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COVER AND AT LEFT: PINK FLOWERS OF “AUTUMN JOY” (HYLOTELEPHIUM ‘HERBSTFREUDE’) WITH A LONE HONEYBEE (PHOTO: RONDA PISZK BROATCH)
**CSA ANNUAL PAYOUT RATES**

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2020 has been an unprecedented year where dining tables became desks, couches became offices, and backyards became science labs. No matter what this fall brings, know that we’re in it together.

And that’s why we’re excited to tell you about a planned gift opportunity, called a Charitable Gift Annuity (CGA), that benefits you AND the students, faculty, and programs at Washington State University. The concept is simple: you make a minimum donation of $25,000, and we, in turn, pay one or two people a fixed amount for life.

Visit foundation.wsu.edu/cga or call 509-335-7883 to learn more about this tax-smart option that secures your future…and ours.
YOU HAVE THE POWER TO HELP THE NEXT GENERATION OF COUGS WITH A GIFT FROM YOUR WILL

Every day, WSU students, faculty, and staff work to make the world a better place by untangling the most complex problems facing society.

You can make a difference.

Through a gift from your will, you help sustain people and programs at WSU that are engaging in life-changing research. Your investment opens doors for learning, outreach, and discovery, and attracts the best and brightest to WSU.

Contact us at foundation.wsu.edu/estate or 509-335-7883 for bequest language and to learn how you can make an impact.

FIRSTWORDS

(Together) This year is unlike any we’ve experienced, with the novel coronavirus, economic devastation, and struggles for justice. So many people have suffered or died from COVID-19. I know of a friend’s sister who got very ill, and a fellow Coug’s grandfather who succumbed to this pandemic. Like many of you, I read the charts and numbers about the hundreds of thousands of people killed by COVID-19. But I need to recognize every number as a person, to feel empathy even if it seems overwhelming.

That empathy must extend to the families hurt by the disease and the economic fallout, to the health care and essential workers, to the students displaced from their college home.

Empathy’s not enough, though. We need action. It’s the spirit of empathy and action that we’ve heard about from alumni, faculty, students, staff, and friends who step up to help. There are so many stories, and this issue of the magazine can only share a few, like Erich Bozkus ’93, ’94 MA Intl. Rel. ’11, who’s working to get millions of meals to health care workers and families in need as chief strategy officer for Chef José Andrés’s World Central Kitchen. Students, volunteers, and staff across WSU statewide, from the Bread Lab to the Master Gardeners, are also alleviating food insecurity. Retired Vice Admiral Raquel Bono (’15 MBA) heads up the complicated logistics of health equipment management across Washington state, while numerous Cougs make sanitizer, masks, and other protective gear.

Our WSU researchers, too, have redoubled their efforts to leverage scientific and thoughtful insight on modeling the spread of COVID-19, understanding the moral quandaries of nurses and doctors facing a public health emergency, preventing the spread of misinformation, and quickly analyzing coronaviruses in hopes of preventing the next pandemic.

I believe that we can extend our empathy even further, into the natural world. As Tim Stouy writes in this issue, insects around the world are declining, which can have serious consequences for our food supply and ecological balance. WSU scientists, farms, and wineries have some smart solutions, with plenty of room for citizens to assist in boosting insect habitat.

Empathy, generosity, intelligence, and a can-do spirit: these should be hallmarks of Cougars everywhere. In this time of crisis, division, and hardship, we can help, whether that means wearing a mask to block the disease, seeking equity for all, or giving a helping hand to a neighbor. I know this is true, for nurses, chefs, CEOs, scientists, students, and all of us in the Cougar family.

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epidemiologists are tracking the determinants that allow the virus to prevent the severe, deadly pneumonia seen with COVID-19. WSU creative and effective ways to allow the University to maintain its and students from across the WSU system came together to identify achieve in barely two weeks’ time. 

WASHINGTON STATE MAGAZINE FALL 2020

Ralph made an ally, and here I am. He got my phone number on my application. He got

at Wazzu, Ralph made a recruiting call to the offered a place in the chemistry PhD program Pullman in the summer of 1977. . . After I was even before my VW bus and I pitched up in one of my academic heroes. He taught me I was thrilled to see that Ralph Yount was a superhero

Our faculty, staff, and alumni are involved in similarly inspiring president

By late April, it was obvious that health care workers were in trouble as cases of critically ill patients in COVID-19 hotspots like New York and New Jersey. Few anticipated the extreme shortages of protective equipment and health care supplies, not the confusing and inconsistent response from federal and state agencies.

spreading with the goal of informing science-based policies to reduce transmission in health care systems, the community, schools, and workplaces. Other researchers are focusing on other aspects of the virus, including the fallout of mass social and physical distancing efforts: economic impacts, food security, voting issues, and the boredom causing depression.

A very scary time

I enjoyed reading the article in your last magazine about Mount St. Helens. I was in graduate school at the time in the communications disorders department when the volcano erupted. I remember driving around downtown Pullman that morning and the announcer on the radio said, “it got so dark in Yakima that the streetlights came on.” And just then—around noon—the streetlights in downtown Pullman started to come on. I rushed over to Dagg Hall to be with my fellow graduate students up in our offices. It was a very scary time.

I recently came across a few photos of myself dealing with the ash. I thought I would share them with you.

DANIELLE DORRAN (NIE MCCLOGNE) (85 MA SPEECH & HEARING SCL)

Note: You can read other WSU alumni and faculty memories of Mount St. Helens at magazines.wsu.edu/extra/where-were-you

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I was thrilled to see that Ralph Yount was one of my academic heroes. He taught me a great deal of biochemistry and provided wise counsel. I owe him a lot, starting from even before my WSU days and pitched up in Pullman in the summer of 1977. After I was offered a place in the chemistry PhD program at Wazzu, Ralph made a recruiting call to the phone number on my application. He got my mother and talked with her for an hour! Ralph made an ally, and here I am. He got my phone number on my application. He got

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An epidemic of misinformation
BY ALYSEN BOSTON

In the flood of information, it feels nearly impossible to analyze every message in everything from political advertisements and talk shows, to social media and children’s movies. COVID-19 is no immune to the effects of fast-traveling media. World leaders are calling the rampant spread of misinformation around the virus an infodemic. Researchers at Cornell University found that between 14 and 19 percent of survey respondents both recalled seeing fake news about COVID-19 and believing it.

Erica Weintraub Austin, director of the Morrow Center for Media and Health Promotion Research at Washington State University, says COVID-19 is particularly susceptible to misinformation, the spread of inaccurate information by mistake, because of the virus’s uniqueness.

“The actual good information is changing every day, and there are a lot of unknowns,” Austin says. “It’s ripe for people to have natural mistrust of what they might be seeing, but also for people to take advantage of that uncertainty.”

Other people engage in disinformation, purposely spreading inaccurate information to manipulate or deceive others.

Their motives vary, Austin says. “Some of them may have motives that are based on trying to keep our entire political system unstable, or they’re trying to sell a product.”

Mike Cauffield, the director of Blended and Networked Learning at WSU Vancouver, has a simple guide on his website, infosecwtf.com/blog, to analyze messages. It’s called SIFT: Stop. Investigate the source. Find better coverage. Trace claims, quotes, and media to their original context.

“You don’t have to spend 20 minutes trying to figure out if each thing is true or false,” Cauffield says. “With the right skills, it can take as little as 30 seconds to determine what things deserve your attention.”

Porismita Borah, associate professor in the Morrow College, is leading a study on reducing misperceptions about the HPV vaccination and autism, something she started before the COVID-19 outbreak.

“They are also more likely to seek additional information and become more educated about the topic,” Borah says.

When we encounter misinformation, Borah says, whether in person or online, speaking up helps other people realize what they are sharing may not be accurate.

