions to truly see a few new regions of our University and the world around us.

It is one thing, for example, to know that climate change is occurring; it is another to see the green coniferous forests of northern Wyoming turn red, and then yellow and brown as they succumb to pernicious mountain pine beetles, whose habitat is expanding. In this issue, writer Eric Sorensen introduces us to an alumnus who saw this change coming.

When he noticed a stunning hand-drawn map hanging on a library wall, one that hundreds of students and faculty pass by each week, writer Nicholas Deshais stopped and took a closer look. He wanted to know who made the map, and why. And who created several hundred others he subsequently found stored in the Owen Science Library?

And we may know that artist Harold Balazs '51 makes fantastical works from wood, concrete, aluminum, enamel, and nearly every other medium. But do we see these pieces around us, even as we walk by them every day? In Pullman, in Wenatchee, in Seattle and Tacoma, and throughout Spokane? He has created more than 10,000 pieces; they are figuratively, and literally, all over the map.

While some of Balazs's work is representational—a flower looks like a flower, a bird like a bird—other pieces are completely abstract. Forms that are simply forms. By creating something that never before existed, Balazs shakes us from our preconceptions, lets us see the unexpected, and provokes a little wonder.

He reminds us there is still so much to know, and to see.

Hannelore Sudermann
Content Editor

P.S. Join us in celebrating the 125th anniversary of the founding of our University. To commemorate the occasion, we have compiled a collection of historical photographs from WSU in a 2015 calendar. Go to wsm.wsu.edu/extra/2015calendar *to buy one.*

Three Great Ways to Belong to One Great Organization.

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

New: Platinum Life Membership.

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

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

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WASHINGTON STATE magazine

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the CAMPAIGN for WASHINGTON STATE UNIVERSITY

I am: Ashley Vu, a junior studying pre-medicine and mechanical engineering.

On WSU: I'm from Northern California and I knew from afar that WSU is an excellent university. But I also knew coming here would be expensive for my family.

On scholarships: The scholarships I was offered helped me decide to attend WSU—especially the Lighty Scholarship. As far as I'm concerned, the Lighty family brought me to WSU.

On future success: Thank you for your faith in me and for your willingness to invest in my future without even knowing who I am. With your support, I know I have what it takes to be successful.

Read Ashley's full interview:
campaign.wsu.edu/impact/ashleyv

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How fat grizzly bears avoid diabetes. http://ow.ly/A1X1w via @sciencemagazine

A little cinnamon goes a long way to fight some of the most gnarly foodborne E. coli illnesses. http://ow.ly/zhdlv #WSU

Native Americans Had a Precolonial Baby Boom—and not just any baby boom—the biggest recorded… http://tmblr.co/ZLxHyn1KF_kWh

Red Brick Roads

Thank you for the wonderful article on the Red Brick Roads in the latest issue of *Washington State Magazine*. I want to thank Bailey Badger [WSM's summer intern and 2014 alum], of course, too. Please do pass along my gratitude for an article well composed, well researched, and well written.

I really appreciate the time and effort you took just to identify this as a possible article of interest to your readership, and of course your general interest in the goings on over here in the School of Design and Construction.

J. Philip Gruen
WSU associate professor and interim director, School of Design and Construction

Talking Trash

Amongst the nice articles in the latest *WSM*, I thought it ironic that an article on trash/landfills and an article on Riverpoint Campus were included. Back in the '80s, living in Spokane, I joined a couple of friends "bottle digging" in exploratory pits in what is now the Riverpoint area. Layers of trash were in places on the property, going back to at least WWI, and my friends were digging for rare bottles. There were thousands of bottles of various types buried there, as glass was the main packing method for liquids then, and of course doesn't biodegrade. Many of those bottles and other species of trash still are buried at the site.

Steve Fabian '81

Over Extension

In the Fall 2014 *Washington State Magazine*, "Washington State University EXTENSION early timeline," I found it interesting to read that the Washington state legislature passed an act creating experimental stations in 1881. As youngsters, our Washington state history classes taught that statehood was gained in 1889. How was that 1881 state legislative act possible, please?

Rosemary Richert
former student

Editor's note/correction: Both Larry Clark '94 and I took that mandatory Washington state history class some years ago, but neither of us caught the error in our timeline. The correct date for the state legislature passing the act is 1891. Thank you, careful reader. HS

Correction

In the review of Island Queens and Mission Wives: How Gender and Empire Remade Hawai'i's Pacific World *(Fall 2014), the era for missionary contact was identified as "late eighteenth century." It should be "early nineteenth century."*

Kudos

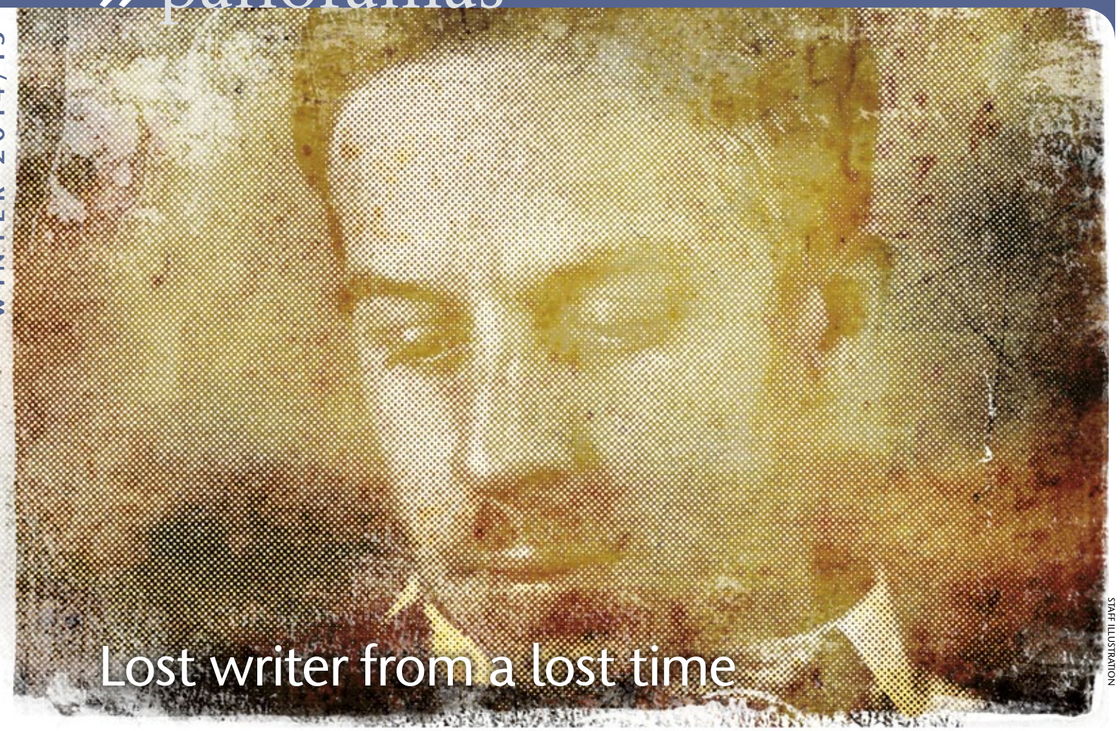
Congratulations! Perhaps best issue yet. Many articles of high interest. Thanks!

Go Cougs!

Dale R .Petersen *'59*
Ferndale

What's New?

Honoring the friendship and support of two alumni and their families, WSU has renamed two colleges. Retired energy executive Gene Voiland '69 and his wife Linda were recognized in September with the naming of the Voiland College of Engineering and Architecture. Likewise, in October, the business college became the Carson College of Business to reflect the contributions of Scott Carson '72, retired Boeing CEO and current WSU Regent, and his wife Linda. *Staff photo*



STAFF ILLUSTRATION

Lost writer from a lost time

by Hannelore Sudermann :: A whole genre of literature, that of the American working class during the Great Depression, has all but disappeared. Now a WSU professor and a Northwest novelist are bringing writer Robert Cantwell, a Washington native, and his most significant book, *Land of Plenty*, out of the mists of time.

Cantwell, one of the finest American writers of the 1930s, was admired by the likes of F. Scott Fitzgerald and Ernest Hemingway, says T.V. Reed, professor of English and American studies. His masterpiece is set in a Washington plywood factory and his characters are based on the workers he once toiled alongside.

Born in southwest Washington and raised in Aberdeen, Cantwell witnessed labor strikes, mill fires, worker injuries, and a town divided by income and class. At the same time, Cantwell was "very much a literary kid," says Reed. He read Henry James and Karl Marx, and later Gertrude Stein and James Joyce.

After, in Cantwell's words, "one barren and miserable year" of college, he went home to work in a Hoquiam plywood factory. Though he was there to earn money as a veneer-clipper operator, he came away with more. "He felt the workers were, in fact, far more interesting than the people he met at the UW," says Reed. In his spare time, he wrote. Inspired by the people around him, including women and American Indians, he wove their individual stories into short stories, a play, and even portions of a novel capturing a broader working-class agenda.

In 1929, he sold a short story and moved to New York just a month before the stock market crash. Nearly broke and selling stories and reviews where he could, he nonetheless managed to finish his first novel, *Laugh and Lie Down*, also set in Washington. Then, in the thick of the Great Depression, he wrote *Land of Plenty*, a tale centered around a labor strike at a lumber mill. Published in 1935, it won widespread critical acclaim.

Writer Jess Walter grew up in a union family in Spokane, a decidedly blue collar town. He remembers hearing references to Cantwell and *Land of Plenty*, the last edition of which came out in 1971.

"Even finding a copy was really tough," says Walter. But he was thrilled to discover writing on a par with the best of the time, and "about this place that we know so well." Cantwell's descriptions of the town, the mill, the tideflats, and "the last great forests between the mountains and the Pacific" are pure Washington.

Workers at a Northwest sawmill ca. 1905. *Courtesy Washington State Historical Society*

Cantwell's writing style is modern, his subjects relevant today, says Walter, who recently chose *Land of Plenty* for reprint as part of a Pharos Editions' effort to reissue great works that are out of print, lost, or rare.

Cantwell caught T.V. Reed's interest 40 years ago when he was a graduate student. Exploring writing about the labor movement, he came across Cantwell's work and was stunned to find, "it was ten times better than anything else that had been written about it.

"He captured the spirit of a radical and revolutionary time," says Reed. And when he approached politics and social questions in his work, his writing got even better, he says. "It's a very modern text in the way it explores social inequality."

He knew Cantwell was worthy of a book-long consideration, "But I thought someone else would do it," says Reed.

No one did.

Recently Reed returned to his subject, publishing *Robert Cantwell and the Literary Left* with the intention of not only bringing Cantwell back into view, but to draw attention to the large gap in American literature from the 1930s, when working class people were at the center of American culture. First World War II, and then the cultural shift to the middle class of the 1950s, led Americans to abandon many great works of this era.

"Cantwell was so much a creature of his time, he was forced to remake himself when the decade came to an end," writes Reed. In fact, the scholar explores the various factors, including 1950s McCarthyism, the abandonment of Marxism by his peers, and a mental breakdown, that led Cantwell away from radical fiction and into the safer territories of magazine journalism and biography. "He never completely recovered," says Reed. "He becomes the quiet *Sports Illustrated* guy rather than the young revolutionary."

Walter and Reed recently celebrated the release of Reed's biography and the reprinting of *Land of Plenty* at an event hosted by the Elliott Bay Book Company. There they told the crowd that it was time we rediscovered the fiction of the 1930s before that body of work is lost. From that time and genre "we're allowed the *Grapes of Wrath* and nothing else," says Walter. "But *Land of Plenty* should be taught in writing programs."

And the time has come for a critical focus on "working class studies," says Reed. "This is our political history, our literary history, and our social history."

The roots of Tilth

by Hannelore Sudermann :: In 1974, a group of Washington farmers, gardeners, and concerned citizens formed one of the nation's first organized efforts for sustainable agriculture.

It was in the midst of a burgeoning back-to-the-land movement, and not long after the founding of Earth Day. The time was ripe for Washington, its farmers, consumers, and researchers to change agriculture.

On his way home from a Spokane conference on "Agriculture for a Small Planet," author and activist Wendell Berry started a letter that would catalyze the movement. He praised the thoughtful and knowledgeable group who had organized the event, and wondered if they might work together to shape "a coherent vision for what is possible."

"Good land use is going to come either by hard necessity or by some kind of teaching," he wrote, encouraging them to seek "a better kind of agriculture." They should reach out to farmers, farmworkers unions, urban consumer cooperatives, organic farming and small farm co-ops, and conservation and wilderness groups, he wrote, bringing together the "various branches of agricultural dissidence."

Berry's letter inspired several people to quickly pull together a meeting in Ellensburg. Nearly 800 farmers, workers, and consumers showed up, and a handful of WSU students and faculty came, too.

David Granatstein, now a sustainable agriculture specialist with WSU, had just finished his degree in environmental conservation at Cornell University and was driving across the country looking for work. He landed in Ellensburg just as the meeting was taking place. "I somehow heard there was a conference there on agriculture," he says. The event was "somewhat of a blur." But he remembers workshops on farming, talk about forming an organic farming movement, and learning about a rural apprenticeship that landed him on a farm in the San Juan Islands.

Woody Deryckx, a former WSU student who was farming near Palouse, and his wife Becky and friend Michael Pilarski, had joined up with Gigi Coe and Mark Musick to plan the Ellensburg event. And the Deryckxes came up with "Tilth," a Middle English word meaning cultivated land, but a word that would come to

represent a broad movement to create and support a more sustainable agriculture.

Today, the effort that is Tilth has spread throughout the West into California, Oregon, and Idaho. With teaching and support as its initial missions, it has produced books, newsletters, classes, and conferences and buoyed, and sometimes driven, the development of sustainable and organic agriculture in the region.

As Tilth evolved, so did research at WSU into organic and sustainable agriculture. Robert Papendick, a WSU-based USDA soil scientist, led a national study in the late 1970s to look at organic farming across the country and co-authored a seminal report acknowledging the viability of organic farming. At the same time Dave Bezdicek, a WSU soil microbiologist, organized the first organic farming symposium at the American Society of Agronomy's national meetings.

By the 1980s, more WSU faculty and students were incorporating organic agriculture in their research. Their early efforts have today led to the WSU Center for Sustaining Agriculture and Natural Resources, a Small Farms Program, and the nation's first organic agriculture major.

Washington was one of the first states to embrace the sustainable food movement. *Photos courtesy Seattle Tilth, Washington Tilth Association, and Tilth Producers of Washington*

"There was always somebody at WSU who was playing some role in terms of national leadership with the organic movement," says Matthew Canfield, a New York University doctoral student writing his dissertation on the sustainable food movement in Washington. A National Science Foundation grant is funding his fieldwork in the state. Besides digging into the WSU archives where the early Tilth records reside, he is interviewing the people who started and shaped the effort.

"Dave Bezdicek was 'the' WSU researcher of the Tilth movement," says Canfield. "With his work and Papendick's, the scientific legitimization to organic agriculture gave the movement some of its key resources."

In 1977, Tilth in Washington became a nonprofit alliance of growers. It focused on cooperative production and marketing, and developed a state-wide set of organic standards. "We now have one of the best ones in the country," says Granatstein.

Even with limited resources, the organization has succeeded thanks to the work of volunteers, says Granatstein. One in particular, Anne Schwartz '78, a Skagit Valley farmer, took a major role very early. "She sort of busts on to the scene," says Canfield. "You can see it in the minutes. First she's attending. Then within like three meetings she's facilitating. Then she's driving it." Schwartz served as president of the Tilth Producers for a number of years and has long been a champion of organic research at WSU.

In 1984 Oregon Tilth split off and became its own nonprofit, creating the country's first organic certification program. "Tilth started out as a movement," says Canfield. "But then it gave birth to several organizations." Today, Washington's chapters include Snoqualmie Valley Tilth, Spokane Tilth, and the Tilth Producers of Washington, which offers farm walks, classes in subjects like urban goat keeping and on-farm composting, and resources for supporting the business of farming. Seattle Tilth has an urban slant, teaching adults and children in the city about organic gardening and urban ecology.

That all this has happened in Washington fascinates Canfield. "Washington state has been one of the national leaders in the sustainable food movement," he says. Our state was a prime location because of diversity of what is grown here as well as the political landscape and consumer interest. In the 1970s waves of people from around the country came to Washington looking for a place to "live their values" and finding a sense of possibility that they couldn't in other places, he says.

"There were lots of different farming movements in the United States," says Canfield. "But none of them had this vision of transforming agriculture. I think Washington will be a really important role model for the rest of the country."

Hair and history

by Trevor James Bond :: On the first day of class this semester, Kristine Leier, a senior majoring in history and anthropology, returned one of the more macabre items owned by the WSU Libraries: a lock of hair from the murdered missionary, Narcissa Whitman.

Hair is not something we at WSU's Manuscripts, Archives, and Special Collections still collect. And how it came to be here, and where it has been for the last half century, turned out to be an intriguing story.

Narcissa Whitman's name is familiar to many in the Northwest. She and her husband, Marcus, established their mission to the Cayuse Indians near Walla Walla in 1836. However, they made poor missionaries. The Whitmans misunderstood Cayuse culture, never learned their language, and over time stopped their missionary work. After years of increasing tension, on November 29, 1847, a group of Cayuse murdered the Whitmans and eleven others.

Some of the Cayuse were angry at the Whitmans for turning their mission compound into a hotel of sorts for thousands of settlers immigrating into the region and blamed them for the spread of a devastating measles epidemic that killed an estimated half of the tribe. After an inconclusive military campaign to find the perpetrators, five Cayuse surrendered to the Oregon Territorial Government and were summarily tried and executed. The surviving Cayuse were forced on to a reservation near Pendleton, Oregon. Assessments of Narcissa Whitman among historians range from heroic martyr to intolerant invader.

As head of MASC, I first came across a surprising reference to Narcissa's hair at WSU while researching the early development of the WSU archives. In 1935, President E. O. Holland hired Clifford Drury, a pastor at the Frist Presbyterian Church in Moscow, Idaho, to collect sources relating to the early Protestant missionaries to the Northwest. In a report later that year to WSU Librarian W. W. Foote, Drury wrote that he bought a lock of Narcissa's hair for $5.

Narcissa Whitman by Oliver W. Dixon. *Courtesy The Oregon Historical Society.* Lock of Narcissa's hair. *Courtesy WSU Manuscripts, Archives, and Special Collections.* Correspondence with braided hair. *Courtesy Pacific University Archives.* "John McLoughlin Greeting Marcus and Narcissa Whitman at Fort Vancouver," mural detail in Oregon capitol rotunda by Barry Faulkner. *Courtesy Oregon Department of Transportation*

It struck me as strange that WSU would collect hair. And if the school did, what happened to it? I am aware of some unusual artifacts associated with our manuscript collections: a Spanish sword from the 1880s, chamber pots from the Multnomah Hotel, to name a few. But a lock of hair from a murdered missionary?

As I searched other archives, I found a startling number of collections of her hair elsewhere: a lock displayed in the "history room" in the village hall of Rushville, New York; six separate donations of Narcissa's hair (of varying colors) at Whitman College; her hair woven into a cross on display at the Oregon Historical Society in Portland; a hair wreath at Pacific University; and a framed lock at the Washington State Historical Society with the ominous caption "this lock of Narcissa Whitman's hair was taken after the massacre in 1847 by one of the survivors."

There are two sources for all of this hair: gifts from Narcissa to family and friends and, more troubling, hair gathered at the site of her murder. According to one survivor's account, wolves disturbed the shallow grave of the victims, scattering bones and "strands of Mrs. Whitman's beautiful, long golden hair."