“It takes courage to say, ‘That’s not true,’ but it is really helpful for us to take that step and stop the spread,” Borah says. “We don’t need to look down on someone who is spreading misinformation without realizing it, just give them a gentle reminder that everything they see might not be true.”

Austin says media literacy is critical for navigating misinformation, not only during a pandemic but throughout our lives.

“There’s so much information out there from so many different sources, and we have to figure out shortcuts to sift through it,” Austin says. “A lot of these messages are trying to manipulate your emotions. If it’s making you feel a certain way, then you should stop and think about it.”

WSU is collaborating with the University of Washington’s Center for an Informed Public to tackle misinformation. Both Cauffield and Borah spoke at the center’s virtual event, Surviving the Coronavirus Infodemic, April 23.

Cauffield says that even with the best governance and most ethical business practices, individuals still need to do their part—in preventing the spread of the virus and misinformation.

“Work that UW is validating the fact that, while a lot of these problems are global, a lot of the solutions are going to have local elements,” Cauffield says. “Everyone has to work together.”

Planning for the storm
BY REBECCA PHILLIPS

Spokane hospital executives grew increasingly anxious as they scoured the ominous headlines late last winter. COVID-19 cases were multiplying rapidly in the Seattle area, and eastern Washington agencies felt ill-equipped to handle a similar surge.

In an effort to prepare, the CEO of the Inland Northwest Region of the MultiCare Health System, which runs Deaconess Hospital and Valley Hospital, reached out to John Tomkowick, the founding dean of the Elson S. Floyd College of Medicine at Washington State University Health Sciences Spokane.

“What we realized was that we are not prepared for a pandemic,” Tomkowick says. “In order to deal with a pandemic, we need to know our beds and we need to be able to communicate with each other.”

Tomkowick and his colleagues reached out to officials throughout the state to discuss the problem. They realized they would need a new tool to help determine the number of ventilator beds. MultiCare envisioned such a tool would be simple to operate and accessible anywhere in the world.

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Their request was for a web-based modeling tool that could help predict hospital needs such as gowns, gloves, N95 masks, and ventilator beds. MultiCare envisioned such a tool would be simple to operate and accessible anywhere in the world.

The idea landed on the desk of Ofer Amram, assistant professor in the Elson S. Floyd College of Medicine and director of the Community Health and Spatial Epidemiology (CHaSE) Lab. Amram and his colleagues use statistical modeling to study the relationship between space, place, and public health outcomes.

Amram shared the proposal with Sterling McPherson, associate professor and assistant dean for research in the college of medicine.

“We started developing the hospital capacity tool around mid-March when west side cases were ramping up on a daily basis and it was starting to get bad in New York,” Amram says. “At that point, there were a lot of predictions saying there would be over 50,000 deaths. It seemed like a big storm was coming and MultiCare wanted to plan for the worst.”

For two or three weeks, we worked with MultiCare on a daily basis as it was a period of great urgency and uncertainty about what was going to happen,” he says. “We were studying the doubling rate of COVID cases in the community, and then, based on the projection of incoming patients, trying to determine what that meant in terms of equipment and personnel.”

“It was really intense. We were asked to create reports every day for MultiCare, the Spokane Regional Health District, hard-hit Yakima hospitals, and other areas. For the first few days, it looked really bad for our region, but the model helped us get a grip on managing supplies.”

At the time, Amram says Spokane city leaders were preparing community contexts to hold overflow COVID patients if necessary, but fortunately, the surge did not reach that level. It’s clear that social distancing had a big impact on decreasing the doubling rate of reported cases,” he says.

The hospital capacity tool was simultaneously released on the internet and accessed by hospitals for early planning needs throughout Washington as well as by researchers in Brazil and South Africa.

The result was an interactive map of Washington neighborhoods color-coded to show where COVID-19 infections could lead to more severe outcomes and death. Monsivais says risk factors include high population density, an older demographic, and a greater prevalence of chronic conditions like heart disease, diabetes, pulmonary disease, or obesity. Using census tract data, death records, and detailed geographic information, he calculated the disease burden for each community with hot spots in the Puget Sound area, for example, likely tied to high population density, while those in eastern Washington link to older populations with chronic diseases.

“This is really an infectious epidemic colliding with a chronic disease epidemic,” says Monsivais. “The biggest health problem in our society is not infectious disease but chronic disease—and those with pre-existing heart disease are among the most likely to suffer adverse consequences of COVID-19.”
Coug step up. Last spring, as COVID-19 spread over the world, social distancing and stay-at-home orders rapidly changed society in an attempt to contain the disease. In the face of tough circumstances, Washington State University alumni, students, faculty, and staff found many ways to not merely endure, but to adapt and engage.

Numerous courageous people on the front line—nurses, doctors, first responders, and essential workers—sacrificed and helped us all. Others sought ways to support them, and to reach out to those in need. The following stories are just a sample of the Cougar spirit of generosity, spirit, creativity, and compassion during the pandemic.

Read extended versions of stories at magazine.wsu.edu

Flour power
BY ADRIANA JANOVICH

WSU Extension offices closed to the public March 16. But that hasn’t stopped the King Arthur Flour Baking School at the WSU BREAD LAB in Burlington from baking loaves. Employee-owned King Arthur Flour, a WSU partner that subleases space in the Bread Lab, has been paying its baking instructors to bake for good. Six weeks into the lockdown, they reached their 2,000th loaf. By May 15, they had baked more than 3,000.

Their bread is donated to local school systems, including the Burlington-Edison School District, which contributes to provide meals for students, as well as food banks and partners. “And they will continue to do so as long as they can,” says Janine Johnson, publications coordinator for the Bread Lab. The King Arthur bakers mostly bake the Approachable Loaf, a whole-grain, tin-baked, sliced loaf. King Arthur Flour is a member of the Bread Lab Collective, a group of bakers, millers, and more who have come together to create an affordable and accessible whole-wage sandwich loaf. The collective’s flagship loaf contains no more than seven ingredients, it made up of at least 60 percent whole wheat, and sells for under $6. Ten cents of every loaf sold goes to the Bread Lab to support further research of other whole-grain products. Donated loaves do not return ten cents to the lab.

Five baking instructors—plus a dishwasher—are working one at a time three days a week to bake bread during the pandemic. In addition to the Approachable Loaf, they also routinely deliver free bagels, croissants, baguettes, and ciabatta to schools and community organizations.

On a mission
BY LARRY CLARK

When DAYTON DEKAM heard about the mission last spring, he jumped at the chance to get food to people in need. “Many of the food banks were overwhelmed or even shut down entirely, meaning that countless families were unemployed with no access to school lunches or household food,” says Dekam, a full-time Washington State University computer science student and member of the Art National Guard who’s spent long days distributing food to families throughout the region.

The need is great because of the pandemic. The United Nations projected that because of COVID-19, the number of people facing severe food insecurity worldwide could double to 265 million. At the food banks where Dekam assists, 80 percent of those being served have never needed help before. And, because they are elderly or at risk, many of the usual volunteers have not been able to help.

WSU groups statewide have launched other efforts to increase food security. ASWSU, WSU Alumni Association chapters, and campus groups held successful food drives. WSU Master Gardeners produced more than 61,000 pounds of fresh food for food banks, thanks to the work of nearly 5,000 volunteers.

At all campuses, food pantries continue to serve students in need. And, to help the economy and get food to people, Executive Chef JAMIE CALLISON and others at WSU Pullman-developed “Pullman Serves It Forward,” through which people can donate gift cards for local restaurants.

Tireless food fighter
BY DANIEL P. SMITH

On the first of May, ERICH BROKSAS (’93, ’94 McKrell, Rat) sits in a northern Virginia home—in an office space he apologizes usurped from his wife—and recounts the whirlwind of recent weeks. The unprecedented age of COVID-19 challenged Broksas’ enterprise spirit and demanded long, grinding hours for World Central Kitchen (WCK).