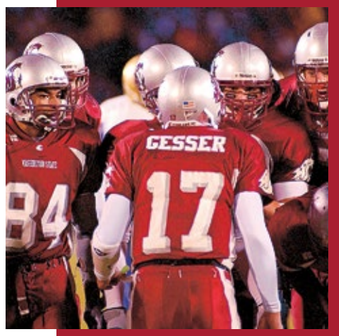
Though the bodies were reburied immediately, it took the Oregon militia nearly three months to muster and travel to the Whitman mission.

:: continued page 14

the right color back on

Jason Gesser celebrates the win that led to the 2003 Rose Bowl. *Photo Lucy Nicholson/Associated Press*

Back on campus at WSU, Gesser is fundraising and reconnecting with former student athletes. *Courtesy Washington State University Athletics*



Gesser directed the Cougars to 24 wins during his career and shared "Pac-10 Offensive Player of the Year" honors with USC quarterback Carson Palmer. *Photo Robert Hubner*

by Jason Krump '93 :: Ask Jason Gesser '02 about the finest decision he's made and his answer is as pinpoint as each of the 70 career touchdown passes he threw at Washington State.

"Coming to Washington State was the perfect and best decision I made in my life," he says. "Besides marrying my wife," Gesser is quick to add, with a laugh. He married his college girlfriend Kali Surplus '02, a former WSU volleyball player, and the couple has three children.

In his new role as the assistant director of development with the Cougar Athletic Fund, the fundraising arm of the Washington State University Athletic Department, his work includes reconnecting former student athletes with the athletic program and building relationships with fans and donors.

"He is a natural," says Director of Athletics Bill Moos. "He is obviously a draw. People want to come to events to see and listen to Jason. He is a perfect fit for us."

And for Gesser, WSU is a perfect fit again.

During his playing career, Gesser wore the crimson color to nearly perfect, and historic, success for the football program. A quarterback for the Cougars from 1998 to 2003, he enriched his college career by leading the Cougars to two 10-win seasons, including a trip to the Rose Bowl and a victory in the Sun Bowl. It's an impressive résumé that fans enjoy reminiscing about with Gesser.

When he left in 2003, Gesser had to put the crimson aside. He played in the National Football League with the Tennessee Titans, the Canadian Football League with the Calgary Stampeders, and the Arena Football League with the Utah Blaze. Then he spent five years coaching high school football in Washington (2006–10), and two years at the University of Idaho (2011–12), where he served as the offensive coordinator and quarterbacks coach. He became interim head coach in October 2012. Last season, Gesser was the quarterbacks coach at the University of Wyoming.

"It was hard," Gesser says of not being able to express his passion for the Cougs when at the other schools. "I wanted to wear my Cougar shirt but I couldn't."

When Wyoming fired head coach Dave Christensen after the season, his coaching staff, including Gesser, had to move on as well, giving the quarterback the opportunity to wear crimson once again.

"Jason Gesser has a passion for Washington State University and that was illustrated in the way he played football for the Cougars," says Moos. "I am thrilled he made the decision to leave coaching and be an administrator, and be one at Washington State."

In addition to his position with the Cougar Athletic Fund, Gesser, a graduate of the Edward R. Murrow College of Communication, joins the Cougar football broadcast team. He is working with legendary broadcaster Bob Robertson, Bud Nameck, and sideline reporter Jessamyn McIntyre.

It won't be Gesser's first foray into broadcasting. While coaching high school football, Gesser worked at Fox Sports Northwest as a game and studio analyst. "I really look forward to prepping every week," says Gesser, who will be providing color analysis.

Gesser gave Cougar fans many memories during his days as a player and team captain. "A lot of them talk about the UCLA game," he says, referring to the 48–27 win against the Bruins, December 7, 2002, that clinched a berth to the Rose Bowl. Gesser threw for 247 yards and two touchdowns on a badly sprained knee and ankle that he injured two weeks earlier against Washington. "Obviously, that is one of my favorite games, too."

Besides his most memorable games, Gesser is often asked about how he chose WSU. Born in Honolulu, Hawaii, he played a variety of sports growing up, including baseball, soccer, and basketball. But he showed the most promise in football. So much so, that playing college ball looked to be a real possibility as early as the ninth grade, Gesser's second year of organized football.

His dad sat him down for a talk. Because his family did not have the means to pay for college, Gesser knew then that his path to a university would have to be through football. "My dad told me if you ever dream about going to college you have to do it on your own," he says. "I said, 'Okay, challenge accepted.' I had a different mindset from the moment my dad told me that."

While his friends were at the beach, Gesser was working out, watching film, and pursuing his dream. The hard work paid off. Universities took notice after Gesser led his St. Louis High School team to the state title his junior year, and then repeated the feat as a senior.

Gesser received offers from over a dozen schools and narrowed his list to five: California, Utah, Kentucky, Washington, and Washington State. The trip to Pullman would be the fourth Gesser would take while trying to choose where to go. It would also be his last. "I canceled my fifth trip because I knew I was going to commit here."

Gesser was leaning toward WSU because of head coach Mike Price, but a trip to a Pullman grocery store sealed the deal. During a winter day, Gesser and his recruiting host Love Jefferson made a trip to get food. Jefferson left his car running to keep it warm.

Worried that someone was going to steal the car, Gesser hurried to get his groceries, although Jefferson took his time. "Ten minutes later, we come out and his car is still there," Gesser recalls. "I look around and there are a lot of other cars running. That just blew me away, how the town looked out for each other. That's when I knew WSU was the perfect fit for me."

Gesser earned his scholarship to WSU, fulfilling the challenge his father gave him. "Even though I was born and raised in Hawaii and had no idea about Washington State until my junior year in high school, I believe the way I was being raised from day one was to be a Cougar."

And now he is raising his family in the town and university that shaped him.

"Being in Pullman, raising my three kids, it's pretty special," says Gesser. "I have the right color back on. It's good to be back." «

:: *from page 11*

According to Perrin Whitman, the nephew of Marcus Whitman, "the soldiers found a considerable portion of Mrs. Whitman's golden hair, from which locks were cut by several members of the expedition." Perrin Whitman himself gathered some of the hair, which is now in the Whitman College collections. Catherine Sager Delaney, who was twelve at the time of the Whitman murders, wrote that "some of Mrs. Whitman's hair was picked up a mile from the grave."

In saving this hair, these individuals took home a very tangible, intimate historical memento. While the gathering of hair from a murder site seems grotesque today, the keeping of tokens or relics of the dead in the nineteenth century was more common. Once Narcissa became famous, individuals who had saved her hair donated it to archival repositories.

The preservation and donation of Narcissa's hair is more than a nineteenth-century curiosity. As late as 2007, Whitman College received a single strand of it. The relic was from a lock that Narcissa gave to a girlfriend prior to her departure in 1836 for Oregon. Until 1970, the lock was on display at Rushville Central High School, New York, in a frame with Marcus Whitman's 1826 license to practice medicine. Apparently one strand came loose, was saved, and then divided into three pieces, one of which was sent across the country to Walla Walla, where individuals still keep memories of its owner.

In a typed list of contents of the WSU Whitman collection, I found a reference noting that on March 15, 1961, WSU archivist Mary Avery sent a lock of Narcissa's hair, some stationary, two small floral paintings, and a bonnet to the Whitman Mission National Historic Site on "indefinite loan." I visited the Whitman Mission last summer and met with park officials, who decided that as the objects were no longer displayed, they should be returned to the University. So as part of her summer internship at the historic site, Kristine Leier delivered the artifacts to my office. After fifty-four years on loan, the curl of Narcissa Whitman's hair under glass, the stationary, flower paintings, and bonnet all returned to the Pullman campus. These objects remind us of how early collectors, such as Holland and Drury, decided what should be preserved in archives. Since little survives from the mid-nineteenth-century Northwest, those sources that remain in archives, libraries, and museums continue to influence how we understand the past.

GREGG MCFALL/NOAA

Cori Kane, a doctoral student in marine biology, has studied rare fish in the Hawaiian archipelago.

Diving deep in a unique tropical paradise

by Eric Sorensen :: Cori Kane calls it "underwater skydiving." She'll be out in the middle of the North Pacific, more than 1,000 miles from Honolulu and most anything else that might be called civilization. Flopping out of a perfectly good boat, she will rocket down nearly 300 feet in just a few minutes, encountering a strange and largely unexplored layer of ocean that's less familiar to science than the deep sea. It's the ecosystem of the mesophotic reefs, which lie at a depth often called the "Twilight Zone."

"When you jump in, it's like you're transported to this other world," says Kane. "There are fish everywhere. There are big fish. There are sharks. There are these big species of jacks called ulua that are like packs of dogs that come and follow you and check out what you're doing. Half of them are almost as big as I am. It's one of the few places where I jump in the water and instantly realize I'm not the biggest fish in the sea. It's an amazing experience."

A self-described "fish nerd" and Washington State University doctoral candidate in marine biology, Kane spent five years diving in the vast Hawaiian archipelago as research coordinator for the Papahānaumokuākea Marine National Monument. It is one of the largest marine protected areas in the world, with some of the highest percentages of endemic fish—species found nowhere else. Over dozens of dives, Kane found even greater numbers of endemics as she and her colleagues counted and catalogued fish in the monument's most remote regions.

"In a nutshell, we found a lot more than we ever could have imagined," she says.

Created by President George W. Bush in 2006, the monument is remote by most any standard. It's particularly far removed from Kane's childhood in Illinois, where her parents built a house by first taking out six acres of corn.

"Even in the middle of the corn fields I was always poking around in the dirt and playing with all the animals I would find," she recalls. Then her parents took her to SeaWorld, where her dad talked the staff into letting her be the kid that rides an orca during a show. She went on to get a bachelor's degree in marine biology and a master's in marine ecology, leading to her position at the monument.

For years, scientists have known that the shallower waters around Hawaii contain huge numbers of endemic fish. A little more than one in four are found nowhere else. But the deeper waters were off limits for exploration, as the dangers of nitrogen narcosis and decompression sickness limited traditional scuba divers to about 100 feet.

But starting in 1989, Hawaii ichthyologist Richard Pyle started developing gas mixes and techniques to dive deeper. Exploring the waters of the Cook Islands, Papua New Guinea, and the Patau Islands, Pyle found more than 50 new coral-reef fish species, estimating that another 2,000 await discovery. The new technology also let Kane and her colleagues start exploring the deeper reaches of the Northwestern Hawaiian Islands and make the first description of their mesophotic reef communities.

Kane recalls that after one of the earliest dives, Randy Kosaki, deputy superintendent of the monument, said, "Did you notice that almost all these fish are endemics?"

Kane, Kosaki, and Daniel Wagner, the monument science advisor, confirmed the impression by swimming transects at more than 50 sites between the main Hawaiian Islands and the Kure Atoll more than 800 miles away. Plummeting as deep as 280 feet, they would follow a line, identifying, counting, and estimating the size of fish a set distance to the left or right.

"It's like taking a snapshot of the reef," says Kane.

It turns out that nearly half the Northwestern Hawaiian Islands reef fish—46 percent—seen by Kane and her colleagues are endemic. That's nearly twice as high as any other tropical region. At the northernmost end of the islands, at a latitudinal limit of coral production called the Darwin Point, the endemism ran as high as 92 percent.

"This unprecedented rate of endemism," Kane and her colleagues wrote earlier this year in the *Bulletin of Marine Science*, "indicates that mesophotic reefs in the NWHI are reservoirs of biodiversity, and further underscores the need for protection of this area."

"By protecting this area, we are protecting a huge chunk of the world reservoir of species, if you will," says Wagner. "If we concentrate on protecting some of these hot spots, we have a lot of species and a lot of unique species, you can get more bang for your buck."

Scientists can use the endemic fish to study subtle variations among species, teasing out their evolution much as Darwin did with the finches of the Galapagos Islands. The monument's protections can also hedge

against endemics' particular vulnerability to extinction.

"If something happens to that population of endemic fish or that species," says Kane, "there's nowhere else to help it repopulate. It's kind of one of those indicator species or priority species that you watch, especially when you're concerned about a certain area, because it has the lowest chance of survivorship if anything super bad would happen."

Kane says threats to the region include plastic pollution, lost fishing nets that can strangle the reef, and the rising ocean temperatures of global warming.

"As climate change goes on and the ocean temperatures rise, we may be seeing a decrease in the level of endemism or fishes disappearing completely because they can't tolerate the warmer waters we may be transitioning into," Kane says. "One of our main goals is to try and document as much as we can right now because we don't even have a baseline for what these mesophotic reefs are. We could already be losing things and there could be catastrophic changes going on that we have no idea about, just because we haven't been keeping an eye on them before now."

Lessons from Geronimo

by Larry Clark '94 :: When Mike Leach, coach of WSU's football team, was a boy, he was in thrall with the story of Geronimo, a warrior who led a small group of Chiricahua Apache in defending tribal lands from invasion by Mexican and American settlers. A reader from an early age, Leach discovered the story at a public library in Cody, Wyoming.

"There was this book on Geronimo, the biggest book there. My mom said, 'Maybe we should get a smaller book, maybe a book with pictures,'" says Leach. "It had footnotes, bibliography, and everything. It's not something that belongs with a second-grader. But like a trooper, my mom read a chapter a night and explained the tough parts. I've been interested in Geronimo ever since."

Leach's fascination with the legendary figure continued through his school years and into his career as a football coach. Even today, he draws on anecdotes from Geronimo's story and details of the Apache lifestyle to highlight to his players the notions of discipline, leadership, and resilience.

He had a desire to write about Geronimo's role as a leader, so after Leach published his personal memoir *Swing Your Sword* in 2011, his agent put him in touch with Buddy Levy, a writer of several historical biographies who was also interested in Geronimo. The two spoke on the phone about the project.

Then Leach was hired as the Washington State football coach in 2012. Soon after he arrived in Pullman, Levy stopped by. "I showed up in his office, gave him some books, and said, 'If you like my books, I'm interested in doing a collaboration on Geronimo,'" says Levy, who teaches in the English department.

Leach hadn't realized that Levy worked at WSU. "It's one of the strangest coincidences," says Leach. He enjoyed Levy's biography of Davy Crockett, and agreed to pursue their mutual interest in Geronimo. They took about two years to write the book and published *Geronimo: Leadership Strategies of an American Warrior* in May 2014.

Structuring the book as an overview of his life, the writers found in Geronimo a rich source of stories from which to extract morsels of advice that conclude each chapter. Leach has shared many of these lessons with his teams over the years.

Leach says his favorite part of the book is about the training of Apache warriors. "That's what fascinates me the most as a coach. Training was what made them better warriors than everybody else," he says.

For example, now we have ultimate marathons where people are running 50 or 60 miles a day. "That was somewhat routine for Apaches," he says. "You didn't get a t-shirt. That's just what you did from time to time, especially if you were being chased."

Levy says he was amazed by the endurance of the Chiricahua Apache as well, not just moving across vast swaths of rugged territory, but doing it "with women and children, carrying animal bladders of water, hiding things in caves, eating and drinking from cactus."

Leach encourages his players with these and other feats of Geronimo and the Apache, telling the players, "Everybody can work harder than they believe they can. Heck, Apaches could do it and they did it over 100 years ago."

Geronimo's legendary toughness appealed to both Leach and Levy. He was shot at least nine times as he defended his ancestral lands and his people against Mexican and U.S. encroachment. Both authors also admired Geronimo's intelligence and tactical skills. The book details Geronimo's adversaries, including the many U.S. Army generals who tried to bring him in.

"He hammered through every general they had," says Leach. He includes Gen. George Crook, the most decorated Indian fighter in the history of the United States, who tried to get Geronimo to surrender. That failure ended Crook's career, Leach says.

Another nemesis, John Clum, ended up as mayor of Tombstone, Arizona. He sent "a posse that included Wyatt Earp and Doc Holliday to run down Geronimo. They never even *saw* Geronimo," says Leach.

The authors didn't want to demonize or idolize Geronimo, and the book doesn't gloss over the bloody trail that Geronimo left in his raids. But, says Levy, "Leach was sympathetic toward the Chiricahua and other tribes and their plight. We wanted to tell the story from Geronimo's perspective."

More than just a "who did what when" approach to Geronimo's life and the history of the Apache struggle, the book has sidebars that inform readers of the Chiricahua Apache culture, from women warriors to marriage customs and

"Geronimo was pretty much the main leader ... He seemed to be the most intelligent and resourceful as well as the most vigorous and farsighted. In times of danger he was the man to be relied upon." —Jason Betzinez, an Apache warrior, from his autobiography *I Fought with Geronimo*. ***Above:*** "Geronimo with Warriors." *Photo C. S. Fly, courtesy Library of Congress*

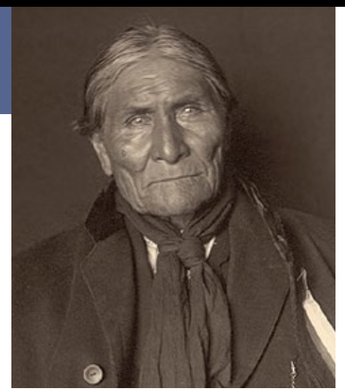
belief in the afterlife. They also include small biographies of prominent Apache figures such as Geronimo's role models Cochise and Mangas Coloradas. "It was almost the Apache equivalent of having George Washington and Abraham Lincoln as your mentors," says Leach.

Writing a book together wasn't always a picnic, says Levy. It was a challenge to get Leach's voice right. "He is a great storyteller, but his style is quite different than mine," says Levy. "He has a very direct way of stating things."

Leach says he enjoyed the research but it was not always "very fun to rewrite and find the perfect words." However, he says, there is a "weird level of satisfaction to completing a book. You take such a broad subject, and it's now assembled in an orderly fashion."

Levy also learned from Leach. Even with several books under his belt, it was Levy's first time collaborating on a writing project and he admired Leach's commitment. "The guy stays up late and has very efficient use of time. He would call me and we'd go over it line by line at night."

The authors' commitment to telling the story of this leader and his amazing ability to lead and survive surmounted any difficul-



Goyathlay (Geronimo). *Photo DeLancey Gill, courtesy National Museum of the American Indian*

ties in writing. Geronimo offered a model of persistence.

Levy was surprised by how long Geronimo lived and how he became an American icon, even as he and the Chiricahua Apache became the longest-held prisoners of war in U.S. history after Geronimo's surrender in 1886. "Once he's incarcerated, it was fascinating how there was a wind change in sentiment toward him in the country," says Levy. Geronimo's name became synonymous with ferocity and courage, something the two authors wanted to convey and explain, says Levy. "When you first hear about this renegade warrior, you don't necessarily know he was fighting for the country he loved and for his family," says Levy.

Read an excerpt of *Geronimo* at wsm.wsu.edu/extra/Geronimo.

A place for faith and support

by Jessica Schloss '14 :: For many, the Interfaith House was a home away from home, whether it was through the services offered by the Common Ministry, a place for meetings for student groups, or just as a hangout in the coffee shop.

The building on the northern edge of campus at 720 NE Thatuna has served the University and its students from the time it was built in 1925.

But time and circumstance bring change. Last spring the Presbyterian Synod put the building up for sale, and sold the Interfaith House to Washington State University for $1.2 million. Citing its location and connection to campus, the Board of Regents approved the purchase.

First a home for the Alpha Chi Omega sorority, the four-story brick structure remained in the organization's hands until it was bought for student outreach by the Presbyterian Synod in 1958. It would be seven years, however, before a Common Ministry was established and the building would become a place for campus religious groups as well as unofficial student organizations.

Known then as the Koinonia House (K-House), a Greek concept for "communion" or "community," a number of local religious denominations created a Common Ministry council. Everything that would come out of the Interfaith House would be part of the Common Ministry, including the tradition of having a basement coffee shop.

A place for friends and colleagues to meet, the Interfaith House also served as a space for those who felt displaced.

Wilhelmina Sarai-Clark, a retired WSU professor, was at one time a campus minister at the K-House as well as a deacon at St. James Episcopal Church. She stresses the positives that came while she was involved with the K-House, including the creation of the conflict resolution center and it serving as a headquarters for the participants of the student demonstrations in 1970. The protests drew attention to racism within the University. The ministry responded by offering programs and support.