Since WCK began feeding quarantined ships aboard the Diamond Princess cruise ship in Yokohama, Japan, in early February, Broksas, the chief strategy officer of the humanitarian-focused nonprofit founded by renowned Chef José Andrés in 2010, hasn’t had a day off—his mind unrelentingly focused on the present and the future.

“Once we started feeding people in Yokohama, our thoughts went to how we might prepare for and react to a large-scale pandemic,” says Broksas, whose primary charge at Washington, D.C.-based WCK is to build robust partnerships that enable the organization to serve those in need better, faster, and more efficiently.

As the novel coronavirus washed over the U.S. landscape in March, severing the normal cadence of daily life and pushing millions into unemployment, WCK leapt into action. Through previous calamities, WCK had established a steady formula: a disaster strikes, WCK rushes into the area, instantly meshing with local community groups and leaders. WCK establishes a central kitchen, crafts meals, and then distributes food to shelters and first responders.

COVID-19, however, had made landfall across the United States. No ground zero. No reasonable timeline for recovery. “There were no guardrails here,” Broksas says.

To scale its traditional response, WCK and Broksas erected a novel strategy dubbed Chefs for America. WCK partnered with small, independent restaurants to produce and distribute hundreds of meals each day, while Broksas negotiated the involvement of third-party agents such as Uber Eats and Postmates to deliver meals to those who could not easily or safely venture outside. By early May, WCK’s efforts had put more than 6 million meals into the hands of vulnerable families, seniors, and health care workers across 218 cities—some 230,000 meals daily.

“’It’s been harrow since seven days a week since mid-March,” Broksas says. “But people need fuel, as much to nourish the stomach as the soul and the mind.”

Broksas’ current work at WCK is the result of an accelerating 25-year low affair with entrepreneurship and social impact. As an undergraduate, he contemplated international diplomacy or politics, “before I interned on Capitol Hill, he quips. Broksas spent much of his post-WSU life globetrotting to promote clean water solutions, global mobile connectivity, and off-grid power. Over a nine-year run with The Case Foundation, meanwhile, he investigated ways innovative technology and business models could drive social change.

“I wanted to make a difference, to apply business principles to large philanthropic opportunities at scale,” he says.

That passionate mindset made Broksas a perfect fit at WCK, which fabsuchs itself more like a Silicon Valley startup than a traditional nonprofit. When he joined WCK in July 2018, the organization’s fourth employee (it has since surpassed 40), Broksas brought his business acumen and enterprising spirit to an ambitious NGO with a noble mission to address hunger. He crafted partnerships with the likes of Google and Ford. He intensified WCK’s technology plan.

“I wanted to be a part of thinking strategically about reimagining the contemporary nonprofit,” he says. “That’s what we needed to be a sustainable, robust organization.”

After feeding people affected by hurricanes and wildfires, volcanoes and earthquakes over the last two years, WCK confronted its most significant challenge ever with COVID-19. Broksas helped WCK images against present circumstances with the America program while preparing for and anticipating additional needs amid an unparalleled public health crisis.

“Once we start taking care of people, we don’t want to stop until the local ecosystem is ready to kick back in,” he says. “That means we have to keep growing, flexing, and adapting.”

Though a high-intensity effort, Broksas never loses sight of a “long-term strategy” to be an immediate lifeline for people in need.

We have a unique model to address things quickly,” he says. “I’m massively proud to be a part of an organization that can deliver like this.”

A VIRAL RESPONSE
“I don’t necessarily have a plan,” Rolovich says. “I’ll probably do this even when we’re not in the pandemic. Then it’s more of a fun deal. This is hopefully helping people and families who could use a meal.”

**Call to duty!**

BY MIA GLEASON

At her home in Alexandria, Virginia, in February, Vice Admiral (ret.) RAQUEL BONO (’15 MBA) likely thought the chances of going back to work just six months into retirement were slim. As she considered the increasing strain put on health care facilities during the COVID-19 pandemic, she knew something needed to be done when she received a phone call from Washington Governor Jay Inslee.

When Inslee asked if she would serve as Washington state’s COVID-19 hospital “czar” and manage the hospital surge capacity, Bono packed a bag, booked her flight, and started work three days later. Bono, the first woman surgeon in the military to hold the rank of vice admiral, served in fleet hospitals in Saudi Arabia during Operations Desert Shield and Desert Storm. Most recently, she was director of the Department of Defense’s Defense Health Agency.

“Professional development education is a part of every officer’s career,” Bono says. “My Executive MBA education was transformative in terms of giving me the business knowledge and additional leadership skills necessary to transcend the geographic and cultural boundaries I encountered every day in my career.”

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**GLEN TRAN (’20 EMBA)** ran one of two new NWS mask manufacturing plants for Honeywell.

**DACK BUSCH (’91 Elec. Eng.)** head-up-Daumus, a company providing free cloud software to COVID-19 researchers.

**Hands-on help**

BY ALYSEN BOSTON

WSU head football coach NICK ROLOVICH has been treating essential workers and the people of Pullman to free meals.

“Meals for members of the public are first come, first served, and announced via Rolovich’s Twitter account, which has some 35,000 followers. "I’m big on that idea of pay it forward. I think it does affect people’s lives," Rolovich says. “I like being part of that. I think it falls within the scope of whatever those allirs are of Cougar spirit. And like being spontaneous.”

Rolovich has also shared tacos from Taqueria Las Torres and barbecue from Zoe Tan’s Chinese Restaurant.

Debbie McNeil (’77, ’82 Med Elem. Ed.), former owner of Quilted Heart fabric store in Pullman, is using her sewing skills to help Pullman Regional Hospital cope with a shortage of face masks during the COVID-19 pandemic.

“I saw other people making masks on Facebook and I thought, ‘Okay, that’s something I can do to help locally,’” McNeil says. “Thank goodness for high school home economics.”

She then contacted the hospital, which released their preferred mask design and a video tutorial.

“There are 5 million ways to make these masks,” McNeil says. “I wanted to make them until the hospital said what they wanted.”

The hospital provides surgical sterile wrap for the back of the masks. Each bag contains enough material for 28 masks.

As states reopen their economies in phases, masks are either encouraged or required for both employees and customers at most businesses. Though masks come in a variety of forms, at minimum they must fully cover the wearer’s nose, mouth, and chin to be effective.

“Masks aren’t going to be the end all, but I’ll keep making them as long as they need them,” McNeil says.
but entire communities, as access points are.

The Hotspots Project provides access not only to counties as well as the Confederated Tribes of the Colville Reservation. Other Corps donated fabric and funds to help Colbert get a new sewing machine for his efforts. Use masks in addition to other preventive measures, put on and remove them with clean hands, and wash them after use.

Drive-by Wi-Fi

By Brian Charles Clark

In Washington, nearly one in 10 rural residents lack access to high-speed broadband. Nationally, about 15 percent of rural Americans are offline. Students on the wrong side of this digital divide face limited or nonexistent access to academic advisors and resources.

To help bridge the divide, WASHINGTON STATE UNIVERSITY EXTENSION in late April began opening drive-in Wi-Fi hotspots to help students access online resources during statewide social distancing efforts. With offices serving every one of Washington’s 39 counties as well as the Confederated Tribes of the Colville Reservation, the Drive-In Wi-Fi Hotspots Project provides access not only to students, but also to communities, as access points are rolled out at schools, libraries, and community centers across the state.

With Extension’s statewide reach, we saw a powerful opportunity to strengthen the digital connection, especially for people and places with limited access,” says Andris-Denis Wright, dean of the College of Agricultural, Human, and Natural Resource Sciences.

The Hotspots Project shines a light on an ongoing challenge: bringing digital access to low-density communities that can’t be profitably served by commercial internet providers. Even after the current pandemic subsides, parking lot Wi-Fi could become a permanent feature across Washington.