"Another thing that originated from the Common Ministry was the acceptance of people with different sexual orientation," says Sarai-Clark. The house "was a safe place to be."

It was also a site for Alcoholics Anonymous meetings, student potlucks, and human rights task force meetings. Whenever the University struggled with an issue, whether it was about drinking or separation of church and state, says Sarai-Clark, the Common Ministry was a place where people could find help.

While the fate of the building is still undetermined, the Common Ministry has relocated into the Community Congregational United Church of Christ for the 2014–2015 academic year.

"I hope that we don't lose the connection with the University that we've had as a safe place to explore," Sarai-Clark says. "Things change, but that doesn't mean it's all bad. Where else are they going to have all of these different religious groups talking to each other? Listening to each other? That's what we are. And I hope that isn't lost." «

View the K-House mural at wsm.wsu.edu/extra/K-House-mural.

ROBERT HUBNER

The Interfaith House (formerly the K-House) has been a resource for students for more than 50 years.

Holiday Sparklers

by Hannelore Sudermann

At Karma Vineyards, where grapevines pour down the hillside toward the southern shore of Lake Chelan, a 3,000-square-foot cave holds the next few years' of sparkling wine.

Three different grapes from the 14 acres of vines go into the bubbly: Chardonnay, Pinot Noir, and Pinot Meunier. They're treated much the same way they would be in the Champagne region of France, where the complex and labor-intensive method of making sparkling wine was perfected.

"The *méthode champenoise* is worth the work," says Julie Pittsinger '06, who owns Karma with her husband Bret. They opened Karma's doors in 2007 and, she says, there really wasn't a decision about whether or how they would do a sparkling wine.

"Maybe we didn't know any different," says Pittsinger one late summer afternoon after sampling the sugars in her Pinot Noir grapes. "It is the traditional style and our personality is to do it right." While studying viticulture and winemaking at WSU, Pittsinger turned to an expert from France to help build the winery and start their first releases. Today Karma produces between 1,000 and 1,500 cases of bubbly each year.

Only a few Washington wineries make sparkling wines, but among them are some delicious and surprisingly affordable options, says Thomas Henick-Kling, WSU's director of viticulture and enology. "And there's room for a lot more," he says. "I think every winery should have some."

The climate, particularly west of the Cascades and in cooler spots on the east side, is well suited to grapes for sparklers. "You need base wines with a nice fruit aroma and a very fine texture," he says, "and the right phenolic content." Phenolics are chemical compounds that affect the mouthfeel and taste of the wine.

Winemakers have several paths to producing a sparkling wine. The Champagne method, perfected east of Paris, is the most time consuming and complex, says Henick-Kling. It involves a first fermentation of the grape juice followed by a blending and bottling with a dose of yeast and some juice and/or sugar for a second fermentation, during which the flavor and effervescence is developed. This second fermentation, which at Karma takes three years, is followed by a three-week "riddling," a painstaking process of shaking and turning the bottle every day or two to move the used-up yeasts, or "lees," to the neck of the bottle.

When the time comes, the winemakers freeze the neck, open the cap, and a plug of yeast pops out. Then comes a *dosage*, a bit of wine and sugar to flavor and sweeten the bubbly. Pittsinger uses her own recipe to top off each bottle before corking it.

But there are other, less complicated, ways to make sparkling wines, says Henick-Kling, who is organizing a course on the subject for his program. The first is the easiest. You take a good wine and infuse it with carbonation, like you would a soda. The result is fizzy, but rather rough, he says.

In the second, known as the Charmat method, wine is treated with yeast and matures in a closed tank where carbon dioxide builds up and creates the bubbles. "It's a good method for young fruit-forward sparkling wines," says Henick-Kling. It typically appears in Italian wines like Prosecco and the red bubbly Lambrusco.

But with the Champagne method, in which the second fermentation requires a contact with yeast for a minimum of nine months and up to three to five years, "You still have some nice fruit, but you also get these nice yeasty aromas," says Henick-Kling.

Doug Charles '83 has watched bubblies come and go in Washington. When he worked as a sommelier in the 1980s, he found houses like Hogue and Preston made "some really delicious sparkling wines," he says. "The potential has been there, but there's only been a tiny, tiny quantity."

Now, in his Anacortes shop Compass Wines, he reaches to a top shelf and pulls down a Trevari Cellars sparkling Pinot Gris made with Columbia Valley grapes. "Here's something worth trying," he says, adding that Trevari's sparklers have been served at the White House.

Then, skimming over a few dozen French Champagnes, he grabs another bottle from the bottom shelf. This is a Syncline bubbling brut rosé from the Columbia Gorge. "Some are traditional, some are non-traditional," he says. "They're all good. But I'd like to see Washington set its identity with what Washington does well."

Using non-traditional grapes like Syrah, Gewürztraminer, Pinot Gris, and Riesling, the state could make a name for itself with its sparklers much in the way it does with its still wines. "Why do we have to make what they make in France?" asks Charles.

Charles has some advice. The first is that sparkling wine doesn't need a special occasion. It could and should be enjoyed any time. "Bubbly is the most versatile of all wines," he says. "It goes with just about anything." (Karma's Julie Pittsinger loves it with spicy food and eggs Benedict).

The second, "there are some exceptions, but for the most part bubbly is best enjoyed when it's fresh," he says. And finally, "Avoid buying any wine from any place that treats it like a commodity. It's like produce. It should be kept at cool temperatures and handled with care." «

& Caviar

by Eric Sorensen

Mahmoudreza Ovissipour and I are in a small conference room on the edge of the Pullman campus with papers, a notebook, napkins, and plastic spoons. At the center of our attention sits a singularly small glass jar shipped overnight in ice packs from California. Its contents: one ounce of eggs from white cultured sturgeon, *Acipenser transmontanus*, also known as caviar.

A research associate in food science, Ovissipour is here to demonstrate how to wring the most flavor from each glistening, beady egg. He is part of a small cadre of WSU scientists who have studied various aspects of fish eggs, including Barbara Rasco, the School of Food Science interim director, and Carolyn Ross, head of WSU's Sensory Evaluation Unit.

This is not a sybaritic exercise, at least not entirely. The worldwide trade in black caviar is worth tens of millions of dollars, placing enormous pressure on sturgeon, particularly in the Caspian Sea, source of 90 percent of the world's caviar. Writing in the journal *Aquaculture Research & Development*, Ovissipour and Rasco say the Caspian catch has dropped to a tenth of what it was 30 years ago, while poaching has grown.

"The fishery is now in dire straits," they write, "and extinction has become a real possibility."

One remedy sits in the palm-sized, $50 jar before us. It holds the roe of sturgeon farmed in Italy. Along with conservation strategies and hatcheries, aquaculture eggs might provide a sustainable answer to the centuries-old demand for this most coveted of delicacies.

But first it has to satisfy the senses the way only caviar can.

"The first sense is olfactory," says Ovissipour, inviting me to open the jar.

I smell almost nothing, wondering if it is too cold. Ovissipour cups his hand over the jar and his nose.

"No, this is really good, because it's pretty fresh, a little bit fishy," he says. He speaks with the accent of his native Iran, one of five countries on the Caspian. "I cannot smell any rancidity, which is really important, because caviar are pretty rich in unsaturated fatty acid. They are pretty sensitive to oxygen and susceptible to being oxidized. This is why, once we open it and the smell is a little fresh, it shows the quality of the fatty acid is really great."

There's also no sourness, which would be a sign of yeast going to work. The color is good, black with a hint of gray. Ovissipour sees a hint of green, also good.

He puts a few eggs between two fingers. They are soft and unbroken, another encouraging sign.

"They're separated eggs," he says, "which means the quality is really high."

Using a plastic spoon—metal spoons might affect the taste—we each put a quarter teaspoon of eggs on our tongues and hold them ever so gently against the roof of the mouth.

"The dissolvability is pretty good," says Ovissipour, who has performed this routine maybe 1,000 times with many varieties, including beluga, the most sought-after caviar. "You cannot feel any firmness... which is really good."

There's a tingle of salt, but not too much, then a nutty, buttery profusion as the eggs melt across the tongue. There's no bitterness, a benefit of being farmed and processed in the same place.

"Once they harvest the fish, they can process the caviar in less than an hour," Ovissipour says, clicking his fingers. "This is why aquaculture can help to produce a safer product and a pretty fresh product."

We sample again, and again. More flavors emerge. The buttery flavor deepens along with a mellow richness similar to a breakfast egg yolk. No surprise there. These are eggs.

Now comes an aftertaste that reminds me of the ocean.

"We call it marine or sea flavor," says Ovissipour.

Recently, Ovissipour, Rasco, and Ross, along with research assistant Allison Baker, a doctoral student, and scientific assistant Beata Vixie '11 MS , identified a total of 16 sensory attributes that could be used to evaluate caviar. The lexicon, which includes terms like "earthy," "old linseed paint," and "rubbery," could help the industry improve the quality of its product, identifying which attributes are most favored by consumers. The evaluation also confirmed previous work showing no taste and quality differences between farmed and wild caviar.

Ovissipour recommends eating caviar with cheese, crackers, and maybe some frozen vodka. Later that day, I invite friends over to finish off the jar's contents. My wife and I cobble together a Danish smorgasbord of pickled herring, the previous night's grilled salmon, cheeses, and the proletarian antipode of caviar, braunschweiger liverwurst. We repeat Ovissipour's exercise, the salty-buttery-marine taste building across our palates with each nibble. We follow with samples of Danish aquavit from the freezer. If caviar were glycerol, this would be nitric acid. The flavor explodes.

"Not bad for leftovers," says my wife.

Yes, I say, "It helps that we have caviar." «

MARCO MAYER/123RF

by Hannelore Sudermann :: portraits by Rajah Bose '02

Harold Balazs '51

Finding *the* artist:

An absurd, incredible journey

THERE'S A TRICK TO FINDING THE ARTIST. It involves a trek down a private drive at the back of a nondescript neighborhood north of Spokane. A patch of pavement gives way to dirt and winds to a tree-shrouded valley. Just as worry sets in that this is the wrong way, a peculiar wooden sculpture pops into view. Then two more towering abstract monuments pose by a bridge into this magical place where art sprouts from the lawn.

Harold Balazs is on the porch of his rustic house, a retreat lovingly furnished with art and photographs of family and friends. He invites me in, where his wife Rosemary is clearing away breakfast.

These days Balazs (pronounced Blaze) fills his mornings with paint. The 86-year-old perches at a massive wood table, which he built years ago, and holds court over acrylics, brushes, and papers. A degenerative disorder has compromised his balance, played havoc with his movements, and affected his ability to find the right words and fully express himself. He is frustrated he cannot always do the welding and sculpting he loves, but it is not keeping him from creating more art.

Today, though, he pushes his paints aside, and with his words and gestures renders his story.

He stepped onto the Northwest art scene in the 1950s with his painting, welding, enameling, and concrete artwork. Known for his collaboration with architects, particularly on liturgical commissions, he easily shifts shapes and styles to suit his projects. But with 65 highly productive years as a professional artist, there is still much more to tell.

And, as with Balazs himself, there is a trick to finding his creations. Though he is one of the most prolific public artists in the Northwest, we have lived with his works for so long, we may not even recognize them.

His touch is in the molded brickwork of a bank tower on Spokane's Second Street. It is in the doors and altars of churches all around the Northwest. And his art is in, yes IN, the Spokane River, a rippling stainless steel sculpture floating on the water. Once you start looking, you find Balazs everywhere.

Harold Balazs in his studio. ***Opposite (clockwise from top left)***: View inside the *"lantern"* tower at the INB Performing Arts Center in Spokane, 1974 (*photo David Leeth*); *Ark*, 1968, an early major commission by Tacoma's Temple Beth El (*courtesy Temple Beth El*); *Centennial Sculpture*, 1978, literally floats on the Spokane River (*photo Guido Ciampi*); *Untitled*, 1979, on the grounds of the State Capital Museum (*photo Jeffree Stewart*); *Rhododendrons (Part II)*, King County Administration Building (originally installed as part of a triptych for the Kingdome—*photo from Google Maps Street View*)

For a sampling of the varied and extensive artwork of Harold Balazs visit wsm.wsu.edu/extra/Balazs.

In Pullman, a dense tangle of concrete puzzle pieces borders the courtyard of the Museum of Art at Washington State University. A short walk away, an up-pointing arrow perches in the entryway of the Terrell Library. A few minutes east, a colorful abstract mural enlivens the alumni center. And you can find more, if you look. Even the curators at the art museum missed the massive, undulating bas relief panels between the first and second floors of Streit-Perham Hall and had not realized or remembered that the three-sided wood and concrete tower in front of the Presbyterian church on Stadium Way was classic Balazs.

Pick any sizeable city in the Northwest. It likely holds the artist's paintings, abstract metal monuments, gravity-defying concrete works, rippling walls of wood, and shiny enamel murals glowing with forms and flowers and birds.

"I remember him storming out of Spokane in the fifties or sixties, a volcano of energy spewing fresh Balazian sculpture in every direction," noted Fred Bassetti, one of Seattle's most influential architects.

"He is unique," Bassetti says in a small museum book. "He reaches into the heart of the matter. Whether his medium is bronze or porcelain enamel, wood, stone, or concrete, it evokes clearly his personal view of the precarious, ironic, tumultuous, absurd, incredible journey we are all making together."

A CREATIVE FORCE

Balazs first bent a piece of metal to his whim in Westlake, Ohio, a village about 12 miles outside of Cleveland. His father Harold was a sheet-metal worker and air-conditioning repairman. In a shop at the back of the farmhouse, he taught his son the skills of bricolage and metalwork that would serve as scaffolding for a career in the arts.

A consummate craftsman, Harold senior honed in his son a meticulous attention to detail as well as the habit of making do with the materials on hand.

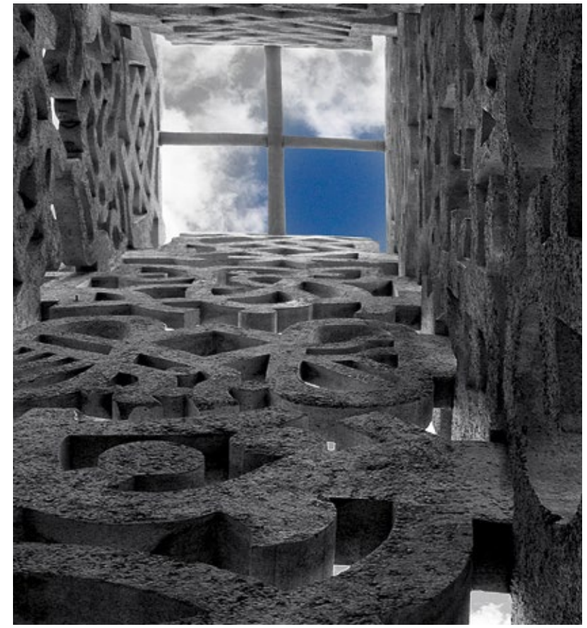
When Balazs was 11 or 12, his mother enrolled him in Saturday morning art classes at the Cleveland Museum of Art. There his explorations drew him to pair of two-foot-square enamel panels by Ohio artist H. Edward Winter. "I was enamored with them," he says. "I said, 'I'm going to do that one day.' And I did."

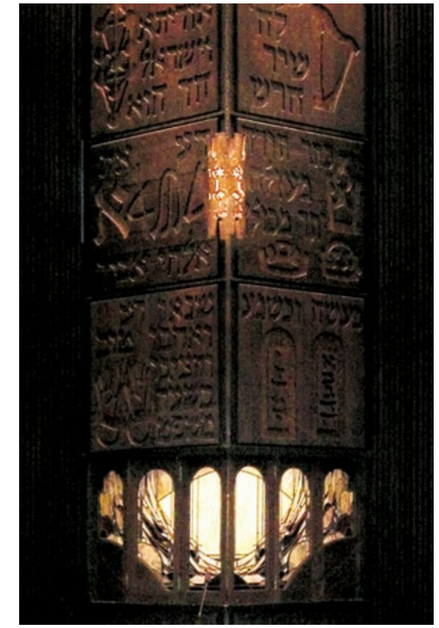
After high school, Balazs strayed into mathematics and engineering at a junior college in Chicago, thinking, because he liked drawing airplanes as a child, he might go into aeronautics. But "I wasted a year," he says, though the time in Chicago gave him a taste of life drawing and anatomy classes. When his family moved to Spokane in the late 1940s, he happily moved, too, and enrolled as an arts major at Washington State College.

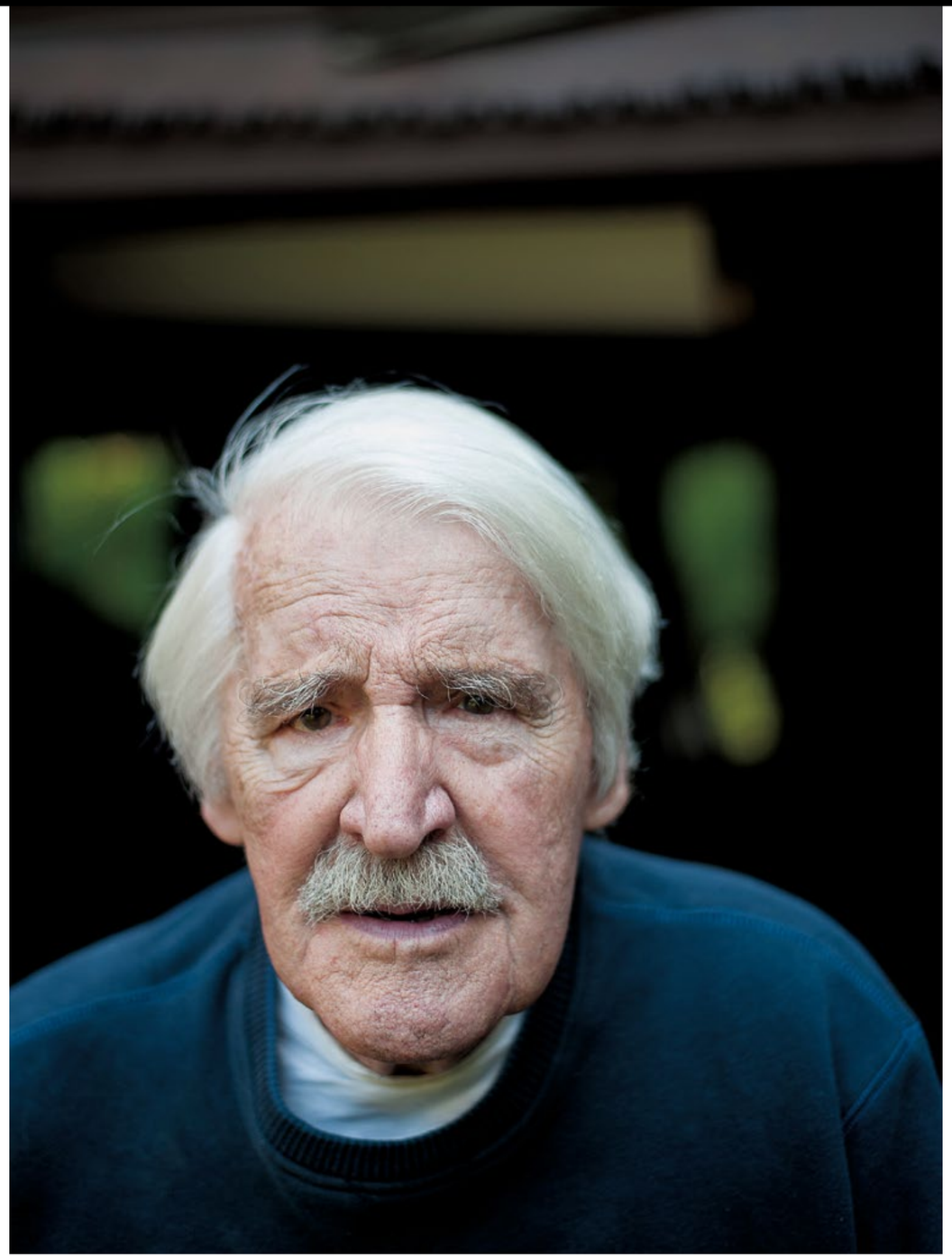
"Harold led the pack," said classmate Rudy Autio in an interview for a 1988 museum book on Balazs. He threw himself into his art classes, but he was also into drama, fencing, skiing, wooden shoes, and, "all kinds of weird things that no one could keep track of."