Stories on the fly

By Alyson Boston

Not many instructors can say they had to navigate a pandemic during their first year of teaching. MATT LOVELESS (’07 Comm.), a former broadcast journalist, transitioned to teaching newscasting courses at the Edward R. Murrow College of Communication in August 2019. His students are part of a team that produces newscasting courses at the Edward R. Murrow College in August 2019. His students are part of a team that produces newscasting courses at the Edward R. Murrow College of Communication.

Loveless says they never missed a show.

“My students were in seven different areas codes and three different states, but the distance itself was never the issue, it was what the technology allowed,” Loveless says. “It was tough, but they never let it seem that way. It was so valuable to learn that we can keep telling stories on the fly and we absolutely will be building that into our curriculum going forward.”

Fine Arts instructor DAVID JANSSEN JR. teaches core principles of art and design with guest lectures on Zoom and projects using students’ own materials.

CHRIS COONEY in the Carson College of Business uses postcards to bring up stories in Zoom. "We'll get back to real travel at some point, and hopefully when we do, you'll come to Bolivia and see the llama that you met virtually with us.”

Virtual vacations

By Adriana Janovich

Live up your next Zoom call with a llama. Call A Llama, a Bolivia-based excursions network with ties to WSU, lets remote workers break the monotony of video calls with a virtual travel experience and online interactions with a real, live llama.

It’s clever tagline “Llama-me!”—a play on “Liamme,” or “Call me” in Spanish.

The new venture—found at callalama.com—began offering online experiences to clients in early May. The armchair travel experience promotes Bolivia and its beloved llamas as well as provides a little levity to workers stuck at home because of the COVID-19 crisis. It also strives to help a tourism industry hard hit by the pandemic.

“Even though you can’t travel, we can still share this amazing place with you,” says La Paz-based DERRICK PATTERSON (’07 History), who runs the business. “I think of Bolivia as one of the world’s last great adventures. It’s a really fascinating place to visit, even if it’s virtually.”

Virtual destinations include the world’s largest salt flats and birthplace of the Incan Empire on Lake Titicaca’s Isla del Sol. Bookings take place during daylight hours Bolivian time so clients can see the sweeping views—and, of course, the llamas.

“They’re really cute, and they are super funny, and they are very important to the way of life here,” Patterson says. “Without them, there would not have been advanced civilisation in South America.”

Customers call in from around the world. Experiences last approximately 15 to 20 minutes and are led by English-speaking guides, including Patterson. He grew up in Pullman but has lived in Bolivia for about 12 years and operates several eco- and adventure-based tourism enterprises.

“We got back to real travel at some point, and hopefully when we do, you’ll come to Bolivia and see the llama that you met virtually with us.”

Washington State Department of Commerce statewide drive-in hotspots:
magazine.wsu.edu/extra/wdfi-hotspots

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According to Washington State University professor of horticulture MARK PAVK, “About 87 percent of Washington potatoes are for processing, mostly as french fries and largely for the quick-service industry. A lot of those fries go to Asia. When the industry has to shut down, there’s a global chain reaction. When people stop ordering fries and the flow stops, you’ve got french fries backed up in a freezer somewhere. As well, you’ve got potatoes in storage.”

CHRIS VOIGT, executive director of the Washington State Potato Commission, says that “there were about 3 billion pounds of potatoes in storage in April,” which is typical for most years. Generally, all 3 billion pounds are used up by the middle of July. “It’s estimated that we’ll still have about 1 billion pounds left over by the middle of July due to restaurant closures.”

Getting produce out of storage is a priority. Growers already planted a crop that’ll be harvested in late summer, and they’ll need the storage space. Besides, storage sheds are essentially giant refrigerators. With no cash flowing in, processors would like to clear those sheds out and shut them down.

If there’s a silver lining here it might be that satisfying a craving for french fries right now might very well be considered a civic service. So please pass the ketchup. "Llámame,” or “Call me” in Spanish.

So please pass the ketchup.

A VIRAL RESPONSE

Cries to eat more fries

By Brian Charles Clark

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Viral haystack

The human world is in the throes of a deadly coronavirus outbreak, yet it’s just one among tens of thousands of coronaviruses in the animal kingdom. Even few of them cross over to humans. So how do we dig through the mountains of coronaviruses and find which ones could potentially spill over? Where could the next pandemic come from?

It’s a puzzle that Michael Letko, virologist and assistant professor at Washington State University, has pondered for years. Now, he and his colleagues have found a way to identify coronaviruses likely to affect people.

A focus on coronaviruses makes sense. At least four separate and severe outbreaks of coronaviruses emerged from coronavirus spillover events: SARS-CoV in 2003, MERS-CoV in 2012, SARS-CoV-2 in 2018 (a devastating porcine virus), and now SARS-CoV-2 (the cause of COVID-19).

The prevalence of coronaviruses also makes it a promising candidate for zoonotic outbreaks because they thrive throughout the animal world, from bats to pigs, rabbits, and apes.

"While many coronaviruses have been identified in bats, coronavirus sequences have now been reported in welder hogs, chickens, pigs, and seals; pick an animal and it probably has a coronavirus," Letko wrote for Nature’s microbiology blog.

Bats, though, have been identified as hosts for several emerging diseases dangerous to humans. They’re the second most diverse mammalian order, found on every continent except Antarctica, and have a high viral diversity relative to other mammals. While there is a lot we don’t know about bat ecology and their ability to resist viruses, we do know that several bats have high identity to viruses with a high similarity to SARS-CoV-2.

At the molecular level, says Letko, lineage B betacoronaviruses, such as SARS-CoV, have receptor areas on spike proteins that interact with people’s cells. These areas are nearly identical between various bat species, intermediate species, and humans.

Armed with that information, Letko began to narrow down the search for potentially dangerous coronaviruses. The advent of advanced genetic sequencing in the early 2000s led to a boom in identifying the genomes of coronaviruses. There are over 40,000 results for the search terms "coronavirus" on the public Genbank database.

The problem, says Letko, is not enough downstream analysis of that information. "We actually have not studied 99.9% of these viruses in the laboratory," he wrote. "Therefore, we do not know if these viruses that we are constantly discovering can cross the species barrier to humans, if they can transmit to our livestock, or if they can cause disease.

Using well-known techniques of synthesizing and analyzing DNA, Letko and his team concentrated on just a small portion of the coronavirus: the receptor binding domain. "It’s focusing on the smallest and most important things we can," says Letko. Since they only test a small region of the virus, it’s faster and costs much less than examining the entire virus, which means they can scale up and test large numbers of viruses

Before coming to WSU, Letko worked at the National Institutes of Health laboratory in Hamilton, Montana, where Letko and his team at the NIH put their system to the test in early 2020. When reports came from China about a new coronavirus outbreak, the researchers were able to quickly demonstrate the host receptor of SARS-CoV-2 within just 12 days.

Letko’s new lab at WSU’s Paul G. Allen School for Global Animal Health aims to be part of a global network of labs, EcolHealth, focused on functional virosciences.

"The ultimate goal of this work is to move away from the rush to learn basic virus biology after virus spillover and emergence..." wrote Letko. As Letko and others build on the knowledge gained from the 2019-2020 novel coronavirus pandemic, the ultimate goal of this work is to move away from the rush to learn basic virus biology after virus spillover and emergence..." wrote Letko.

Indeed, at tracks that we see routinely the horse-racing industry has taken the unprecedented and economically risky step to cancel races during a time when the sport is facing increased public scrutiny and opposition.

It’s a point that led to intense media attention in the spring of 2019 when a rash of thoroughbred mysteriously lost their lives competing on California’s Santa Anita Park racetrack—where the famed Seabiscuit once galloped. Over a period of several months, 28 horses suffered serious injuries on the track that required euthanasia, most due to catastrophic leg fractures.

With no obvious explanation and ten weeks of repetitive stress, and catastrophic injuries. Her team is developing methods that could help prevent such injuries.