"It was incredible to watch Harold work," said Autio, a world-famous Montana-based sculptor who died in 2007. "There wasn't anything he couldn't do, build, or invent."

"I was always in trouble down there," says Balazs, a smile curling under his trademark mustache. He once discovered a room in the art building that no one was using. He used the space to clean ducks he had shot in a creek, and he and his friends would sneak up there and work at night, he says, "Until we got caught by the janitor."







In the early fifties, fine art undergraduates were prohibited from entering in juried shows. But prohibitions didn't suit Balazs, who sent some works to a show in San Francisco. "These were pieces I did totally on my own," he says, explaining that his teachers had not had any influence on what he produced. "I got in, and the whole rest of the faculty was rejected."

Kicked out of the ROTC because of his independent spirit, Balazs was also nearly expelled from the fine arts program. He owes his survival to teacher George Laisner. A Czechoslovakian immigrant who painted, sculpted, etched, made jewelry, and worked with glass, Laisner taught Balazs about Bauhaus design and encouraged him to follow his multimedia impulses. In return, Balazs taught Laisner to do precise metalwork. "He loved Harold and saw his potential," says Anna-Maria Shannon, associate director of WSU's Museum of Art. Laisner convinced his colleagues to keep Balazs. "He told them, he will do us credit."

Somehow among his myriad activities and classes, the art student from Ohio found time for love. He met a sparkling 17-year-old Rosemary Schneider at a Spokane swimming pool one summer day in 1947. She was nice looking, he says, smiling across the room at her. She rolls her eyes before heading out to the garden to leave us to our interview.

He is a "friendly, innovative, craggily handsome, sometimes self-deprecating man," wrote biographer Judy Laddon. "Stunningly handsome," says Karen Mobley, a friend of the Balazs's and former director of the Spokane Arts Commission, "and charismatic. How could Rose not fall for him?"

Harold and Rosemary married in September of 1950 and moved into a $12-a-month shack in Pullman. It had a little wood stove and old-fashioned ice box, which Balazs would chill with icicles he plucked from the eaves of fraternity houses. "Here I am this young jerk with a beautiful wife and then next thing you know, we're waiting for a child." Kurt arrived just a week after graduation.

The young family moved in with Rosemary's parents in Spokane and set up a workshop in the basement. Rosemary would help with the metal and enamel jewelry, cut stencils, stock supplies, and make deliveries. They sold pieces through shops in Spokane, Seattle, and Portland. The smaller items, which today command as much as $400 on Etsy and eBay, then wholesaled for just $8 or $9.

The late Joel E. Ferris II, owner of the Spokane home furnishings store JOEL was thrilled to stock Balazs's handiwork. "He showed up in wooden clogs," noted Ferris in the book *Harold Balazs: Art is an Art Form.* Balazs brought in fixtures, tables, stools, jewelry, and pictures. "He is and was the true artist-craftsman, lifting the taste of the community."

At the same time, Balazs was entering juried competitions and developing a following. A Spokane newspaper covered his one-man exhibit in 1954. "Balazs' work is characterized generally by a gay sense of color and lively humor," wrote Gladys E. Guilbert for *The Spokesman-Review*. The article notes that his paintings had been accepted for exhibition at the Seattle Art Museum and the Henry Gallery Invitational, and had won a major Henry award. The one-man show in Spokane included paintings, mobiles, enamel plaques, lithographs, earrings, cigarette boxes, and pictures done in lacquer and metal.

Balazs never understood how some people could pursue only one form or style in art. "There were just too many things I wanted to try," he says. He liked to have 10 or 12 projects going at once, "that way I would never get bored."

Twins Erika and Andrea were born in 1959 and the Balazs family moved to their own little Eden, a home with seven acres on Peone Creek in the suburb of Mead. It provided room to play and the privacy and the proximity to nature they craved. "I always worried I'd bother people with my noise," says Balazs. "And this place is just crawling with wildlife."

In spite of his critical acclaim, Balazs was repulsed by the business of "Art." He found the gallery scene of cultivating collectors and schmoozing with dealers distasteful. "I found the more money, the more scoundrels show up," he says.

So he focused on creating pieces more people could afford, working directly with clients, and producing major works for mere dollars. In 1965 the Spokane Airport Board, for example, paid him just $800 for a sculpture he suspended from the ceiling.

Across a wide lawn and opposite their house, the Balazs family built a barn to serve as a studio. They named it Mead Art Works and welcomed the helping hands of many "Mead Workshop Elves." Rosemary was the most essential collaborator, "without her none of this would happen," says Balazs. But his father would also do metal work, his friends would assist on the larger pieces, and younger artists who lovingly called him "Uncle Harold" would trade their labor for his mentoring. The children would take part, too. Lately Balazs's grandson Keegan has picked up the welding torch when the artist's physical state cannot keep pace with his imagination.

Seattle architect Tom Kundig, who visited Balazs's workshop as a child in the 1960s, started helping as a teen. "Harold had unstoppable energy," says Kundig. "He was always thinking about the world, what was around us in culture, in nature. He would take all of that and then turn it into art. A flood of art.

"Even when his family was watching TV, or if he had a book, he would be sketching, imagining, developing an idea," he says.

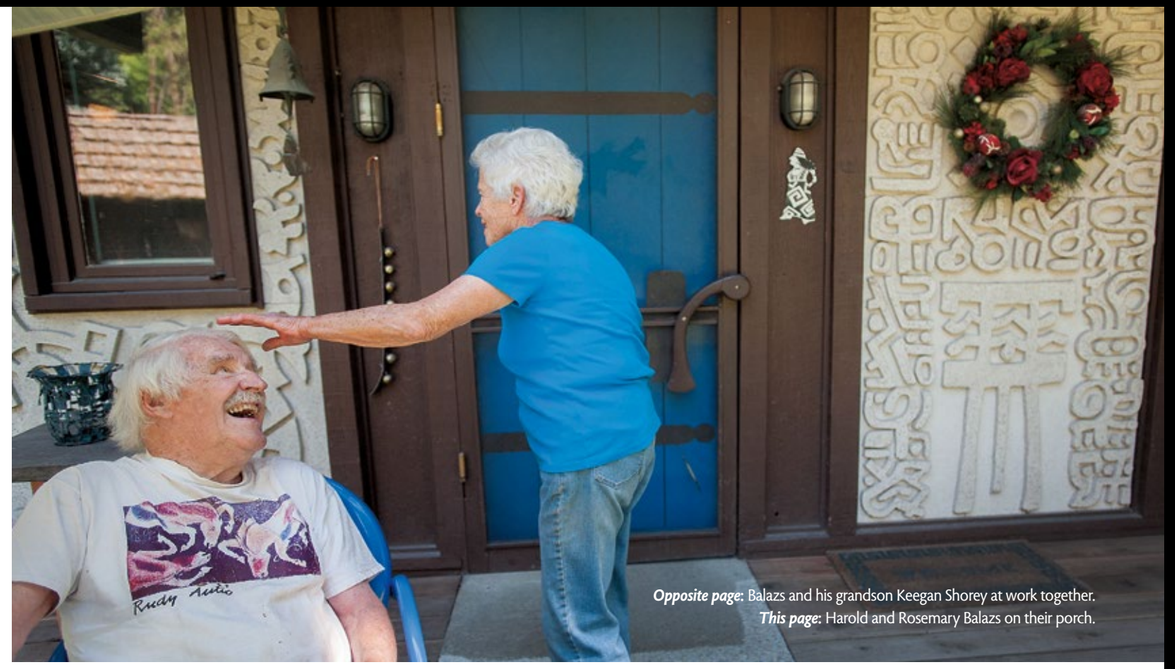
Assisting Balazs with projects—including the Kingdome's "Rhododendrons," enamel panels now adorning the King County administration building in Seattle—gave the budding architect a notion of "making things that make our life better."

"I knew intuitively I would not be an artist," says Kundig, winner of the National Design Award from the Cooper Hewitt, Smithsonian Design Museum. But as an architecture student he drew on his experiences with Balazs, learning from his use of organic forms, his experimentation with materials, and his boundless energy for creating beauty. "I was lucky to be around that creative force of nature."

ONE CORNER OF THE UNIVERSE, OR GOD BOXES AND ARCHITECTS

"I was once known as the Madman of Mount Spokane," says Balazs, who counts skiing, along with fishing and hunting, among his favorite pursuits. "I can't ski anymore, but I once had a controlled ricochet technique that was really something." The younger architects in town skied as well. "And we shared a liking for modernism," says Balazs. Those mountaintop encounters led to friendships, which lead to commissions. Willing to create in nearly any medium, and being affordable and a willing collaborator, Balazs became an artist for the architects.

The late fifties and sixties brought a boom of church construction. And Balazs had developed a technique with cast concrete that suited it



Opposite page: Balazs and his grandson Keegan Shorey at work together.
This page: Harold and Rosemary Balazs on their porch.

well. He could create baptismal fonts and candle sticks. He used it to build walls at Spokane Unitarian and window grills at Bethlehem Lutheran depicting Christ's life. Always seeking new challenges, he changed media at St. Charles Parish in Spokane and built brightly hued baked enamel on copper doors, torch-cut iron baptistery gates, a torch-cut crucifix, and a torch-cut grillwork altar depicting saints.

With affection, Balazs calls these houses of worship "god boxes." A secular humanist, he nonetheless researched each commission to create works that would suit and serve each congregation's values.

One memorable night in the 1960s, Balazs and an assistant spent hours toiling 40 feet off the ground to install a wood altarpiece at the Temple Beth El in Tacoma. He had included inscriptions and figures memorializing victims of the Holocaust. "We were up and down a ladder working on it way into the night," he says. When he and his helper finally descended and turned around, they found they had an audience, some of whom were crying. "They were Holocaust survivors, and they were building this temple," says Balazs, a tear in his own eye. "We have the capacity to touch people to such a degree. That's something that's very sacred. You have to guard that."

In the midst of his church commissions, the Puget Sound-area architects discovered Balazs. In Seattle, his first major public work was a 21-foot copper *Totem* to stand in the plaza of the 1959 Norton Building downtown. Then Fred Bassetti commissioned a copper sculpture for the front of the Henry M. Jackson Federal Building. And Tacoma's Robert Price called, as well as more than 20 others. Balazs liked being in on it from the start. Whether it was a gate, a sculpture, or a simple embellishment on a wall, he sought to craft the things that would elevate the projects.

By the 1970s, more than 80 percent of the Balazs's income came from architectural commissions. Playing with brick, metal, and concrete, developing new techniques, it was all part of the fun, he says. He could carve enormous polystyrene forms for walls, gates, and sculpture, fill the crannies with concrete, and reinforce the pieces with rebar. The results were ornate forms, both abstract and representational, but always intriguing.

"My business is trying to make one corner of the universe a nicer place to be," he once told the *Oregonian*. "That's really what it's all about."

EXPOSITION

Balazs's role as a public artist intensified when Spokane was named the site of Expo '74. He became the primary artist of the world's fair. From glass etched bowls for the key dignitaries to a large concrete internally illuminated "lantern" in Riverfront Park, he was everywhere. He even managed to sneak in some Balazs-style irreverence, with a small (now stolen) historical marker that stated, "On 27 July 1973 Nothing Happened Here."

But his greatest challenge was the 32-foot "lantern" made with 20 concrete panels. It was the largest object of art planned for the fair.

Creating the design and building the form went well, but assembling the piece onsite, which Balazs always did himself, and without safety equipment, turned treacherous. "It was a very windy day and I was right up at the top," he says. "The wind caught a piece and I tried to restrain it, pushing it away from the building." He was pinned and crushed three vertebrae, the worst injury of his career.

The incident laid him up for several frustrating months. But he turned his convalescence into an opportunity to focus on watercolor landscapes. Once recovered, he was all the more driven.

"His mind and his artistic inclinations are just bubbling all the time," says Ivar Nelson, the production editor of the 2010 book *Harold Balazs and Friends*. He feeds his creativity with literature, poetry, and philosophy, says Nelson. "He is very receptive to the world."

Balazs likes to paraphrase philosopher Alan Watts: "You've got to be part rascal." Watts believed the secret of life was to be completely engaged with the task at hand, and to realize that it's not work, but play. That suits Balazs who is driven to play every day. "It beats honest work," he says.

Mobley, the former Spokane arts director, conjures up a classic Balazs moment from the installation of the giant Rotary Fountain in Riverfront Park. Water shoots from sprinklers and spouts around a ring supported by five 24-foot steel columns on the sculpture Balazs co-created in 2006. The project is nearly complete, the security fence still around it, and the group decides to turn on the water and see it in action. Suddenly Balazs, who had disappeared into the back of a truck, "rips off all his clothes and runs down the ramp and into the fountain," says Mobley. "Right in front of those poor Rotarians."

POSTERITY

As our morning draws to a close, Balazs invites me to see the works he has collected from his friends. Every wall of the home is covered, and sculptures linger in the corners. He points out a large, and now quite valuable, Autio piece, proud of his classmate's success. And then he brings out a stack of his own paintings that he has completed for a summer show at The Art Spirit Gallery in Coeur d'Alene.

It's not the aging that upsets him, he says. But the evolving physical problems are curbing his ability to bring his work to life. His paintings are, as ever, fanciful and colorful. But a tremor is evident in the black lines dividing the paper into characters and shapes. "I don't care if it's neat." He points to the ripples in the brush strokes. "I don't care about them."

What he does care about is the color, the surprise, the response his bright creations of shapes and signs might provoke.

Balazs doesn't know how many works he has created, or where they might be. He has produced many thousands of things and never kept a catalog. A number have surrendered to the weather. Others were vandalized or simply removed because of changes to a site. The Norton Building *Totem* vanished during a site renovation. "I fear it was sold for scrap," says Balazs. A bronze lady on a bicycle was stolen from Coeur d'Alene. A Sacajawea sculpture disappeared from Cheney.

In Sitka, Alaska, a copper sculpture in front of the city-state building simply went missing. Someone found it at the dump. "A lot of public art ends up that way," says Balazs, with a shrug. The person who found the piece gave it to a neighbor. When it was rediscovered, the city asked for its return. The neighbor refused. Balazs backed her up.

"He doesn't see his art as permanent," says Nelson. "He has an enormous ego about his work while he's doing it. But once it's done, it's done. People may get tired of it and want a change. He's OK with that."

Posterity is not his priority, says architect Tom Kundig. "He taught me that the real value comes in the making of it. Do good work and hopefully that has good effect."

Balazs eschewed the commercial art world, opting instead to work with architects, a few small galleries, and friends. And he has kept himself somewhat cloistered near Spokane, instead of out in a bigger city where, say collectors and curators alike, he would be famous. For him, the purpose of his work is simply wonder, both following his own and creating it for others, he says. "Even if the wonder is nothing more than, 'why in the hell did he make a thing like that?'" ⊗

Art *in* public places

In the late sixties, Harold Balazs '51 helped build a public arts tradition in our region. Along with several members of the Washington Arts Commission, including artist Jacob Lawrence, he created Washington's Art in Public Places program. Starting in 1974, the program began directing one-half of one percent of all state building budgets toward purchasing contemporary art. The pieces would be owned by the state but could reside at the site of the project.

Having traveled in Spain and Italy, Balazs had realized that the United States could easily support more arts and culture. "Countries in Europe do so much more than one percent," he says. In a gallery in Rome, he learned that the Italian government at the time prioritized arts investment with a strong culture ministry. So he made it a mission to support it at home.

"Harold is so much a supporter of other artists," says Jim Kolva '68 who, with his wife

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Pat Sullivan, has collected hundreds of original pieces, including a variety of works by Balazs and other WSU graduates. "You would always see him at other artists' openings."

Balazs realized that public commissions could be the financial foundation for many artists, and would offer the public access to great works. "When it all started, it was like many government programs, it was to spread the wealth around," he says. The eligible artists were primarily from the western United States and British Columbia.

Seattle, as a city, had started its own program a year earlier, allocating a full one percent of public project funds. But thanks to Balazs and his fellow commissioners, Washington was a leader, the second state in the country to do this.

Today the state program has placed more than 4,500 works around Washington, both in permanent sites and on loan. A number reside on WSU's campuses.

In Pullman, west of Hulbert Hall, Larry Tate's untitled piece of Everdur silicon bronze and stainless-steel cable was one of the first to arrive in 1976. It was soon joined by Robert Ellison's *X-position* just off Stadium Way in 1977 and James Lee Hansen's *Stempost* in 1979.

Ten years ago, a few significant bronzes including *Red Horse Capture* by John Buck and *The Technicolor Heart (The Big One)* by Jim Dine came to WSU for a large sculpture exhibit. Thanks to state arts funding, they found a permanent home.

But public art goes beyond what the state provides. WSU's own collection should not be overlooked, says Anna-Maria Shannon, associate director of the Museum of Art. Many, like Dudley Pratt's 30-foot limestone "rangy farmboy" on the side of Holland Library, may simply be taken for granted. There are hundreds of works in common areas, offices, and plazas all around campus. And they have many different owners, including the art museum and the president's office.

Shannon has started to create a comprehensive catalogue, at least of the outside pieces. It becomes a challenge, though, trying to find everything and then deciding whether it's art or something else, she says. Would it include the *putti* on the Stimson Hall Fountain? Or the low relief Art Deco sculpture of five women on the front of the Smith Gymnasium? "Is it a piece of art or an architectural aspect?" Shannon wonders.

For the most part, all these works are things of beauty, provocation, or contemplation. We may not realize how much public art enriches our experience, or even that it's there, says Tom Kundig, a Seattle architect and friend of Balazs. "But I know it has to have some effect," he says. "It's more influential than we can quantify." ⊗

From one Harold to another: take a brief tour of some of the Balazs works around campus—with a few other large-scale sculptures thrown in—at wsm.wsu.edu/extra/campus-art.