"These injuries aren’t just a sudden step in a hole. It’s the result of what the horse has been doing for the previous two months,” she says.

At her laboratory, Stover collaborate with orthopedic surgeons and biomedical engineers to meticulously record the chain of events that can trigger these catastrophic injuries. Her team is also developing methods for early detection and prevention.

"We’ve found these injuries develop as midinjuries, most often as a stress fracture or remodeling in joints that temporarily weakens the bone and predisposes it to fracture,” she says. For one, Stover says they had a spate of heavy rains which called for scaling the track.

"That’s a huge reduction,” she says. “We’re making headway but there’s room for improvement. The California racing industry has taken a lot of small steps that add up to a significant reduction in fatalities such as limiting the amount of pounding horses are allowed, banning high-tug grass and oats, or diets—on the track, and for a time, switching from dirt to synthetic track surfaces.

Similar clusters of deaths have happened at other racetracks and Stover says they usually involve multiple factors.

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It truly takes a global disaster to throw the Kentucky Derby off its game. For only the second time in its 146-year history, the prestigious horse race has been postponed. The jewel of the Triple Crown was previously delayed for several months during World War II, but today, the culprit is the novel coronavirus pandemic.

Stover received the Lifetime Excellence in Research award from the American Veterinary Medical Association in 2018. She says. “And, is it something the body can heal, that it can get worse?”

"The racing industry is getting a wake-up call, which is an opportunity for change,” she says. “My goal is to enhance the safety of the horse and all those who work with the horse. If the welfare of the horse is our focus, the welfare of the industry will follow.”

Stover says racehorse deaths have actually been declining for the last few years—up to thirty percent prior to the Santa Anita cluster. “That’s a huge reduction,” she says. “We’re making headway but there’s room for improvement. The California racing industry has taken a lot of small steps that add up to a significant reduction in fatalities such as limiting the amount of pounding horses are allowed, banning high-tug grass and oats, diets, or diets—on the track, and for a time, switching from dirt to synthetic track surfaces.”

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The building of social empowerment

BY ADRIANA JANOVICH

Tobias Jimenez spent his childhood in the type of settlement that he and his colleague Sean Anderson are now striving to improve.

The structures “have no electricity,” Jimenez says. “None have potable water. They’re not connected to the sewer. It’s not sanitary.”

Jimenez (’17 Arch., ’19 M.Arch.) was born in Pasco but moved to Colima, Mexico, with his parents as an infant. They raised him in an informal settlement—“like a favela,” he explains—on the city’s outskirts. “You’re focusing on surviving. You’re spending most of your time and energy trying to meet your basic needs. Living there is one of the reasons I decided to come back and help people who are in this type of situation. I grew up there. My mom still lives there. I could understand the problem.”

Jimenez and Anderson aren’t aiming to simply make shelters but, through architecture, to “inspire and empower the people living in these settlements to live a life with dignity,” says Anderson (’17 Arch., ’19 M.Arch.). “We are trying to make residents feel proud about who they are and where they live and, as a result, be motivated to maintain long-term improvements and play an active role in their communities and society, rather than remain silent and forgotten by the rest of the world.”

About one in eight people worldwide live in informal settlements, and numbers are even higher in metropolitan areas like Colima. About a quarter of the global urban population live in slums, according to the United Nations. UN figures show the total number of informal settlement dwellers now tops 1 billion people and, by 2050, the number is expected to grow to more than 3 billion, or 38 percent of the projected 9.7 billion global population.

The UN calls these settlements “systemic human rights violations, the effects of state actions, inaction, and policies that deprive millions of their fundamental human rights.” Conditions “are often inhumane,” according to a 2018 UN report. “Many residents live in overcrowded, insecure dwellings, without water and sanitation, fearful of eviction and subject to preventable life-threatening illnesses.”

In Latin America and the Caribbean, an estimated one in five people lives this way. “There is a huge need for this type of architecture,” Anderson says. “The world is facing a global housing crisis.”

The summer after he and Jimenez finished graduate school, they went to work on their passion project: designing affordable, safe, easy and quick to build, multi-functional homes to help empower people who live in informal settlements. The homes can be built in stages, as people are able to afford them. They use local building materials and design elements meant to inspire self-confidence and self-reliance—features such as solar panels, rainwater catchment systems, and rooftop vegetable gardens. Movable walls give homeowners the ability to customize their space. Each unit is also meant to be easily repaired by the homeowner, rather than requiring expert and often expensive repairs.

Jimenez and Anderson aren’t aiming simply to make shelters but, through architecture, to “inspire and empower the people living in these settlements to live lives with dignity.”

Jimenez also earned an honorable mention in the international student design competition Timber in the City: Urban Habitats, organized by the Association of Collegiate Schools of Architecture, the Binational Softwood Lumber Council, and Parsons School of Design. His “Parcelas Verticales,” or vertical plots, proposed an affordable housing concept for 12 families.

Jimenez and Anderson are now striving to improve. They’re exploring partnerships with nonprofits as well as the possibility of incorporating their project, informal, as its own nonprofit. Anderson has since returned to the United States to work on crowdfunding and other fundraising for their first home, meant for Jimenez’s mom, a widow who’s lived in the same unpermitted structure for more than 20 years. “We’re lucky because she owns the land,” Jimenez says. But, “structural elements are decaying. She’s worried about the settlement falling apart.”

Building designs from Jimenez and Anderson: magazine.wsu.edu/extra/informal
As the novel coronavirus ravaged the nation last March, panicked citizens emptied store shelves of toilet paper, macaroni, and even baking yeast. More surprising to long-time gardeners was the unhappy discovery that their favorite seed catalogs were also cleaned out.

In many regions, not a seed packet could be found as "doomsday" gardens took root in backyards and patios across the country. Now, as harvest season approaches, it's clear that people-plant-nature connection has been integrated into many residential and nursing care facilities.

"There isn't a bad day in the garden," says Murphy. "No matter what shape the garden's in, it helps with the troubles of the day. When you live, you're a little calmer, a little more connected, and can let go of some of the things on your mind."

According to the American Horticultural Therapy Association, therapeutic gardens are designed to facilitate interaction with the healing element of nature. These gardens range from senior community and enabled gardens to sensory and meditation gardens. Each is designed to help people increase physical fitness and mobility as well as reduce anxiety, stress, and pain.

But it's not just the inherent restful effects of a green space. Studies show that a harmless soil bacterium, Mycobacterium vaccae, can lift depression by activating the same serotonin-releasing neurons in the brain that are targeted by Prozac. Simply inhaling the microbes while digging in soil can help improve mood. A 2019 paper in the journal Mycobacteriology reports these mycobacteria may owe their soothing properties to a special type of fat that has anti-inflammatory effects on the brain.

Sheehan, who managed the Ballard P-Patch community garden in Seattle for 12 years, says that many people consider the garden to be their "happy place." But for those with limited mobility or physical or mental challenges, gardening can be tough.

That said, Sheehan has devoted much of her career to the promotion of enabled gardening including developing Extension programs on the subject. She first introduced the concept of enabled gardening at P-Patch, where they added permeable hard scape paths to aid the navigation of wheelchairs, walkers, and strollers. She also installed stock tanks and benches with raised beds so gardeners could sit while tending their plants.

"Enabled can mean many things," says Sheehan. "Most think it means elderly people who can't bend or move very well, but it also includes children who need garden beds that are close to the ground. And for those in wheelchairs, table gardens reduce fatigue in reaching and can be simple and inexpensive to make."

Enabled gardening also includes the use of ergonomic hand tools and easy–grip water faucets. Sheehan says keeping things organized and accessible is key—such as storing tools in a brightly-painted mailbox.

There are so many benefits from gardening and, especially for those who live alone, it's a social outlet," she says. "You can grow your own cherry tomatoes or roses in a small space like a deck and share them as gifts."