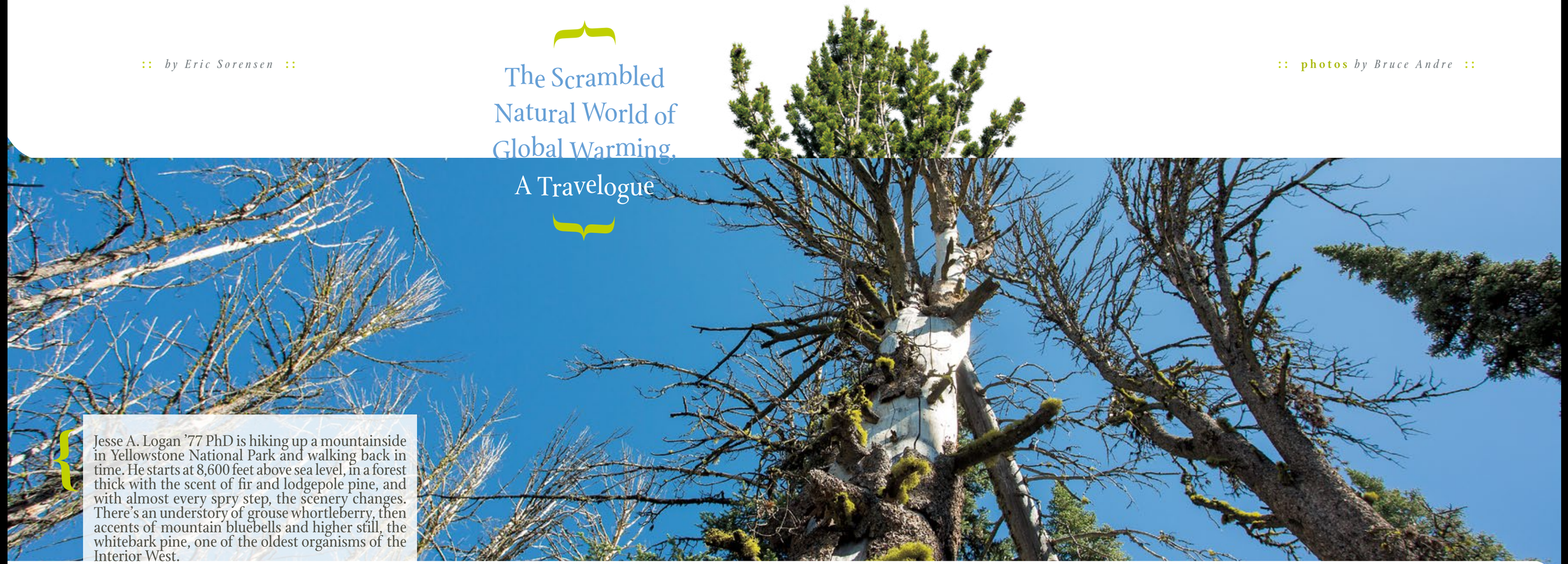
Opposite: Balazs's *Rotary Fountain* (a collaboration with landscape architect Robert Perron) in Spokane. ***Clockwise, from left:*** Pullman's public sculptures include Balazs's *Tori Lantern* on the Fine Arts Plaza, Robert Ellison's *X-Position* off Stadium Way, *Red Horse Capture* by John Buck, and the bas-relief on the Smith Gymnasium. *Photos Zach Mazur except as noted*

STAFF PHOTO

:: by Eric Sorensen ::

:: photos by Bruce Andre ::

The Scrambled Natural World of Global Warming, A Travelogue



Jesse A. Logan '77 PhD is hiking up a mountainside in Yellowstone National Park and walking back in time. He starts at 8,600 feet above sea level, in a forest thick with the scent of fir and lodgepole pine, and with almost every spry step, the scenery changes. There's an understory of grouse whortleberry, then accents of mountain bluebells and higher still, the whitebark pine, one of the oldest organisms of the Interior West.

Finally, the vegetation gives way to large swatches of scree. Logan's 70-year-old legs have gone up 2,000 feet and back more than 10,000 years, from the lush vegetation of the twenty-first century to the hardscrabble world of the Pleistocene Epoch, when glaciers scraped the earth and plants struggled to hang on.

The view east and north opens up, and Logan can peer into the Shoshone National Forest's Crow Creek drainage. It's a long trough fringed with peaks and mesas and vast groves of dead trees. One section of trees was burned in the spectacular fires of 1988. But even larger sections are forests of whitebark pine ravaged by the mountain pine beetle.

As a U.S. Forest Service entomologist in the 1990s, Logan developed a model that showed global warming could raise temperatures enough for the beetles to flourish and overwhelm the pine. His prediction came true beginning in 2003, when a beetle outbreak swept over much of the Greater Yellowstone Ecosystem. The trees turned a glowing red as their needles died, then became "ghost forests" of bleached skeletons.

"I've watched all of this happen," says Logan. "First the south-facing slopes went, naturally, then the north-facing slopes. It's just heartbreaking."

The view is a peek into a future of increasing global temperatures and rapidly changing natural relationships. For thousands of years, plants, animals, bacteria, and fungi have secured a tenuous foothold on the planet by adapting to specific niches and relationships. Now, a seemingly subtle rise in the average global temperature—1.5 degrees Fahrenheit since 1880, according to the Intergovernmental Panel on Climate Change—is prompting a cascade of ecological changes. They could only hasten as temperatures rise as much as 8 degrees more by the end of this century.

Earlier this year, the Third National Climate Assessment, an analysis by more than 300 experts, cited 30 observed and projected biological responses to climate change in the United States. Among them: the loss of habitat for nearly a dozen marine mammals, earlier salmon migrations that risk being out of synch with optimal spawning conditions, fewer trout in the West, earlier bird migrations, and dying western conifers. In general, the assessment's *Climate Change Impacts in the United States* says climate change can reduce the ability of ecosystems to improve water quality and regulate water flows. It can also overwhelm the ability of ecosystems to buffer extreme events like fire and floods. Some species may decline and even become extinct, "altering some regions so much that their mix of plant and animal life will become almost unrecognizable."

One need only look at the salamanders Rod Sayler traps at the edge of the Pullman campus. The creatures live and breed in small pools around the arboretum, metamorphosing from larvae to adults as the pools dry. But if the pools dry too quickly, the salamanders emerge smaller and less fit to make their way in the world.

"Salamanders are kind of a canary in the mine, as so many species are," says Sayler, who teaches conservation biology as an associate professor in Washington State University's School of the Environment. "They show us that we have these changes going on in the environment… This is just one tiny example of all these other multitudes of changes going on at the same time that are affecting our ecological communities."

Exactly how those communities will be affected, though, is subject to a lot of fine, as-yet-unwritten print. In a way, climate change is scrambling the natural world so much that it is sending ecologists back to the drawing board.

"I always say that one of the products of climate change is uncertainty," says Ken Raffa '80 PhD and professor of forest entomology at the University of Wisconsin–Madison. "We can say with certainty some products of climate change are rising ocean levels or changing insect ranges. But I think we have to be honest and say another product of climate change is more often we find ourselves answering intelligent questions by saying, 'I don't know' about things we used to know a lot about."

"The more we learn, the more complicated it starts to look to us," says Jesse Brunner, an assistant professor in the WSU School of Biological Sciences studying the effect of climate change on the blacklegged tick, carrier of several diseases, including Lyme disease.

"I remember when I was first hearing about climate change and disease, it was really simple relationships," Brunner says. "It was things like, warmer temperature, faster development, everything goes to hell. But the reality seems to be, the climate gets warmer and more variable and precipitation changes and certain types of organisms might do a little bit better, at least in certain stages of their life cycle. But others might do worse. Trying to figure out the net outcome of that is a messy business."

In a way, the term "global warming" confuses the issue. Just as some places might actually get colder, the effects of rising average temperatures will often be quite localized. To see this, we've arranged with several WSU faculty and alumni to take a virtual tour of the country, from a New Hampshire hillside to the tidal flats of San Francisco Bay, with stops in between. Along the way, we'll see researchers observing and anticipating the effects of rising temperature on the natural world, a bewildering process that takes ecology's already complicated study of connections and activates a whole new set of circumstances.

Some are good, some are bad. Whatever the outcome, ecologists tend to agree that the warmer future will be profoundly different.

"This is a new game, no question," says Logan, who expects negative impacts to outweigh potential benefits. "It's really an interesting time to be an ecologist, but not a particularly happy time."

HUBBARD BROOK EXPERIMENTAL FOREST, NORTH WOODSTOCK, NEW HAMPSHIRE

In the fall of 2009, Michael Webster left a faculty appointment at WSU to take an endowed chair in ornithology at Cornell University. He moved, as the crow flies, 2,000 miles from Pullman to Ithaca, New York. The trip was as easy and risk free as for just about any other animal. And quite possibly easier than the move a black-throated warbler might make as global warming shifts its habitat up or down a hillside.

"We're very flexible animals," says Webster, who still collaborates with WSU faculty. "We have technology that helps us deal with a huge range of conditions. These birds don't necessarily have that technology and it's unclear how flexible they are and how well they can adapt to a changing climate. And that's what we're trying to figure out."

The black-throated blue warbler is a forest bird that migrates from the Caribbean to breed each summer in the northeastern United States and southeastern Canada. For years, Webster has studied the bird in the Hubbard Brook Experimental Forest, one of more than two dozen long-term ecological study sites run by the National Science Foundation and other federal agencies.

Like most creatures, the bird has evolved to breed in a specific niche. If average temperatures change and alter that niche, the bird could find itself in a bind, as would other birds, insects, and other animals.

"Basically there are three options for those species," says Webster. "One is to adapt to the changing conditions. Another is to move to where conditions are more favorable for you. And the third is to go extinct, at least locally." The creatures that go extinct are, in effect, fatally bound by their evolution. Unlike a human, they can't pack a moving truck and go to a new clime.

"They become trapped by their own ecology," says Webster.

As it happens, more is known about the Hubbard warblers than just about any other breeding population. With climate conditions changing, Webster and his colleagues saw a chance to ask, "Is this good or bad for the birds?"

Webster simulated a warming climate with more food, putting out meal worms and training the birds to eat them. He found that, to the extent a warming climate increases the abundance of food, the birds might fare better.

"They do modify what they are doing in a way that is at least partially adaptive for the changing conditions," he says. "They do OK and in fact, to a certain level, they do well. This is one of the birds that at least in the short term might benefit from changing conditions."

Indeed, if they have more food in the spring, they could breed as soon as they return from migration, and might make two broods. But a long-term warming trend could also affect the structure of the forest, shading out the understory so there is less food for insects. This is probably what's happening at lower elevations.

"So over the longer term, it may be not good for the birds," Webster says. "There's this complicated thing where, short term, it's probably good for them. Long term, possibly not."

Researchers have noticed that birds in Europe, where ecological conditions are more similar, are having young out of sync with the emergence of caterpillars, a major food source. In the United States, where forests are more varied, there are more varieties of caterpillars and a less predictible peak in food abundance.

Still, what's good for the warbler may not be good for the wren, and ecologists struggle to find an overarching theory for the effect of a rapidly changing climate.

"So far, I don't see a general rule of thumb emerging," says Webster. "It looks like it might be much more species by species."

SAN FRANCISCO BAY

Back in the mid-'70s, while finishing his WSU doctorate in zoology, James Cloern saw an episode of *NOVA* featuring U.S. Geological Survey scientists studying the inner workings of San Francisco Bay's physics, chemistry, and biology.

"Wow," he recalls thinking. "Wouldn't that be a neat place to work?"

Six months later, he was in San Francisco as a USGS ecological modeler. That was 38 years ago. At the time, the USGS San Francisco Bay program was already looking at climate variability—cyclical changes in precipitation, river flow, wet years, and dry years. In the last 20 years, the changes have been more continuous. Their footprint has also been huge.

"In our long-term studies, we've detected large changes inside San Francisco Bay that we think are attributed to climate-driven changes that are operating across the entire North Pacific Ocean," he says. "In terms of everything being connected, in order to understand a place like Puget Sound or Willapa Bay or San Francisco Bay, we need to understand what's going on in the local watershed, in the far watershed and across the North Pacific Ocean basin."

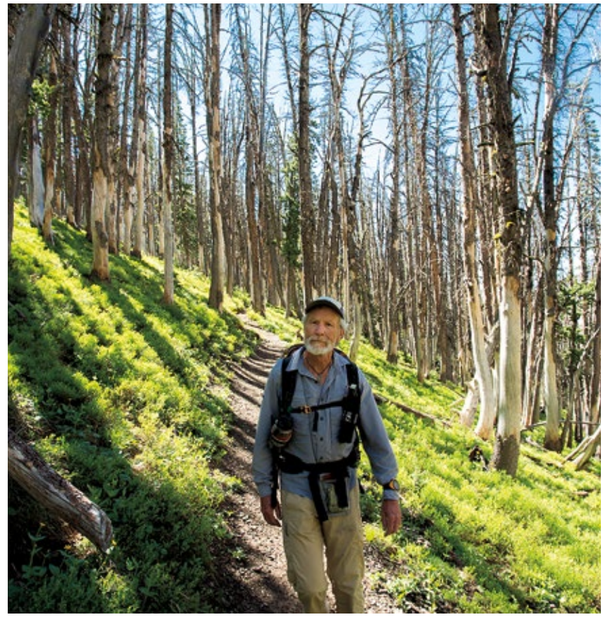
In 2011, he was the lead author of a study in the online journal *PLOS ONE* projecting changes to the bay under two contrasting climate scenarios of fast and moderate warming. Aimed in part at helping resource managers plan for a warmer future, both scenarios anticipated a shrinking water supply, wetter winters and drier summers, rising sea levels, "reduced habitat quality for native aquatic species, and expanding envelopes of environmental variability into regimes we have not experienced." Salt water will intrude more into freshwater areas, hurting irrigation and supplies of drinking water. Four runs of native Chinook salmon will spawn in summer waters warmed to "lethal levels" for their eggs.

"Sea level rise in a sense is a straightforward problem," says Cloern, "whereas sustaining endangered, indigenous species is really challenging because it's not the response of just one thing. It's not just increasing water temperature. It's not just changes in salinity. It's changes in the food supply. It's changes in habitats that are required for spawning and for avoiding predators. It's changes in competition from invasive species that are going to find themselves in a habitat that's more favorable to them. So it's a multidimensional, complex, much more challenging problem."

LYME, CONNECTICUT, AND POINTS WEST AND NORTH

When we think of ecology—the study of organisms and how they interact with each other and their environment—it's easy to forget that humans are one of those organisms. The blacklegged tick does a good job of driving that point home.

The tick transmits the bacterium *Borrelia burgdorferi*, the cause of Lyme disease, so named after it was seen in three communities centered around Lyme in 1975. At the time, outbreaks of the disease were confined to coastal southern New England. It has since spread through the Northeast and upper Midwest and become the most commonly reported vector-borne disease in the United States, according to the Centers for Disease Control.



Now comes the era of climate change, creating what Jesse Brunner, a disease ecologist and assistant professor in the School of Biological Sciences, calls "an interesting, natural experiment that's happening right in front of us."

Here's a simplified form of one scenario. If temperatures go up, more ticks will survive, breed, and infect. Early on, it was widely thought the ticks required mild winters to survive, like those found near coastal areas, and that they were restricted from moving inland by cold, dry winters.

But the invasion of recent years negates that hypothesis, says Brunner. The ticks exist in lots of places without mild winters. Thinking that rare cold snaps might still kill the ticks off, Brunner one winter put some in the ground in mesh bags, digging them up every few weeks to see which survived. They seemed to be unaffected by the cold, finding places just warm enough in the ground to survive.

Still, Canadian researchers hypothesize the ticks might run through their life cycle faster with warmer temperatures. Going from eggs to larvae to nymphs to adults generally takes two or three years. The longer that takes, the more risks they face, says Brunner, leading to fewer progeny.

So the cold overwintering hypothesis gives way to the warmer, faster development, less risk hypothesis. As Brunner puts it, this can make more places "permissive" for ticks.

"The regions in North America that are permissive for ticks are probably expanding," he says. "At least on the northern edge it seems to be expanding, just because it's getting warmer in the northern regions and they're able to complete their life cycle quickly in the northern region. Those areas that could not have ticks before probably now can have ticks."

But a tick's survival also depends on its ability to get a blood meal, which it does by "questing." This involves climbing high up a piece of vegetation and sitting with arms extended to grab a passing creature—a deer, a mouse, opossum, a human. But elevated, open questing spots can be dry, and all that time above the humid leaf litter with arms extended dries a tick out. Meanwhile, with global warming, the Northeast summers are forecast to be hotter, with less frequent, larger rains between long dry spells.

"My suspicion is that there's going to be a lot more time that's basically bad for questing," says Brunner. "They're going to have a harder time finding a host. So all of a sudden, developmental times may not be the issue. The ability to complete your life cycle, that may be easier to do under future climate. But getting a host might be a lot more difficult."

No blood meal, no tick.

Then there's the effect that climate change has on the host themselves. Their populations may be sensitive to temperature, as well as their food sources. And remember the tick's pathogen, the bacterium *Borrelia burgdorferi*. Its ability to replicate is also affected by temperature.

"It could be that under warmer conditions, pathogens might replicate faster," says Brunner, "which means they might be more likely to get transmitted to a new host. In a lot of hosts, though, the immune system can be temperature-dependent as well. For a lot of arthropods, their immune system functions better at warmer temperatures."

At least for now, he said, "We don't know which one is going to end up winning the temperature race."

THE GREATER YELLOWSTONE ECOSYSTEM

For thousands of years, the whitebark pine has flourished by going where no tree dares to go—the bitterly cold, windswept reaches high up on the western spine of the continent. It has colonized poor soils, enabling an ecosystem in which calving elk have cover and Clark's nutcrackers, squirrels, and bears can thrive on the tree's fat- and protein-laden nuts. As a friend of Logan's puts it, the trees "turn granite into grizzly bears."

But the tree also has the distinction of being, as Logan puts it, "one hell of a survivor, not a particularly good competitor." This has been borne out by the mountain pine beetle's ability to so utterly overwhelm the tree in what Logan has called a "perfect storm" of circumstances.

First, winters grew milder, letting more adult beetles survive. Some adults could overwinter and attack early in the year, while other adults attacked later.

Then there's the chemistry. Typically, the beetle has attacked lodgepole pine, which tends to grow at lower elevations than the whitebark. The lodgepole has a potent arsenal of resins to repel or kill adults and prevent eggs from hatching. The whitebark has some of the same chemicals, called monoterpenes, but not as many. Moreover, attacking female bark beetles can convert some of the tree's chemicals into pheromones used to attract males, rallying the troops.

"They use the tree's defense chemicals as precursors to the aggregation pheromone," says Raffa, the Wisconsin entomologist, who last year wrote about the whitebark chemistry in *PLOS ONE*. "So as long as the tree is fighting back, it's bringing in more and more beetles. It's kind of a multi-million-year-old version of jujitsu."

After burrowing through the tree's bark, the beetles make a J shape in the phloem, the bark layer that takes nutrients from the leaves to the roots. A year after an attack, the tree's needles turn red and eventually fall, leaving a ghost forest.

"Pretty soon, you just see bare skeletons," says Logan.

In 2009, Logan did an aerial survey of the Yellowstone ecosystem and found 95 percent of the whitebark pines had some level of mortality, with nearly half losing their ecosystem services like food for grizzlies and retained snowpack. Logan sees the damage most everywhere now, especially since much of his retirement—some 100 days a year—is spent back-country skiing in the park.

For scores of other species, the effect of global warming can be unclear, complicated, and subject to all manner of ifs. But as Logan said upon accepting a forest entomology award in 2010, the beetle outbreaks on the whitebark pine "are perhaps the clearest example to date of a predicted ecological response to global warming that was borne out by subsequent events."

He may well be the nation's biggest advocate of the whitebark pine, telling its story to the likes of *High Country News* and *The New York Times*. Encountering a group of hikers on the way to Avalanche Peak, he says, "You guys notice all the trees? Bark beetle." When a visitor suggested that the whitebark is not a particularly good looking tree, he politely said those could be construed as fighting words.

But he sees no quick fix. Pesticides are impractical. Replanting trees is prohibitively expensive and, like pesticides, outside the park's guiding principle of letting nature take its course.

So Logan takes the long view. Driving above the treeline one afternoon, he stops at the Rock Creek Vista Point. At 9,190 feet above sea level, it must be one of the highest rest areas in America, with fortress-like privies and expansive views of rock and stunted, twisted *krummholz* versions of whitebark pine.

"I just don't see much optimism in the current distribution of whitebark in this system," said Logan. "The way climate is going, I see massive disruption for grizzlies, for water retention. We're in for some serious times."