Those rewards are especially important for aging adults according to Seattle's ElderCare program, which was founded in 2015 to help connect elders with the healing properties of nature.

Now offered in 21 states, ElderCare provides a mobile sensory garden and therapeutic horticulture classes for seniors living in residential and nursing care facilities.

Murphy is an ElderCare educator at two such facilities in the Yakima area, where she held classes until the statewide lockdown prohibited visitors.

"For each class, we would typically bring in a plant and talk about it," says Murphy. "We provide activities that focus on sensory and cognitive stimulation as well as motor and social skills. The residents get to touch and smell things like mint, basil, or a polka-dot plant and then a couple people assist with planting it in the garden.

"After planting, they often sit by the garden which stimulates reminiscing," she says. "When we cut the herbs and pass them around, some don’t like the smell of rosemary or thyme, but others say it smells like pizza and it brings back wonderful memories of family."

Although their Master Gardener office was physically closed last spring, both Murphy and Sheehan reported a spike in phone calls and email requests.

"Gardening is all new to many people, so I always encourage them to start with small containers and grow what makes them happy," says Sheehan. "They'll feel better, they won't be as frustrated, and it really will be therapeutic."

"It's so important that we focus on things that soothe us right now, nature being way up on the list," adds Murphy. "If any good can come out of this, people have gotten off their phones a bit and are doing more outside with their families. COVID-19 is a huge black cloud but if there is a silver lining, I'd say that's it."
A taste of the wild side

The development of a new apple variety, such as Cosmic Crisp, is often the work of an entire career. Retired Washington State University professor Bruce Barritt spent many years looking for just the right apple—and Cosmic Crisp still took another handful of years before his successor, Kate Evans, released the apple to growers.

Tymon James (’18 Integrated Plant Sci) thanks he might be able to take a few steps that will spell that process up. But to have to take a walk on the wild side to do so.

As an undergraduate intern mentored by horticultural scientist Cameron Peace, James started working with domesticated apples' wild relatives in the student-run Palouse Wild Cider apple breeding program. Students noticed that the 20-odd species of wild apples being grown in Pullman as part of the program had many desirable attributes sought by domesticated apple breeders, including a very short juvenility phase.

In an apple tree, juvenility ends when the first buds, hundreds of inches long, begin to bloom. That’s when crossbreeding work can begin. Anything that might reduce the 30 years it takes for a domesticated apple to reach maturity would be welcomed by apple breeders everywhere.

When James investigates short juvenility in wild apples, several apple species have already shown promising results, including some a species that had previously been noted by USDA researchers to have short juvenility: “We saw flowers for the first time at the end of last summer when small-petaled trees grown from seed came out of their first cold cycle,” he says.

Apples and pears need a prolonged period of cold, called vernalization, to start flowering. In the wild, winter chills do the trick, but trees grown from seeds in pots can be moved indoors in early winter months to vernalize. To simulate spring and summer, the trees are then moved to a warm greenhouse for a growing period of about five months.

James is analyzing the tree’s genetics to see if he can real dense clusters of short juvenility. “Once you know the chromosomal location, and the gene variants, called alleles, you can create a DNA test” that identifies genetic factors indicative of short juvenility. From there, it may be possible to crossbreed a trait into domesticated apples.

But, James cautions, it’s just as possible that the alleles that produce short juvenility may be “highly linked to alleles associated with undesirable phenotypes such as small fruit size or flesh astrigency.”

Identifying desirable attributes in wild relatives and domesticated apples is likely to turn up other genes in addition to short juvenility.

Wild apples, as Peace sees it, are rich with “jewels in the genome.” As James and his colleagues work in a recent paper, “Apples’ wild relatives also harbor many other alleles for valuable traits such as disease resistance, abiotic stress tolerance, and desirable productivity and fruit quality.”

The trick, though, is the genetics that produce characteristics would be hard-won traits. But they may also provide insight into ways that wild apples adapt to changing environments.

Renaissance of an ancient grain

Spelt, along with other so-called ancient grains, is experiencing a renaissance. Kevin Murphy, a Washington State University plant breeder who has worked with spelt for nearly 20 years, says chefs are looking for new flavors. And that search is driving a small but growing market for spelt.

When Murphy and his team developed a variety of spelt that ticked lots of boxes for farmers and chefs, they released it via the Open Source Seed Initiative (OSSI). The OSSI is “dedicated to maintaining fair and open access to plant genetic resources worldwide in order to ensure the availability of germplasm to farmers, gardeners, breeders, and communities of this and future generations,” according to its website.

Murphy released Elwha River spelt in 2017, the same year commemorating the removal of two nonessential dams on the Olympic Peninsula river to encourage habitat and salmon restoration. Interest in trying the grains came fast, from the Culinary Breeding Network, as well as star chef Dan Barber, the founder of Row 7 (“a seed company dedicated to deliciousness”).

“It’s early days,” Murphy says, “but we connect farmers who grow these grains with restaurants that want to try them.”

At a dinner for 300 in New York, produced by the James Beard award-winning Barber, Elwha River spelt was used to prepare “a dessert made of spelt: the ice cream cone was made of spelt, the ice cream had spelt in it, and the crumbles on the ice cream were also spelt.” Martha Stewart, among other celebrities of the culinary world, was in attendance.

The great thing about working with chefs, Murphy says, is that they “take breeding lines and explain why they like them, which really helps us know what is working” in the kitchen.

By releasing Elwha River spelt through the OSSI, Murphy cast his bread upon the waters—and it’s paying off.

James Henderson, a longtime collaborator of Murphy’s, says the company he works for, Hummingbird Wholesalers in Eugene, Oregon, is growing 130 acres of Elwha River spelt this season.

“There’s nothing bad to say about this spelt!” Henderson says. Unlike most spelts, Elwha is hulless, making it cheaper to produce than conventional varieties. In a good year, most spelts yield about 1,500 pounds per acre, but Elwha is putting out over 5,000. And because it outcompetes weeds, it is easy to grow organically. Elwha River spelt can also be malted for beer; a test fermentation produced a beautiful red brew.

“Couple that with excellent baking quality. Henderson says, “and you’ve got a home run.”

The nutritious grain, cultivated for over 8,000 years, never lost popularity in Europe, where it is used in baking, brewing, and distilling. With the Pacific Northwest’s fascination with artisanal cuisine, this grower-and-baker-friendly spelt is sure to be a hit.
**PACIFIC GOLDEN Chanterelles**

*BY ADRIANA JANOVICH*

**First, you have to find them**

Common throughout Europe and North America as well as parts of Australia, Africa, and Asia, chanterelles like shady, conifer-covered places. They’re mycorrhizal, meaning their underground networks of mycelia enjoy a symbiotic relationship with host-specific tree roots, particularly those of Douglas fir, spruce, and hemlock. Even though we have the ability to grow mycelia in culture, Carris says, “we haven’t been able to get them to fruit without a tree. You can only find chanterelles in the wild.”

While brightly colored, chanterelles can be difficult to spot under a canopy of mixed conifer trees and a blanket of fir and pine needles. They’re easily mistaken for autumn-burned leaves, identically shaped by their puffy shape, often compared to a trumpet, as well as their fake gills and the forked ridges running down their thick stems. Their caps are wary and irregular, with ruffled edges like fluted pastry crusts.

Popularized in France in the 1700s, chanterelles—a low in calories and a good source of vitamin D as well as minerals such as copper, iron, potassium, and manganese—were served in France since the twelfth century to nobility. They remain a favorite in many European nations such as Poland, Lithuania, Ukraine, and Czech Republic, where mushroom-picking is a long-standing cultural tradition.

“Their flavor always makes me think of being in the woods,” says Carris, a past executive vice president of the Mycological Society of America who appeared in the 2019 documentary film Fantasies Fungi, directed by Louie Schwartzberg and narrated by Brie Larson. “When they cook, their scent is more fruity than some of their other cousins like saffron. And they’re easy to prepare. Roast or sauté them with butter, olive oil, and a splash of wine, then enjoy. Or, save them for later. “The nice thing about chanterelles is you can freeze them,” Carris says. “You can enjoy them all year long.”

Neff uses his first picks of the season atop steak. Leftovers go into a goat-cheese omelet the next morning. The secret ingredient on his stovetop—apricots—adds a bit of the forest in the form of the mycelia. Neff says, “It’s just great to eat with a loaf of bread,” says Neff, who also puts chanterelles on homemade pizza and into spaghetti sauce. “I just love eating them.”

He loves them so much that, in his contract negotiations, “I actually stipulated that the search committee chair would show me his secret fishing hole and his secret mushroom spot,” Neff says. “He took me some places, but not his secret chanterelle spot.” Neff eventually stumbled upon it himself. Of course, he won’t say where it is.

Jim Freed recommends looking for the edible gold in your healthy, forested areas, typically second-growth, with trees 10 to 12 feet in diameter. “The retired special forest products specialist for WSU Extension taught classes for mycological societies on the west side for decades. He encourages foragers to tread carefully and harvest gently, cutting mushrooms at their base, rather than yanking them out of the ground, “so as not to disturb the mycelia.”

He also recommends keeping an eye on the weather. “In drier conditions, they don’t come up as much,” says Freed, who’s seen chanterelles selling anywhere from $10 to $17, even $28, per pound. “It’s really crucial what happens in late July to middle of August. If temperatures stay nice and warm, above freezing at night, and there’s good soil moisture of maybe 2 inches of rainfall over the month, you’ll see lots of chanterelles. Their prime is middle of September to Halloween unless you get a frost. We’ve had three good years in a row now.”

He’s hoping for another one.

“Once you find a spot,” Freed says, “you’re going to go back year after year after year.”

Mushroom risotto and other recipes for chanterelles:

magazine.wsu.edu/extra/chanterelles

IN SEASON
A world without insects?

BY TIM STEURY

Compared with the current trauma of coronavirus, the imminent loss of an insect species, or even of many, may seem less than dreadful. Sadly, it is not.

Over the past couple of decades an increasing number of reports have warned of dramatic declines in insect populations worldwide. The most definitive review so far, a meta-analysis published this spring in Science, pulls back a bit from the direst prognoses, but is still hardly cheerful. Authors compiled data from 166 long-term surveys of 1,676 sites spread across 41 countries and found an average decline in terrestrial insect abundance of approximately 9 percent per decade. Curiously, they also found an increase of freshwater insect abundance of approximately 11 percent per decade.

Those numbers for freshwater insects offer at least a drop of cheer, as they probably reflect improved water quality. However, fresh water accounts for only 2.4 percent of the earth’s surface.

In spite of what can appear a bleak scenario, one nevertheless can find here and there a glimmer of optimism. Faced with data sufficient to cause grave concern, at least a couple of Washington State University scientists embrace a mixture of trust in insect resilience and a determination that despair is not an option.

Referring to her efforts to restore pollinator habitat and rebuild threatened butterfly populations, WSU Vancouver conservation biologist Cheryl Schultz says, “I wouldn’t be doing this if I didn’t think there was hope.”

For his part, David James is even more upbeat, at least in a relative sort of way. Why? Look at the past as comparison, says James, an entomologist with WSU’s Irrigated Agriculture Research and Extension Center (IAREC) in Prosser.

“We’ve improved incredibly from what it was 30, 40 years ago. And the insects are still with us.”

Indeed, the steady replacement of organophosphates and other pesticides with “soft,” narrower-spectrum pesticides is decidedly encouraging. (Organophosphates are generally toxic to anything with a nervous system.)
This is not, however, to say that everything is rosy in insect land. “There are lots of twists and turns in the road,” says James, who recently published results of a small study adding to evidence that neonicotinoids, which seem to be toxic to mammals than organophosphates, turn out to have unanticipated effects on non-target insects.

James found that monarch butterflies in the laboratory exposed to neonicotinoids at a rate commonly found in nectar dramatically reduces their longevity. By day 22, he writes, “only 3/14 individuals in the treated group were still alive compared to 8/10 in the untreated group.”

“This brief and simple laboratory study while limited in scope and replication, indicated that the neonicotinoid … has a profound impact on the survival of adult monarch butterflies within a short period of time. … Prior to death, treated monarchs displayed characteristic uncontrolled vibrating, trembling, and flapping of wings, similar to neonicotinoid poisoning in honeybees.”

The most unsettling thing about neonicotinoids, James says, is “we don’t know how ubiquitous they are in the environment.” Their persistence and versatility are both strength and detriment. Also, rates of neonicotinoids used in urban areas are greater than in agricultural fields. “The nectar in backyard butterfly gardens might be more contaminated than in agricultural lands.”

MOS T WOR R I S M O 9 9 about the reported declines is that the loss of even a small fraction of insects might be disproportionately consequential. It is difficult to oversstate the value of insects, writes Merrill Peterson in his recent field guide, Pacific Northwest Insects. Peterson is professor and chair of entomology at Western Washington University and adjunct professor of entomology at WSU.

Thirty-five percent of the foods we eat require insect pollination. Pollination further results in increased production of 85 percent of food crops. In the Pacific Northwest, apples, cherries, apricots, plums, blueberries, and strawberries are just a few of our economically vital foods that depend on insect pollination.

Insects are at the bottom of the food chain. They are food to many. Apart from seabirds, 86 percent of North American bird species feed insects to their young. Birds alone eat 480 to 500 million metric tons of insects per year.

Insects recycle waste, from cattle dung to corpses. Assessing the status of insect populations is tricky. There is no worldwide baseline for the world’s million or so named insect species. Scientists believe millions have yet to be discovered.

Regarding their decline, “most of what we have been able to do so far has been anecdotal or has been limited to a small number of species,” writes Peterson in an email.

“But I think that there are plenty of signs that we should be concerned. For one, there are certainly some species that used to be quite abundant that are now exceptionally rare. The Western bumblebee is a case in point.”

Peterson cites the rate of collection of Bombus occidentalis by students in his department’s entomology course at WSU. Abundant in the 1970s and 80s, since about 1995 specimens collected by students have dwindled to virtually none.

Anecdotally,” he continues, “there’s the oft-cited windshield phenomenon, whereby one seldom has to clean insect splatters off of our windshields now, unlike decades ago.”

SCH UL T Z 5 7 RECENTLY JOINED other scientists worldwide in urging the adoption of a “roadmap for insect conservation and recovery” in Nature Ecology and Evolution. “There is now a strong scientific consensus that the decline of insects, other arthropods and biodiversity as a whole, is a very real and serious threat that society must urgently address,” they write. They cite as the causes of this decline: habitat loss and fragmentation, pollution, invasive species, climate change, and overharvesting—and propose remedies that reflect the urgency of the problem.

Among them: reverse recent trends in agricultural intensification, aggressively reduce greenhouse emissions, increase landscape heterogeneity, and encourage insect-friendly farming. The list of urgent measures goes on, with restoration of habitat among the most crucial.

A recent United Nations report notes that “three-quarters of the land-based environment and about 66 percent of the marine environment have been significantly altered by human actions.” In addition, urban areas have more doubled since 1992.

Regional loss of habitat mirrors this picture. Although a drive across central Washington might convince one that sagebrush is forever, the sagebrush ecosystem is considered one of most imperiled in the United States.

According to James, diminishing shrub-steppe habitat of southeastern Washington has resulted in loss of habitat for approximately 50 species of butterflies.

ONE ROAD BLOCK to insect conservation is that insects have yet to gain the attention that larger, more charismatic fauna enjoy. An exception is the monarch butterfly.