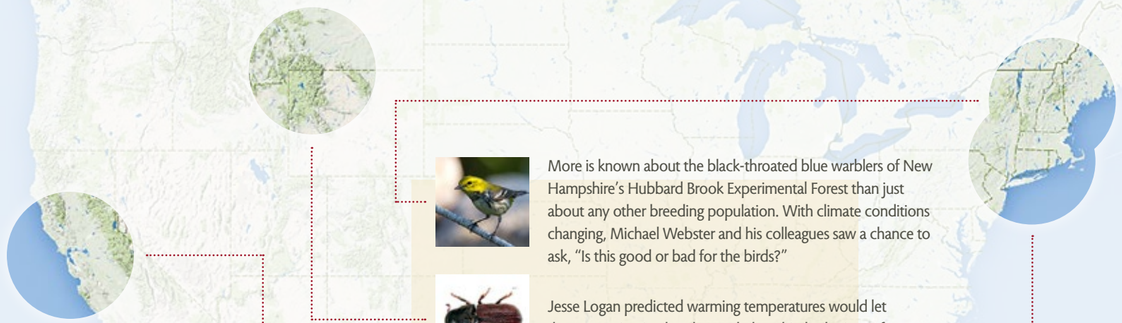
He recalls how his grandfather, who was born in 1856, told of seeing a fungus wipe out the American chestnut, an enormously valuable tree in the woodlands of the eastern United States. Logan expects that he too will explain to his own grandchildren how a major tree left the landscape.

But taking an even longer view, he says the whitebark's future may well be here among the *krummholz*. High enough to avoid the reach of the beetles, the trees can serve as a genetic repository, if and when the climate stabilizes or the tree develops some sort of adaptive response to the beetle. Meanwhile, it can hunker down in a forbidding redoubt of rock and snow, growing at a glacial pace, taking half a century to so much as put out its first pine cone, awaiting the day its time returns. ⊗

The Scrambled Natural World of Global Warming

A Travelogue

Left to right: Cornell ornithologist Michael Webster, USGS aquatic ecologist James Cloern '76 PhD, retired U.S. Forest Service entomologist Jesse Logan '77 PhD, WSU disease ecologist Jesse Brunner.



More is known about the black-throated blue warblers of New Hampshire's Hubbard Brook Experimental Forest than just about any other breeding population. With climate conditions changing, Michael Webster and his colleagues saw a chance to ask, "Is this good or bad for the birds?"

Jesse Logan predicted warming temperatures would let the mountain pine beetle attack the whitebark pines of Yellowstone, then watched it happen.

James Cloern led a climate study of San Francisco Bay that anticipated a shrinking water supply, wetter winters and drier summers, rising sea levels, and "reduced habitat quality for native aquatic species."

Jesse Brunner is studying the effect of a changing climate on blacklegged ticks and the Lyme disease-inducing bacterium they carry. For now, he says, "We don't know which one is going to end up winning the temperature race."

STAFF ILLUSTRATION

Mapmaker Mystery

by Nicholas Deshais :: photos by Robert Hubner

THE PALOUSE, in its way, is a perfect place. A land of soft, rolling hills framed by rivers, mountains, forests, and desert, this agricultural hinterland feels all four seasons fully, and in all likelihood grows enough food to feed its inhabitants and visitors with ease. It's home to scholars and farmers, and its story begins in the ice ages and continues today with an unrelenting flow of research from two major universities.

Despite such beauty and bounty, the Palouse has not received the artistic consideration that has Yosemite or Hudson Valley. I've never seen anything like that, at least until a day last winter when I stumbled into the Owen Science and Engineering Library to escape the cold.

There, pinned behind glass in the lobby, a large, color ink-drawn poster of the Palouse grabbed my attention. It was stunning, with countless details of the landscape stretching north of Oregon's Blue Mountains and the Walla Walla River, and to the south of Lake Coeur d'Alene and Ritzville. Near the center, two dots represented Pullman and Moscow. It lay in perspective, projecting from the southern end, making the north look smaller and farther away. I inspected the map for probably 20 minutes before I looked at the tag accompanying it. Artist unknown, date unknown.

I was intrigued, naturally. Who would spend the countless hours creating such a stunning piece without affixing their signature? I met with Chelsea Leachman, the reference librarian who displayed the map, to get some answers.

She led me to a locked, well-lighted room on the third floor of Owen that contained a pile of more than 400 hand-drawn maps very similar to the one displayed in the lobby. The maps detailed the natural features of Washington state with intricate color pencil drawings. Purple volcanoes shot puffs of smoke into the air, and blue rivers tore through mountain ranges. The features appeared in greens, browns, yellows, pinks, blues, and purples—a veritable cartographic rainbow.

The backs of the maps identified what was on the front, and overflowed with shorthand notes on geology and history, footnotes to published

Searching for answers with Owen Science and Engineering Library reference librarian Chelsea Leachman. ***Insets, from top:*** Frank McCann, Solon Shedd. *Courtesy WSU Manuscripts, Archives, and Special Collections*

works, and names of prominent geologists. Some of the maps contained catalogues of mountain peak elevations, and some were careful reproductions in triplicate. Much of the writing, while clear in style, was close to indecipherable in content. Conjugated words with superscript letters baffled me. Dense paragraphs filling the entire page daunted me. These maps, it appeared, were the culmination of years of effort, easily. This was the work of a very dedicated mapmaker—or perhaps a group of them.

"When I saw the big map, I knew I had to display it," says Leachman. "But nobody knows who drew it."

That includes three emeritus professors from the geology department, now the School of the Environment.

"The whole map collection was donated to the library [by the geology department] several years ago. Part of it was from the standpoint that these things are old and needed to be preserved. We didn't have a good place for them," says geologist Gary Webster. The maps were already around when he started at WSU in 1968, but he doesn't know who drew them. "The maps may be approaching a hundred years old, but that's awild guess."

Experts at the University library's Manuscripts, Archives, and Special Collections had never heard of the maps, but were immediately intrigued, like me. Everyone who saw the maps was stunned by their precision and beauty. And no one had a clue who created them.

There are no dates written on any of the maps to identify date of completion, no signature to claim creatorship. As the mystery deepened, so did my resolve to find the unknown cartographers. I was on the trail of a mapmaker, but the trail was cold.

So I began with Leachman. She had done some digging herself and found the name "Frank McCann" on the back of one of the maps.

"He was a resident of Coulee City and amateur geologist," she wrote in an email. "What I have not figured out is how they would have ended up at WSU."

McCann was a longtime resident and business leader of Coulee City who was called "The Daddy of Grand Coulee" for his efforts to educate the world about his adopted region.

When McCann first arrived in Coulee, it "was only a scar on the face of the Earth," according to C.T. Giezentanner in *The Chalice of the Gods*, an out-of-print book about the Coulee area. "Dry Falls was called a 'Damned Pot-hole' by the stock men who roamed the range."

But with McCann's unremitting boosterism, things began to change. He wrote a series of articles describing Grand Coulee as "the outstanding geological feature of the state of Washington." He convinced prominent geologists like J Harlan Bretz, the famed scabland elucidator, to visit Coulee and escorted them on their explorations.

Eventually, and by no small effort of McCann's, a dam was erected, one that is still the country's largest power-producing facility. "What nature intended, but never completed," is how McCann described the dam. Unfortunately, three years before the dam was completed, McCann "dropped dead when he stepped from his car at a service station while en route to his boyhood home at Northloop, Neb.," according to his obituary in the *Spokane Daily Chronicle*. The 1939 article was sure to mention McCann's "national reputation as an amateur geologist."

But there was no mention of mapmaking in any article, let alone any connection to Pullman or the University. And the name Leachman had found appeared on the back of a map of the Coulee area. Was it simply a reference to his work?

In need of answers, I did what any wayfaring writer would and went to an expert. Cheryl Gunselman is the manuscripts librarian with MASC, and her office windows look over a reading room where pens are prohibited and white gloves are required. Talk to Gunselman about history and she is easily, and uncommonly, excited.

Soon after hearing about the maps, she mentioned Solon Shedd, the first university-trained geologist to teach in Pullman, as a potential maker. Shedd came from Stanford in the fall of 1896 to teach six courses in geology and mineralogy. Until this time, a man by the name of Elton Fulmer had taught geology—but he was a trained chemist who also taught chemistry, pharmacy, and assaying. This was no big feat when the entire student body numbered just 57. But as the students came in greater numbers and Fulmer was appointed state chemist, he hired Shedd.

In 1905, the Washington State Agricultural College Experiment Station and School of Science became Washington State College, and Shedd was made professor and obtained his master's and doctoral degrees from the new college. He also was named assistant state geologist, which is why Gunselman mentioned him to me. In this capacity, he created survey maps of the state. Maybe the maps in Owen were his field notes, Gunselman suggested.

The notes and drawings seemed too carefully rendered to be field notes to me, but her theory was better than mine, primarily because I had none. I looked at the maps closer and began to see names and dates. Daly 1903. Weaver 1916. Stanton 1898. Landes 1901. I plugged these into the library's database and realized these were references to published papers on regional geology. Shedd's cartographic authorship grew in my imagination.

Then I saw Barksdale 1947. And C.C. Popoff 1948. My heart sank. Shedd had died in 1941. He was out. So was McCann for that matter.

Still, Shedd's role as state geologist grabbed me as rife with potential. Perhaps his successor drew the maps?

Harold Culver looms large over the study of geology at WSU. After teaching for six years at the University of Washington, Culver worked as chief of the coal division for the Illinois Geological Survey, during which time he obtained his doctorate in geology from the University of Chicago. So when he came to Pullman in 1925 and replaced Shedd as both head of the college's geology department and supervisor of the state Division of Geology, he had both the academic and administrative experience needed for the roles.

Right away he began work on the first official published map of the state of Washington, which would replace the "sketch map" done in 1901. He enrolled other instructors and advanced students to assist him, an effort that would take decades. According to an obituary of Culver by the Geological Society of America, Culver's mapping work was impressive, as "large unmapped areas were filled in well enough to be useful to the U.S. Geological Survey for inclusion in the 1932 map of the United States." Four years later, in 1936, Culver published the official geologic map, accompanied by a small book, *The Geology of Washington*. It's a dry book—as official books on geology can be—but the names in it matched those on the maps. Daly. Weaver. Pardee. Bretz. There was a problem, though. The map was published eight years before the latest reference I found on the maps: Popoff 1948, which as far as I could tell referred to investigations done on the limestone and silica deposits in Skagit and Snohomish counties.

Still, I reasoned that while Culver's map was drawn years before the final dated references, he could have continued his map work after publication. Culver didn't die until 1970, long after the final date on the maps.

Gunselman, the archivist, recommended I consult old course catalogues to see who was in the geology department, and when. I thought it might help me chase my Culver idea down. In fact, it did the opposite.

When I pried open those dusty old books, I was hopeful. In 1936, Culver taught field geography, which involved "detailed mapping of the area." He taught it again the next year. And the year after that. In 1939, the class was taught by the generalized "staff." But in 1941, a new class entered the catalogue called "Preparation of Geologic Illustrations." It was taught by Ralph Lupher, who ran it for five continuous years.

Lupher came to Pullman in 1931 as professor of stratigraphy and paleontology. Immediately, he took an interest in local geology and spent much time in the field, contributing to Culver's work on the state map. Outgoing and amiable, Lupher became popular among students, not just for taking them on his impromptu weekend field endeavors, but also for the open door at his log cabin home on A Street, which was later razed and turned into a fraternity parking lot.

Before the student body boom of G.I. Bill soldiers, the geology department had dwindling numbers of students and Lupher left Pullman in 1945 for work with Shell Oil Company assessing the oil and gas potential in southwestern Washington. His work with Shell was solitary for seven years, when he "traversed all available roads, jeep trails, and old railroad grades, collecting samples and recording geologic information." He created such a comprehensive report that Shell still referred to it 30 years later, according to a memorial written after his 1979 death.

Again, I thought I might have found my mapmaker, but nowhere was a mention that Culver or Lupher left behind a trove of maps. I thought if I found a sample of handwriting to compare with the tens of thousands of letters on the backsides of the maps I could maybe find my cartographer. Again, I headed for the archives.

When I left the sunshine for the ground floor reading room in Terrell Library, Gunselman sat me down with a pile of personnel files and other ephemera.

Culver, kindly enough, left the University his field notebooks, a collection of leather bound journals filled with decades of his observations. I opened the first, my mental fingers crossed. Instead of the neat, blocky letters of the map, I found instead the clean lines of cursive, page after page, year after year, decade after decade. The man had great penmanship, I had to admit, but he was not my cartographer.

I moved on to Lupher, whose personnel file contained exactly one piece of paper. It had no handwriting.

At this point, my intrigue turned to frustration. I was looking for a geologist, someone who made a vocation out of studying change over a vast period of time, someone whose subject of study is so long lasting it appears as permanent to us, especially when viewed over the course of one human life. Geological features, generally, are static. The permanence of the natural world lasts the course of many generations. Sometimes they outlive an entire species. They say mountains crumble to the sea, but Mount Rainier is 500,000 years old. For that matter, the Pacific Northwest has been around tens of millions of years.

But I was frustrated because I realized how impermanent my mapmaker allowed himself to be, simply by not signing anything. Here was someone who lived in the last century—not even worth a mention in the geologic sense. Yet he left no mark of himself.

I was beginning to think that geologists sacrificed their own human stories for those of the world beneath and around us. So I went to the source of all stories: People.

The geology department was disbanded more than a decade ago and reconstituted as a program in the School of the Environment in 2012. Today, there are three emeritus professors who taught in the defunct geology department: Gary Webster, Philip Rosenberg, and Franklin "Nick" Foit. Of anyone on campus, I thought, one of these men must know who drew these maps.

"I have no idea where they're from," says Rosenberg, who came to Pullman in 1962. "I think they probably have been around for ages."

Foit came to WSU in 1971, and had never seen the maps, but like me thought they were very cool.

Webster, who knew of the maps but not their maker, said there was one person who definitely knew who made the maps.

"I've racked my brain. I came here in 1968. I have the feeling that the fella that might've known is long dead. Chuck Campbell," Webster says. "Chuck Campbell was the history guy here. A wealth of information. I'd always go to him."

Campbell taught geology in Pullman from 1934 to 1971, and his personnel file in the archives was the fullest of any I dug through. His records state he double majored in geology and French at the University of Michigan, but he could also read German, Spanish, Russian, and Italian. His employment in Pullman began with a Western Union telegram dated July 12, 1934. It was from E.O. Holland, the college's president, offering him the position.

He took it, of course, and like many of his fellow geologists he spent summers doing "geological mapping … chiefly Ferry County." You might think I grew excited at another potential rabbit hole. I was not. I quickly realized Campbell was not my mapper simply because of his handwriting, which was loose, a bit sloppy, and looked nothing like what I saw on the maps. But it didn't matter. Campbell liked to write, and I thought that among his documents I could find a clue. He was head of the department from 1950 to 1961, after all.

More importantly, he wrote "An Informal History of the Department of Geology," a 30-page account overflowing with information about the department's first 80 years. Everything from how long each professor taught in Pullman to each building in which geologists toiled made their way into Campbell's account, though he admits that "much of the iceberg is … tantalizingly out of sight." For instance, to illustrate his point that not all details could be included in such a history, he gave us but one: "One secretary … who was an Arthur Murray dance instructor, (was) drenched in perfume that has only recently disappeared from Morrill Hall, but which helped to counteract the smell of scorched wood around the assay furnaces where Phil Rosenberg's lab now is."

Campbell does furnish his history with interesting facts that bump against geology. For instance, the foundation and trim for the Administration Building, now called Thompson Hall, was made from granite pulled from Medical Lake, near Spokane. And the building brickwork "was made on the spot, from loess excavated from the slope across the road."

Good stuff, just not what I was looking for. The illustrative details I was looking for, as he admits, are tantalizing and, sadly for me and my map quest, out of reach. "Inclusion of all these touches would effectively baffle any person wishing to find hard data in this story: they are left out, regretfully."

I did not seek hard data. All I wanted was one mention of a geologist's mad desire to make map after map. One sentence conveying a specific professor's hobby of scrawling too much data on reams of colorful maps. But there was no such mention or sentence. Regretfully.

I sat down with the map one last time, poring over front and back, looking for the smallest detail, the smallest clue, and grew increasingly disheartened. When I stepped back to catch my breath and looked at the map from a distance, I was again struck by their beauty, like when I first saw them months before. And I realized, it didn't really matter who made them. Like the mountains and rivers they illustrate, you don't really need to know how they were built to appreciate their grandeur. Sometimes just looking at them is enough. ⊗

See detailed versions of the map at wsm.wsu.edu/extra/geology-maps.

Opposite page: Consulting with manuscripts librarian and archivist Cheryl Gunselman. *Insets, from top*: Harold E. Culver, Charles D. Campbell. *Courtesy WSU Manuscripts, Archives, and Special Collections*

Class notes are also online

wsm.wsu.edu/mystory

myStory

CLASS NOTES

1950s

Philip K. Piele ('57 English) is the new president of the leadership council at the Jordan Schnitzer Museum of Art at the University of Oregon.

1970s

Anne Taylor ('75 Int. Des.) was appointed to the Oregon Arts Commission in June.

Rosemary Baker-Monaghan ('78 Forest Management, '86 MCE) was elected chair of the Clatsop Community College Board in Oregon.

Norm Keitges ('78 Mech. Eng.) won a patent for his cable-injection process to repair electrical cables.

1980s

Elece Hempel ('83 Hum.) was awarded with "Woman of the Year" of the 10th Assembly District in Marin County and southern Sonoma County, California. She is executive director of the Petaluma People Services Center.

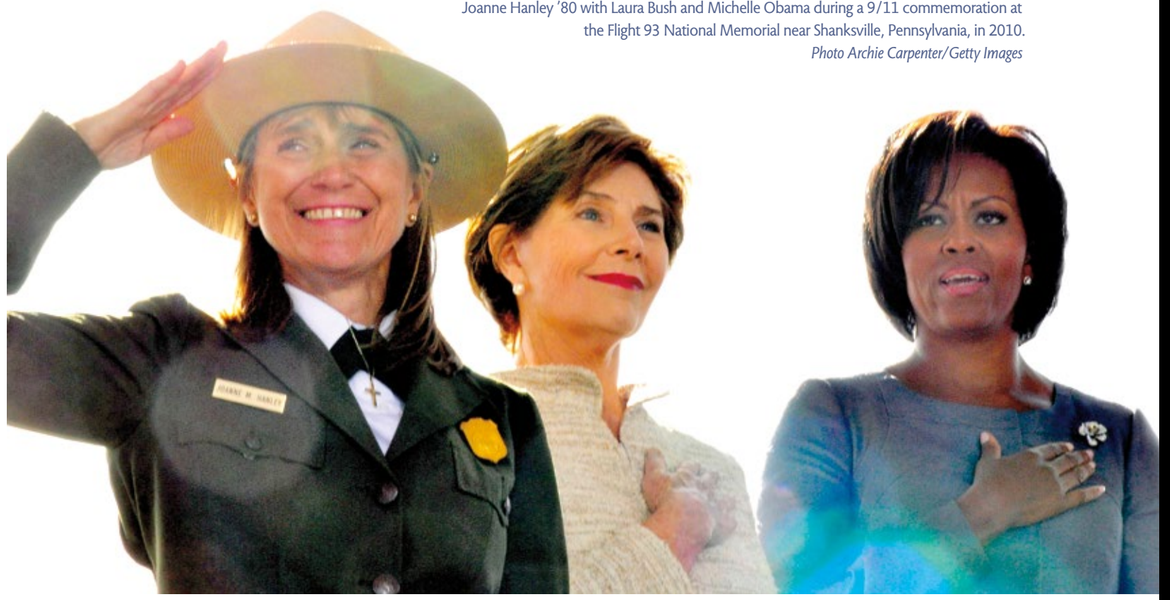
Lori Stinson ('83 Nursing) was appointed provost and vice president for academic affairs at Lewis-Clark State College.

Navin Dimond ('85 Busi. Admin, Const. Mgmt.) received the Colorado "I Have A Dream" Foundation Dream Maker Award for his work in promoting education in his community. He is president and CEO of Stonebridge Companies, a hotel management and development firm.

Elizabeth Teske ('89 Comm.) at Trios Health Marketing in the Tri-Cities, and P.S. Media co-owner **Mark Showalter** ('85 Fine Arts) won five international awards for educational videos.

1990s

Bobbi Cypher ('93 App. Des., Merch., Textiles) is store manager for WSU Connections' newest store in downtown Spokane.



Joanne Hanley '80 with Laura Bush and Michelle Obama during a 9/11 commemoration at the Flight 93 National Memorial near Shanksville, Pennsylvania, in 2010.
Photo Archie Carpenter/Getty Images

Joanne Hanley '80

Preserving public treasures

by Whitney Pipkin :: Joanne Hanley '80 never expected that a master's degree in environmental science would lead her to Gettysburg—one of the most significant sites in American history—or to supporting and creating several other memorials along the way.

During a 32-year career with the National Park Service, Hanley worked at more than a dozen historically and environmentally significant locations throughout the country. She oversaw the fundraising, design, and construction of the Flight 93 memorial to commemorate the September 11, 2001, crash. And, after serving as superintendent of the National Parks of Western Pennsylvania for a decade, she turned her energies to the field where a pivotal battle of the Civil War was fought in 1863.

The Gettysburg Foundation runs the only privately owned and operated visitor center in the National Park Service, and in 2010 the nonprofit's board saw in Hanley's experience with park service partnerships and nationally significant sites "the perfect leadership mix," said foundation chairman Robert A. Kinsley.

As president, Hanley works hand-in-hand with the park service, managing the $103 million Gettysburg National Military Park Museum and Visitor Center. With 140,000 square feet of exhibits, the 1883 cyclorama painting of the battlefield, and food court, the visitor center is where "the Gettysburg experience" begins for most.

After we visit in her office, located above the visitor center, Hanley insists that I see the 20-minute film, narrated by Morgan Freeman, and cyclorama show, if nothing else, on my way out. She adds that, since the center was expanded to include a dozen museum galleries, most people stay overnight to take it all in.

"There's just so much," she says. "You can't do Gettysburg in a day."

When she first came on board, Hanley knew the foundation—one of the largest and most successful private organizations in the park service, with an annual budget around $13 million—represented a unique opportunity to "preserve these very special places."

She had most recently overseen the development of the new Flight 93 National Memorial and served as its superintendent for a decade. Designing the memorial meant forging close relationships with family members of the 40 people who lost their lives in the crash. If not for the efforts of passengers to overwhelm the hijackers, the plane would have been the fourth to hit a U.S. landmark that day.

"It was a life-changing experience," Hanley says of creating the memorial in rural southwestern Pennsylvania. "Nothing up until that point in my life ever came close to doing what we did."

Hanley recalls the words that have been spoken every year on the anniversary of

September 11 at the Flight 93 memorial. Quoting President Abraham Lincoln at Gettysburg, "Someone would always point to the crash site and say, 'The world will little note nor long remember what we say here, but it will never forget what they did here.'"

"I really feel strongly that those words of the Gettysburg address are not only true here and at the 9/11 site, but about any battlefield where Americans have fought to preserve freedom," she says.

As an environmental science student at WSU in the 1970s, Hanley never imagined herself in a position like this, quoting Lincoln's patriotic speech as often as she does. She hadn't imagined herself building an entire park, or working for the park service for that matter.

Biologist Robert Jonas, Hanley's academic advisor, was the first to plant the idea. Jonas spent his summers as a seasonal park ranger at Yellowstone National Park and urged Hanley to apply her interest in natural resources to a park service internship.

Midway through her master's program, Hanley spent a year as an environmental specialist at the Denver Service Center, creating environmental impact statements and assessing new construction projects at the central hub for designing new national parks.

The mission of the park service quickly became her own.

"It's been said that the national parks are America's greatest invention, and I think she was very much a part of that spirit and commitment," says Frederick Steiner, one of Hanley's WSU professors. "She certainly had an idealism that was very strong as a student and carried into her career."

Steiner, now the dean of the school of architecture at the University of Texas at Austin, crossed paths with Hanley 20 years after her graduation.

She was overseeing a national design competition at the time to determine the look and feel of the Flight 93 memorial when a familiar name rose to the top five list of finalists. Out of more than 1,000 design entries, Steiner's submission with his university colleagues stood out.

"It was a pleasant surprise," Hanley says.

She called Steiner herself to tell him the good news, mentioning her maiden name to jog his memory. Though another design was awarded the final contract, Steiner kept track of Hanley's progress as she oversaw construction of the Flight 93 monument, largely completed in 2011.

"I think it's quite an accomplishment in this day and age to create a national monument, especially given the gravity of that particular topic," he says.

Hanley now sees public-private partnerships like the one that runs Gettysburg as key to funding the preservation of public places. Most of the one million annual visitors to Gettysburg—deemed the No. 1 destination in America by TripAdvisor.com users—don't realize it's run by a private organization.

Hanley says that's fine. She'd never want to see federal funding for these places entirely replaced, "because these places are public treasures."

From top: Gettysburg National Military Park scene; Joanne Hanley—*video frames courtesy Gettysburg Foundation.*

Aaron Miller ('94 Public Relations) has been promoted to senior vice president at Banner Bank.

Roger Casey ('98 Nursing), RN, MSN, CEN, was inducted into the Academy of Emergency Nursing. The honor recognizes emergency nurses for their significant contributions to quality patient care both in and out of the emergency department. He works for Northwest MedStar of Tri-Cities and has 22 years of experience in health care, including 17 in emergency medicine.

Amanda Cassens Affleck ('98 Psych.) produced an iPhone app to provide information on congenital heart defects for patients and health care providers. She is a nurse anesthetist living in Spokane with her husband Jay Affleck, and serves on the board of directors for the Washington Association of Nurse Anesthetists.

John Robert Clark ('98 PhD Botany) was appointed executive director of the Center for Plant Conservation at the Missouri Botanical Garden in St. Louis, Missouri.

Matthew A. Marner ('98 Crim. Jus.) opened his law office in Chandler, Arizona, in July. He practices DUI and criminal defense. He earned his master's of science at Michigan State University in 2001 and his juris doctorate at the University of Arizona in 2008.

Derek Woodson ('98 Master of Engineering Management, '05 MBA) has been hired as a senior account manager at SIGMADESIGN in Vancouver, Washington.

2000s

Joel S. Allen ('01 MFA) will have his sculptures featured at the Crystal Bridges Museum of American Art in Bentonville, Arkansas, in their exhibition *State of the Art: Discovering American Art Now*. Joel works with twine, yarn, wine corks, pill bottles, wood, copper, irrigation tubing, acrylic sheeting, paper pulp, and rubber to create large-scale hanging fiber sculptures.

Jason Gesser ('02 Comm.) is an assistant director of development at the Cougar Athletic Fund.

Jennifer Van Eps ('02 Fine Arts) was given the Legacy of Conservation award by the USDA Natural Resources Conservation Service for her contributions to the agency's "Unlock the Secrets in the Soil" educational campaign.

Mike Seely '84, '09

A passion for peppermint

by Eric Apalategui :: During the August harvest, the smell of peppermint freshens the air over Clatskanie, Oregon, where third-generation farmer Mike Seely '84, '09 MBA is finding sweet success in a crop that once nearly bankrupted him.

"We've been raising mint forever," says Seely, who paid his WSU tuition farming the fast-growing perennial. He first farmed near Vancouver before buying his home farm along the lower Columbia River where the moderate climate and rich soils are ideal for growing the flavorful crop. He earned his first degree in electrical engineering, but unlike his siblings he never strayed far from farming.

This year, the Seely's peppermint patties and other candies are available nationwide. But just seven years ago that fresh aroma nearly faded from the breezes blowing inland off the Pacific Ocean.

As the world's toothpaste and gum makers were switching to cheaper oils from Asia and synthetic flavorings from Europe, the domestic mint market plummeted and the Seelys lost $100,000 on their 2007 crop. "We thought we were done raising mint because the price had been bad and we were tired of losing money," says Seely's wife Candy, also an electrical engineer-turned-confectioner.

That fall, the couple visited the Portland Farmers Market, desperate to find a more profitable crop. Instead, they obtained permission to sell small bottles of their essential mint oils, thinking customers could use the flavorings in their own kitchens like the Seelys did at home.

The Seelys quickly wearied of telling people how to use the oil, so for the second week Candy made peppermint patties and other confections to sample. But instead of buying oils, the customers said, "We don't want to make it, we want to buy it," she says. "By the third week, we were making mint patties for the market."

Over the next few years, a handful of small Portland markets sold the Seelys' candies. That changed in 2011, when Denise Breyley stopped at their booth and fell deeply in love with the Seelys' signature candy.

"Seriously, the peppermint patties are really, really exceptional," says Breyley, Whole Foods' local forager for the Pacific Northwest. "Everybody has an idea of what a peppermint patty is, but this peppermint patty is head and shoulders above what everybody expects."

PHOTO BILL WAGNER

Breyley gave them a trial run in a few Portland-area stores, then expanded sales across the Northwest.

"Mike and Candy are obviously very passionate about what they do," says Breyley, who likes that the Seely family oversees the entire process from soil to sale. "They have a real commitment to quality."

As the Seelys saw the potential for their products rise, they hired design and marketing experts to help build a national brand for their candy patties, barks, melts, and mint teas.

This year, every Whole Foods store in the country—more than 300 locations coast to coast—will carry the brightly hued Seely brand, including special-recipe candy just for Whole Foods. Including the natural foods market, Mike Seely anticipates their candies in roughly 2,000 locations by year's end.

Following the 2014 harvest, the Seelys broke ground on a 4,000-square-foot candy-making facility on their Clatskanie property and plan to employ 50 to 100 people by next year, up from the 31 mostly part-time workers they have during harvest. They are modernizing some of their processes, such as packaging, while continuing to make the candies by hand.

Seely credits their success, in part, to advice from professors and fellow students in WSU Vancouver's MBA program. He repays their help by sharing what he's learned with current students. The Seelys also donate a portion of their profits from Seely candies sold on campuses back to WSU.

"They have a very good product," says Joe Cote, one of Seely's business professors at WSU

Mike Seely '84, '09 and his wife Candy have transformed their mint farm into a candy business. Now two of their children, WSU students Warren and Alayna Seely, have joined the effort. *Photo Bill Wagner*

Vancover. "They put in a lot of effort to make sure things work."

As Seely constantly turns knobs to control the pressure and temperature of steam used to distill the oil from mint leaves, he describes the extraction process. Boilers pump 350-degree water into the bottom of large bins stuffed with chopped and dried mint, a perennial plant harvested much like hay. As the steam rises through the load, it carries the oils out a pipe and into a receiving tin, where it condenses back into liquid. The oil rises to the top and is skimmed into 55-gallon barrels.

Each of those two-ton truckloads of chopped mint produces about 7.5 gallons of pure oil, enough to flavor three million sticks of gum. A new truck arrives every 15 minutes, from dawn to dusk, during several weeks of harvest.

The Seelys grow more than 400 acres of heirloom black Mitcham peppermint, plus a much smaller crop of native spearmint. Most of the mint is processed for its oils, although the family also saves some for whole-leaf teas.

"We raise mint the way my grandparents did. That's what separates us from almost everybody else out there," Seely says. "The new focus is on yield. It's not about quality, it's about price."

Seely, by contrast, only cuts each mint field—some of which are more than 50 years old—once a year, and does it precisely when the plants have 3 percent to 5 percent bloom. The single harvest and the timing result in more flavorful oils, he says. They hoe weeds by hand, release predator insects instead of pesticides, and discourage killdeer from nesting in their fields.

"That's the way my dad taught me," he says.

After the scare that nearly pushed them out of mint farming, the market stabilized with less than half the original U.S. acreage. Scares tied to foods from China and growing consumer interest in natural ingredients help keep their oil in demand, Seely says. The bulk of the family's oil still sells to brokers and finds its way into mass-produced toothpastes and mouthwashes, gums and candy canes.

And there's room to grow. Two of the Seely's four children, Warren and Alayna, both current Washington State students, are buying up additional acreage and plan to more than double their parents' mint production while also raising livestock.

Warren Seely, a mechanical whiz known in agricultural conference circles for his scale-model farm equipment built with Legos, is tinkering with an improved harvesting method that will separate mint leaves from the unwanted stems in the field. The innovation would cut back on the energy used during harvest and distillation.

"I've always known I wanted to go back into farming," Warren says while driving a load of mint just days before returning to campus to finish his own degree in electrical engineering. "There's always ups and downs, but the downs make you appreciate the ups even more."

Kathryn House ('03 Spanish Language and Literature, Zoo., '06 MS Horticulture) opened Sequence Winery in Caldwell, Idaho.

Heather Kimmel ('03 MA English) became Idaho state director of the American Lung Association.

Niki Koubourlis ('03 Real Estate and Fin.) launched a website where women can rent outdoor apparel and gear. Her e-commerce site, www.boldbettiesoutfitters.com, opened in August.

Rebecca Shepard ('03 Comm.) was hired as a marketing manager for Perrigo Animal Health in Omaha, Nebraska.

Dustin King ('04 Socio.) joined CORE Accounting & Consulting of Coeur d'Alene, Idaho. He is studying for his CPA exam.

Ricky Russert ('05 Theatre Arts) joined the Cinemax television series *Banshee*, playing a teenage gang member.

Jacob Jones ('07 Comm.) won the 2014 Washington Mental Health Reporting Award. A staff writer for *The Inlander* in Spokane, he won for his series on how the criminal justice system handles people living with mental illness.

Craig Jordan ('07, '11 MS Civil Eng.) was hired as a project geotechnical engineer by Landau Associates.

Steele Fitzloff ('08 Land. Arch.) became a licensed landscape architect. He works for Bernardo|Wills Architects in Spokane.

Joe Simons ('08 English) joined KXL Portland as radio news co-anchor.

Aron Baynes ('09 Kinesiology) and **Brock Motum** (x'13 Psych.) joined the Airbnb Australian Boomers, the Australian national team, and competed in the 2014 FIBA Basketball World Cup.

Trista Harvey ('09 Nat. Res.) received the John and Jenny Barnett Memorial Prize for her work at the University of Melbourne.

Nik Koprivica ('10 Business) was hired as an assistant basketball coach for Truman State University.

2010s

Christina Turner ('12 Comm.) is a program assistant at the Cougar Athletic Fund.

Joseph Grissom ('14 MS Botany) was selected as a Woodrow Wilson Teaching Fellow by the Woodrow Wilson National Fellowship Foundation. He will receive $30,000 for a master's program at Ball State University to teach math or science in Indiana public schools.

IN MEMORIAM

1930s

Betty Alice Huggins ('37 Socio. and Spanish), 99, April 25, 2014, Pullman.

1940s

John B. Hitchcock ('40 Math.), 96, June 7, 2014, Mount Vernon.

Antoinette Poulsen ('40 French, '41 Ed.), 96, June 12, 2014, Friday Harbor.

Ruth M. Andrews ('42 Econ.), 94, August 10, 2014, Lacey.

Donald M. Johnson ('43 Chem., '47 Chem. Eng.), 93, July 14, 2014, Walnut Creek, California.

Patricia M. Hunter ('46 Home Economics), 90, June 19, 2014, Spokane.

Patricia C. Holden ('47 Agriculture, Alpha Delta Pi), 89, July 28, 2014, Sequim.

Maxine Marie Steeve ('47 Pharm.), 90, August 16, 2014, Spokane Valley.

Margaret E. Wozniak ('47 Office Admin.), 91, July 24, 2014, Oakland, California.

Stanley H. Clinton ('48 Econ.), 97, August 14, 2014, Spokane.

Norma L. Ellsworth ('48 Pharm.), 87, May 15, 2014, Pullman.

F. Ivan Nye ('48 MA Socio.), 95, March 1, 2014, Juliaetta, Idaho.

David Lowell Bristow ('49 DVM), 93, August 14, 2014, Riverbank, California.

Joyce M. Elliott ('49 Home Economics), 86, August 22, 2014, Shelton.

Geraldine R. Gayda (x'49 English, Pi Beta Phi), 86, July 2, 2014, Seattle.

Gerald William Munro ('49 Hort.), 97, July 10, 2014, Bothell.

Carroll Wandell Nellermoe ('49 Chem.), 87, June 5, 2014, Gig Harbor.

Ted Tremper '04

The art of improv

by Debbie Lee :: Ted Tremper '04 discovered his dream as a Washington State University student joining Nuthouse, WSU's then fledgling improv group.

Now, more than a decade later, he's an actor, a web television filmmaker, veteran of the improvisational comedy troupe The Second City, editor, director, and, in his words, "God knows how many other things." Tremper finds that reality can be every bit as fun and funny as his dream.

Four years ago his web program *Break-ups: The Series* won critical acclaim for its originality. His five-minute scenes of break-up vignettes filmed around Chicago has drawn hundreds of thousands of views. He followed that up with *Shrink*, another web series, this time focusing on a clinical therapist who fails to land a residency but decides to see patients on his own. The series won the 2012 New York Television Festival Awards for Best Comedy Pilot. At the same time, Tremper has developed his improvisational skills in Chicago, grown as a writer, and even become a teacher for other improvisational actors.

VIDEO FRAME FROM VIMEO

Writer/comedian Ted Tremper in a scene from his web series *Break-ups* with actress Katy Colloton.

As I write this—one week before school starts—the freshman class of 2014 is checking into their dorms. On Terrell Mall, I zigzag around clutches of young men and women dressed in t-shirts and jeans. Some might be in my introductory literature class, I think, and feel my heart race. After 25 years of teaching, the day I stand before a new class, I am still excited...and terrified.

Teaching is like improv, something I realized in June when I talked to Tremper at a coffee shop in Chicago near The Second City comedy theater where he was performing.

"Public speaking is the number one thing people list when you ask what their fears are. It's above death," he tells me. "So, it's better to be in the casket than be giving the eulogy." (He was paraphrasing a line from *Seinfeld*, that public speaking is second to death, but ahead of financial hardship. Clearly in the "terrifying" category.)

"The idea of being a comedian in our culture is looked down upon because you're not trying to be an astronaut or cure cancer or change the world," he says, "but I would argue that being any kind of an artist is just as important."

After graduating in 2004 with a degree in English, Tremper found rapid success as a writer and filmmaker as well as an improvisational comedian. He got his master of fine arts degree at the School of the Art Institute of Chicago. He performed for The Second City Touring Company (whose ranks include John Belushi, Bill Murray, Dan Ackroyd, Joan Cusack, and Jane Curtin) in Chicago for four years. He was also recently a part of the ensemble at the Sundance Institute's Director's Lab.

"Most impressive is Ted's chameleon-like personality, his ability to write and create in a variety of genres and contexts," says Buddy Levy, clinical associate professor of English. "He's taken a WSU liberal arts degree and crafted, through dedication and perseverance, a vibrant career that blends writing and performance.

"Ted shows what's possible for our graduates if they work really hard and remain committed to their vision."

Tremper joined Nuthouse in 2001. The troupe started up two years earlier when a group of students got the idea of turning a one-act play by Benjamin Gonzalez, a clinical assistant professor of performing arts, into a full-length show.

Nuthouse, now one of the best-known improv groups in the state, had a rocky time until Tremper arrived. "Ted's one of the funniest people I've ever met," says Gonzalez. "But he's also got this unbelievable drive and dedication to his craft. That's what separated him from

Virgil Earl Whiteley ('49 Ag. Econ.), 87, June 10, 2014, Walla Walla.

Ollie Mae Wilson ('49 Home Economics), 87, July 19, 2014, Colville.

1950s

Howard L. Averill ('50 Hort.), 89, January 13, 2013, Everett.

Jane Jette Hammer ('50 Speech Comm.), 85, March 29, 2014, California.

Dorothy J. Hawkinson ('50 Psych.), 91, July 24, 2014, Sacramento, California.

Robert Duane Lawson ('50 Fin.), 85, December 24, 2012, Wenatchee.

Conrad Edward Setterlund ('50 Econ.), 90, April 15, 2014, Spokane.

Mary M. Wray ('50 Fine Arts), 86, August 14, 2014, Bellingham.

George R. Curtiss ('51 Elec. Eng.), 89, May 22, 2014, Lewiston, Idaho.

Sallyann DeGuire ('51 Home Economics), 83, June 13, 2014, Spokane.

Fred Kirk Merrill ('51 Ag. Ed., '70 MA Ag. Ed.), 88, May 14, 2014, Chewelah.

Joseph Edward Fagan ('53 Busi. Admin.), 86, June 9, 2014, Manheim, Pennsylvania.

Ralph A. Hauser ('53 Industrial Arts Ed.), 92, June 19, 2014, Pullman.

Dorothy Wells ('53 Educ.), 87, July 15, 2014.

Arnold Elmo Glarborg ('54 DVM), 91, February 14, 2014, Tucson, Arizona.

Nora May Williams ('54 Home Economics), 89, July 11, 2014, Vancouver, Canada.

Curtis Strausz ('55 Agri.), 81, March 2, 2014, Cowiche.

William Joseph Link ('56 Mat. Sci. & Eng.), 80, July 28, 2014, Vancouver.

Marilyn G. Hammer ('57 Physical Ed.), 78, May 26, 2014, Georgetown, Texas.

William A. Acheson ('58 Mech. Eng.), 77, December 19, 2012, Aston, Pennsylvania.

Ted J. Filer ('58 Social Studies, '62 MED Ed., Theta Xi), 78, April 14, 2014, Zillah.

everyone else. He was a leader. People wanted to match his stamina. He took us from a bunch of college kids getting together for an evening, to a real, semi-professional improvisational group."

The beauty of improv is that it is interactive—based on audience feedback and the relationship created between the actors and the audience. A Nuthouse show opens with a moderator taking suggestions for scenes. An audience member may yell out "bloated whale," which then becomes the setting. The audience names the characters, their roles, and their relationships, and then it's show time.

Improv incorporates your intellect, your memories, your emotions, and your physicality, Tremper tells me. Like jazz music and jazz dance, it relies on spontaneity. "There's a saying in the Chicago improv scene that *you should play to the height of your intelligence*," he says. "That means using all of [your] skills with another person who is trained in the same way, building art together in the moment with the audience. So you're flying on the trapeze with no net."

Just like teaching.

I asked Tremper what kind of student he'd like to see take his upcoming course at WSU: People majoring in business, engineering, biology, or nursing? Or education?

"Everyone would benefit," he says. With improv, you learn to project your voice, and plant your feet, rather than slumping or moving apologetically. That training will give you an edge in whatever you do. But what improv does at its core is make failure okay. "People are so afraid of looking stupid," he says. "A good improv teacher encourages you to fail in the ways you're most terrified of failing. You're constantly being asked to confront your fears. You're always using creativity and intelligence to find new ways to solve problems." «

COURTESY TED TREMPER

Tremper is back on campus in November for a free performance and to teach a week-long, one-credit workshop that incorporates writing, performing, and some improv. The Department of English is sponsoring the event in collaboration with the Student Entertainment Board and WSU Performing Arts.

You can see Ted Tremper on Thursday, November 13, in the CUB Auditorium at 6:00 pm. (There will be a pre-show reception at 5:30.) His workshop, November 10-14, is open to students on a first-come basis. Register at the English Department, Avery 202.

Richard O. Hutchinson ('58 Agriculture), 80, May 28, 2014, Thorp.

1960s

Burton R. Greenwell ('62 DVM), 83, June 6, 2014, Sutter, California.

Merle Frank Pierce ('62 DVM), 85, May 2014, Seattle.

George Johnam Simchuck ('63 Mining Eng.), 75, April 1, 2014, Guatemala.

Barry L. Eberhardt ('65 Mechanical Engineering) 70, September 30, 2013, Sammamish.

Steven W. Johnson ('67 Ed.), 69, May 28, 2014, Seattle.

Kim Ann Roth ('67 Speech & Hearing Sci., Delta Gamma), 69, August 8, 2014, Seattle.

1970s

Richard "Rick" E. Reid ('71 Forestry, Lambda Chi Alpha), 66, June 29, 2014, Bigfork, Montana.

Robert "Bob" Blane ('74 Pharm.), 62, September 1, 2014, Wenatchee.

Michael W. Buckingham ('75 Police Science), 61, January 2, 2014, Sedro Woolley.

Larry Jackson ('75 Business), 60, July 20, 2014, Pullman.

Mary McGrath-Taylor ('77 Home Economics), 83, August 21, 2014, Othello.

John "Jack" F. Strickler ('78 Mech. Eng.), 59, June 4, 2014, Kalispell, Montana.

1980s

Elizabeth June Kessel ('82 EDD), 86, May 21, 2014, Spokane.

David Brian Carlson ('87 Social Sciences), 48, June 16, 2014, Seattle.

Katherine Runde-Jarrell ('87 DVM), 62, January 20, 2014, Mount Hood, Oregon.

1990s

Nicole Renee Cleland-Aebi ('90 Comm.), 45, August 10, 2014, Oregon.

Luke Timothy Krebs ('91 Biol. and Ed., '98 PhD Pharmacology Toxicology), 49, May 30, 2014, Tremont, Maine.

Cherylyn Kelser ('94 Mech. Eng.), 59, August 17, 2014, Richland.

John David Porter ('98 MBA), 53, July 1, 2014, Boston, Massachusetts.

2000s

Maralee Ann Rambo ('00 Human Dev.), 52, June 20, 2014, Longview.

Thomas Mark Thorson ('08 Arch.), 30, May 3, 2014, Richland.

2010s

Andrea Green ('11 Social Science), 35, June 3, 2014, Seattle.

Faculty and Staff

Keith Brandon, 82, College of Sciences, 1967-1996, April 10, 2014, Spokane.

Peter M. Carey, Psychology, 2014, August 25, 2014.

Gail A. Clowers, 77, WSU Puyallup, 1984-2005, May 28, 2014, Tacoma.

Norma L. Ellsworth, 87, Agronomy Department, 1948-1975, May 15, 2014, Pullman.

James E. Frasure, 43, Dining Services, 2008-2014, June 23, 2014, Pullman.

Alvin L. Heinrich, 76, Engineering Shops, 1968-1997, July 31, 2014, Clarkston.

Robert E. Hoskinson, 85, Management and Administrative Systems, 1960-1983, June 4, 2014, Colorado.

Larry M. Jackson, 60, University Stores, 1977-2014, July 20, 2014, Pullman.

Audrey Knight, 90, Water Research Center and Murrow College of Communication, 1970-1980, August 26, 2014, Spokane.

Lloyd O. Luedecke, 79, Food Science, 1962-2012, June 4, 2014, Pullman.

Thomas M. Maloney, 83, Mechanical & Materials Engineering, 1956-1995, June 18, 2014, Pullman.

Antoinette Poulsen, 96, Foreign Languages and Literature, 1947-1980, June 12, 2014, Friday Harbor.

Ruth Romine-Muir, 81, House Director, 1983-1993, April 12, 2014, Liberty Lake.

James D. Satterlee, 66, Chemistry, 1989-2014, June 18, 2014, Pullman.

WSU Alumni Association News

Celebrating a half century, and more

Some traditions are worth breaking.

After 65 years of springtime reunions, the Washington State University Alumni Association has moved the events for Golden (50 years) and Diamond (60 years) graduates to the fall.

In September, students from the classes of 1954 and 1964 (and one student from 1944) returned to campus for three days filled with memories, conversation, and exploration. Between luncheons, dinners, and "classes without quizzes," the alumni toured the new Football Operations Building and the Student Rec Center, attended a memorial service for veterans, stopped by Ferdinand's Creamery, and visited with students.

The Alumni Association has rescheduled the reunions to build on campus events like building dedications and student dinners that alumni might enjoy attending. The attendees also explored the Lewis Alumni Centre and participated in seasonal campus activities, including a tailgating event and a football game.

The reunions for the classes of 1955 and 1965 are scheduled for September 2015. Check back with the WSUAA for details.

Photos Robert Hubner

For more information about WSUAA and alumni chapters visit alumni.wsu.edu *or call* 1-800-258-6978.

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

Nikkei Baseball: Japanese American Players from Immigration and Internment to the Major Leagues *by Samuel O. Regalado '83 MA, '87 PhD* UNIVERSITY OF ILLINOIS PRESS, 2013 :: *Review by John Wong* :: Since Sam Regalado received his doctorate in history in 1987, he has established himself as one of the leading authorities on the history of baseball and the Hispanic population in the United States. Now a professor at California State University Stanislaus, Regalado has penned an eminently readable history on how baseball helped Americans of Japanese descent construct an identity.

Regalado's interest in the American Japanese communities can be traced back to his WSU days when a professor assigned Roger Daniels's book *Concentration Camps USA: Japanese Americans and World War II* and to his own friendship with a Japanese neighbor. In the early 1990s, Regalado began to branch out from his main research in Latino baseball and added baseball in Japanese American communities. *Nikkei Baseball* is a result of over 20 years of his research and scholarship.

Nikkei Baseball follows the American national pastime from its introduction in Japan in the late 1800s to Hawaii and the West Coast where most of the early immigrants and their children had settled, to the present day. In this journey, the love of baseball by early Japanese migrants and their descendants "uncovers a unique and rewarding feature of the American past, and one that profiles a people who turned to the national pastime for respite during their darkest moments," writes Regalado.

The author traces the history of baseball in Japan and provides an excellent contextual analysis on Western (specifically American) influences in late nineteenth century Japan. Both Japanese reformers and American visitors promoted baseball as an important institution that would encourage "patriotism, industrial productivity, and modernization" in the Meiji Restoration. Some Japanese of the time (the first generation Issei, especially those in the rural areas) moved overseas because of the brighter economic opportunities in the West.

Subsequent chapters discuss the lives of the Issei and their descendants, the Nisei, and how baseball became an integral part of the Japanese diaspora in America. A vibrant baseball culture existed from major cities such as San Francisco and Seattle to smaller Japanese migrant enclaves in Hood River, Oregon, and the Yamato Colony in central California. Readers see the tribulations of community leaders who organized and promoted baseball clubs and then leagues. In large part, Issei and Nisei leaders saw baseball as a way to assimilate their communities into the mainstream and to preserve traditional Japanese values. Anti-Asian feelings, however, ran high from the late nineteenth to at least the first half of the twentieth centuries. Japanese communities (along with the Chinese) were always viewed with some degree of suspicion if not outright hostility. Despite their passion for the American pastime, de facto segregation was the rule of the day. Nikkei baseball was no exception to this exclusion as it received little coverage from the white media since competition was largely limited to the Japanese American communities.

In addition to hostilities toward Asians, segregation led to one of the most tragic chapters of human and constitutional right violations in American history. When the United States entered the Second World War in 1941, the passion for and participation in baseball failed to avert the uprooting of the Japanese American communities and their incarceration in concentration camps. The national pastime did offer some degree of normalcy in otherwise extremely stressful and trying conditions as baseball began almost immediately in the camps. Regalado details the resourcefulness and enthusiasm of the internees to organize baseball competitions to make their predicament a little more tolerable and, of course, to demonstrate their loyalty toward America.

The last chapter covers the time from the end of the Second World War to the present as later Japanese American generations, the Sansei and Yonsei, became accepted by the larger community. For baseball, opportunities previously unavailable began to emerge, especially at the most visible level, Major League Baseball. Ryan Kurosaki became the first Japanese American to play in the Major Leagues, joining the St. Louis Cardinals in 1975. More Major League players of Japanese descent were to follow. Another milestone was reached when the Seattle Mariners chose Don Wakamatsu as the team's manager in 2009. According to Regalado, these developments represent the changing fortunes of the Nikkei community who, from the time they reached the American shores, included "baseball as a bridge to reach those outside their circles and to demonstrate their love of country and culture."

For those who are interested in the intersection between sport and ethnicity, *Nikkei Baseball* should be a welcomed addition. Its impressive bibliography, both in the number and variety of sources, will help anyone who wants to know more about Japanese Americans and their history. For baseball aficionados, *Nikkei Baseball* resurrects characters and organizations that were part of the making of the national pastime. And sports trivia lovers will find amusing nuggets such as the story of games between Japanese American teams and a barnstorming team that included Babe Ruth and Lou Gehrig. ⊗

John Wong is an associate professor of sport management at Washington State University.

Red Light to Starboard: Recalling the *Exxon Valdez* Disaster *by Angela Day* WSU PRESS, 2014 :: *Review by Victoria Hart* :: The *Exxon Valdez* and its 53 million gallons of crude oil made history on March 24, 1989. In the weeks and months that followed, more than 10 million gallons of oil bubbled into Alaska's Prince William Sound.

Thousands of company menus, recorded meetings, news articles, and government documents provided Angela Day ample material for her book.

She corrals those notes and perspectives from whistleblowers, cannery workers, an airplane pilot, environmentalists, the mayor of Valdez, federal agencies, union organizers, lawyers, oil company executives, and a lot of fishermen.

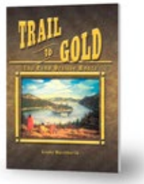
The story follows Bobby Day, the author's husband and a long-time Alaska fisherman, as he struggles to grasp the scope of the disaster and its impact on his beloved frontier lifestyle. Fishing is in Bobby's blood, and he fears losing the livelihood that "was interwoven with his relationships and sense of identity."

The spill and its attending investigation uncovered a series of lapses within the oil industry that created an environment ripe for calamity. Captains left the wheelhouse, contingency plans were exaggerated, and polluted wastewater wound up back in the Sound.

Countless species of birds and a healthy population of orcas and sea otters once complemented the millions of herring and salmon that returned each year, but the spill left the previously teeming waters "breath-takingly quiet, too quiet."

Slow, disorganized cleanup efforts by Exxon and government agencies left wildlife populations decimated. Years of debate over oil industry development in Alaska left a trail of lobbyists and legislation surrounding the issue, but fell short of defending citizens' rights in their moment of need. Litigation and clean-up efforts extended from one bad fishing season to another, through a $16.5 billion federal lawsuit against Exxon in 1994, and beyond.

But the tanker's disastrous journey initiated changes in organization and oversight to guard against a repeat event. The spill led Alaskans to be heard in board rooms and court rooms for as long as oil flows down the Trans-Alaska Pipeline. ⊗



Trail to Gold: The Pend Oreille Route *by Linda Hackbarth* MUSEUM OF NORTH IDAHO, 2014 :: *Review by Jessica Schloss '14* :: During the Pacific Northwest's mining boom in the second half of the nineteenth century, small communities to house and supply miners appeared throughout the West. And the need to move supplies into these areas lead to the arrival of steamboats on Lake Pend Oreille and the Clark Fork River.

Author Linda Hackbarth looks into the area around Lake Pend Oreille in the 1860s and the efforts of a steamboat company to capitalize on the potential for trade in the Northern Idaho territory. Hackbarth, a former WSU assistant professor who is now a volunteer historian in her North Idaho community, documents the milestones of the Oregon & Montana Transportation Company's Pend Oreille route, including the very beginning, when a need for these trails arose. She writes about the men who risked life and limb to plot the routes, and the demise of the supply trails when railroads obliterated any need for them.

Strategically-placed biographies familiarize the reader with the early miners and businessmen. Using letters and journals from the characters of Lake Pend Oreille, the author delivers first-hand details of life there in the mid to late 1800s.

Overall, *Trail to Gold* provides an in-depth exploration of an era that had left Hackbarth wanting answers. This record of her explorations proves to be an insightful and interesting read. ⊗

new & noteworthy

After Artest: The NBA and the Assault on Blackness *by David J. Leonard* SUNY PRESS, 2012 :: After a brawl at a Pistons-Pacers game in 2004, the NBA adopted policies to govern black players and prevent them from embracing styles and personas associated with blackness. This book by Leonard, associate professor of critical culture, gender, and race studies at Washington State University, discloses connections between the NBA's discourse and the broader discourse of anti-black racism. ⊗

Emergence and Collapse of Early Villages *Timothy A. Kohler (editor), Mark D. Varien (editor)* UNIVERSITY OF CALIFORNIA PRESS, 2012 :: This book examines how climate change, population size, interpersonal conflict, resource depression, and changing social organization contributed to the rise and collapse of large ancestral Pueblo farmers' villages in the central Mesa Verde region of Southwest Colorado between A.D. 600 and 1280. Co-editor Kohler is a Regents Professor in anthropology at Washington State University. ⊗

Another Autumn *by Yvonne Higgins Leach '83* 2014 :: Leach's first collection of poems covers family, love, loss, community, work, separation, and connection through images of seasons. ⊗

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Ask Dr. Universe

If there were a black hole between the Earth and moon, what would we see?

—Steven Raabe

Donuts in the sky. That's the easy answer.

The more difficult, and probably much more painful, answer depends on your view. You'd see a spot in the sky where light disappears as if going down the bathtub drain. You might see the oceans lift from the Earth and float away into space. You could see the black hole change from a point of nothingness to a color-shifting tiny orb. It would deepen from red to blue as it sucks everything into it, including you, stretching everything out like taffy on a medieval torture device.

Depending on the black hole, some say you might see the future. Or the beginning of all time. Or an entirely different universe.

Don't worry because chances are you'll see none of this. The nearest black hole is 1,600 light years away. That's 9 quadrillion miles. In other words, crazy far.

Anyway, to explain the sky donuts I talked to Michael Allen, an astronomer whose office is on the top floor of the tallest building at Washington State University. He says what a black hole does is take a lot of stuff and put it into a small space. It's like taking a gallon of milk and making it fit into a cup. Then making that cup fit into a tablespoon. Then doing that a billion times.

A black hole isn't a hole at all but an orb, like the Earth. It's called a hole because it pulls everything toward it so strongly that almost nothing can escape. Though black holes can have more material in them than our own sun, some of them are smaller than real donuts (glazed or otherwise). They can even be smaller than a grain of sand.

Despite this, a black hole has unbelievably strong gravity. It pulls everything into it, including light, and squishes it into a point of near nothingness.

So what would we see if a black hole showed up between the moon and us?

"Rings," says Allen. Ring inside of ring inside of ring, getting bigger and bigger. "Like multiple donuts. A bunch of donuts in the sky."

It sounds delicious. But why?

Gravitational lensing, Allen says, which is a scientist's way of saying the light is bent. You know how water streaming out of a hose curves down to the ground? It doesn't shoot out in a straight line because the Earth's gravity is pulling it down. The black hole is doing this as well, except instead of water, it's light and instead of a hose it's the moon.

In this way, the hole gobbles up most of the light the moon is reflecting. Not all of it, though. Other light from the moon is grabbed by the black hole's insanely strong gravity and bent like a bar of steel, curving around the black hole like that stream of water from the hose.

Since light is used to traveling in straight lines, this curved light appears distorted when it reaches our eyes. When the distortion is strong enough—say, when there's a black hole right next to our planet!—multiple images appear.

And since a black hole is the source of such a distortion, there's a big, black hole in the middle of what we see.

So the next time you're eating a donut, pretend you're a black hole and eat the whole thing, letting none of it escape.

ILLUSTRATIONS DAVID HUYCK

PHOTOS ZACH MAZUR

In plain sight

Broken Arrow sits in the foyer of the Terrell Library. Thousands pass by it each week, most not realizing it is the work of artist Harold Balazs '51, or that it was a gift from the Friel family whose lives entwined with the history of the school long after graduation.

Though he planned to be a teacher, Jack Friel '23 started his 30-year career as the Cougars' head basketball coach in 1928. As a student, he met Catherine (Matthews) Friel '23, '58 MAT in the original college library. They married a few years later and raised their family just a few blocks from campus. Three of their four children attended Washington State.

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