Schultz coauthored an article in Frontiers in Ecology and Evolution last July that raises an alarm over the Western monarch. The butterfly suffered a decline of 97 percent between the 1980s and the mid-2000s. It suffered an additional plummet in the winter of 2018-19, to fewer than 30,000 individuals. The overall drop in the Western monarch population since the 1980s is thus approximately 99 percent, bringing it to what biologists consider a “quasi-extinction threshold.”

Schultz brings to the monarch conservation effort long experience. Over the last couple of decades, she led the effort to head off the extinction of the lovely Fender’s blue butterfly in the Willamette Valley (WSU Summer 2013). As a result of efforts by Schultz and colleagues—doing the science, coordinating public-private partnerships, and investing massive amounts of time—the Fender’s blue is a rare success.

“It’s one of very few insects that are recovering,” says Schultz. The U.S. Fish and Wildlife Service is actually considering changing the butterfly’s status from “endangered” to the less severe “threatened.”

“We know the remedies to decline, says Schultz. “We know how to plant hedgerows, we know how to plant breeding areas, we know how to stop development.”

“Not to say climate change isn’t important. It is. But when people say it’s all about climate, then there’s nothing you can do about it.”
Climate clearly influences year to year variation. But in our signals the long-term decline is caused by habitat loss and fragmentation.

There are a lot of very tangible things we can be doing.

One of those tangible things is James’s work on reintegrating agricultural land with pollinator-friendly habitat, focusing primarily on wine grape vineyards. Wine grape production in Washington has exploded from a few hundred hectares in the mid-1970s to 24,000 hectares in 2015. The nice thing about growing wine grapes in south central Washington is they don’t require a lot of pesticides, making them amenable to restoring native plants within them, restoring habitat for butterflies and other beneficial insects. James found that habitat-enhanced vineyards contained double the number of butterfly species compared to conventional sites.

It is unlikely that all insects will disappear anytime soon. After all, they’ve been here a lot longer than we have and likely will outlast us by far. (And even in decline, they outweigh us by a factor of 17.) Meanwhile, we’re still here, and as James observes, so are they. But out of the million or so insect species that we’ve identified, what if the Western monarch does disappear? What have we lost? “A lot of things,” says Schultz. “This is part of our persona, this is part of our landscape. This is part of who we are.”

Tim Stasy is the former editor of WSU’s Washington State Magazine and Universe magazine. He is now an orchardist in retirement cultivating heirloom cider apples and pears.

As scientists examine the extent and causes of insect population decline, one of their largest tasks is data collection. Understanding trends in insect abundance or diversity requires lots of data, which requires an enormous amount of time. “Citizen scientists” can help immensely.

Yes, there is something you can do about insect decline…

As scientists examine the extent and causes of insect population decline, one of their largest tasks is data collection. Understanding trends in insect abundance or diversity requires lots of data, which requires an enormous amount of time. “Citizen scientists” can help immensely. Here are a few possibilities:

David James recruits people annually to help tag and monitor monarchs. Check it out at magazine.wsu.edu/extra/monarchs.

Other citizen scientist butterfly opportunities exist for members of the Washington Butterfly Association, which helps monitor and survey threatened species in collaboration with the Washington Department of Fish and Wildlife and the Bureau of Land Management.

Readers in the Yakima area can join the Cowiche Canyon Conservancy for butterfly citizen science opportunities.

The Xerces Society coordinates a number of opportunities, including the “Pacific Northwest Bumblebee Atlas.”
In a crunch for lunch?

BY ADRIANA JANOVICH

ATTENDANCE WAS A REQUIREMENT.

In a crunch for lunch? The world food production expected to reach 9 billion by 2050, the United Nations Food and Agriculture Organization (FAO) estimates that, to feed everyone, sustainable food production will have to increase by 70 percent. Insects, according to the FAO’s 2021 report Edible Insects: Future Prospects for Food and Food Security, “are not merely ’famine foods’ eaten in times of food scarcity or when purchasing and harvesting ’conventional foods’ becomes difficult; many people around the world eat insects out of choice, largely because of the palatability of the insects and their established place in local food cultures.”

There are nearly 2,000 edible insect species, many of which are staples, even delicacies, in other countries. Commonly consumed insects include beetles, caterpillars, bees, ants, grasshoppers, locusts, crickets, cicadas, and termites.

“Eating a Dungensis crab is not that different from eating a bug when you think about it,” says David George Gordon, aka Dr. George. “It’s a bug. His recipe for the childhood snacks ‘ants on a log’ typically made with peanut butter-filled celery sticks dotted with raisins, features actual ants.

Gordon recommends cooking them. “You wouldn’t eat raw chicken or pork,” he says. “Don’t eat raw insects. There are some parasites you can use insects for intermediate host.”

Similarly, don’t eat insects you find under the sink or on the sidewalk, which might’ve been exposed to pesticides. And, avoid eating brightly colored bugs. “In insect language, that means, Hey, don’t eat me. I don’t taste good.”

Gordon’s bucket-list bugs are palm weevil grubs. “I would love to try them. But they’re agricultural pests so you can’t import them. They’re about the size of little pork sausages and gunky-looking by our standards. But in Central Africa and throughout Southeast Asia, they’re considered a special food.”

Whether or not you opt to eat them, Gordon says, “it plays a very important role in keeping our planet going. If they were to disappear, our planet would come to a grinding halt. It really is the little stuff that makes the world go around.”

“YOU KNOW WHEN YOU HEAR IT?"

FROM THE CLASSROOM TO COUNCIL chambers and, of course, the basketball court and football field, Glenn Johnson has arguably the most recognizable voice in Pullman.

After four decades, the longtime mayor of Pullman and retired Washington State University broadcast public address announcer for Cougar football and men’s basketball. He wrapped up 40 years at “The Voice of the Cougs” at the end of the 2020 basketball season. Fall marks the start of his forty-fifth year announcing WSU football.

“The coup de grâce was significant,” he says. “When I first started, I had maybe a few announcements, but nothing like today where it’s a highly produced event that goes for four hours. It’s intense. You are basically bossy the entire time. It can be stressful. I definitely prepare for the game. I definitely do my homework.”

Before the season starts, Johnson meets with WSU’s sports information officials to go over all of the Cougars’ players’ names. “Some you practice and practice,” he says, particularly the one-syllable names, long, or difficult to pronounce. Armed with a background in broadcast television and radio, he’s a master of projection. His voice is an unwavering, clear, booming, and full of personality.

Johnson started announcing games for WSU at the beginning of the 1976 football season. He’d only been in Pullman a year by then, moving from the Patuxent to Sacramento when his employer, Mutual Broadcast Stations, was sold. Two or three years after that he started what became one of his signature calls: “And that’s another Coug first down!”

His timing is everything. The long pause comes after “And that’s another,” with smaller pauses for “Dance for six” and “The pocket has been cleared.”

Johnson says, “I think people not only want to watch the game, but they entertained.”

Johnson’s been “The Voice” longer than my forty years as a Pullman resident,” says Mayor Glenn Johnson. “He’s been our ‘Voice of the Cougs’ longer than I’ve been a mayor.”

Johnson has also made history as mayor of Pullman. His re-election to a third term in 2011 was a first for the city since Pullman was founded in 1848. He’s now serving his fifth term—and the city’s fifth—term. He also chairs the Pullman-Moscow Regional Airport Board of Directors, is a member of both the Rotary and Kiwanis clubs, serves as secretary-treasurer of the Washington State Association of Broadcasters, and sits on the board of trustees of the Community Colleges of Spokane.

In 2013, the WSU Foundation presented him with its Outstanding Service Award. And, in 2016, he received the Honorary Alumni Award during halftime at the WSU vs. University of Washington basketball game. In the higher state honor the WSU Alumni Association gives to nonalumni friends who have given special service to the University, Johnson says, “It’s just been a ball.”

SIDEINES

“THE VOICE” B Y ADRIANA JANOVICH

YOU KNOW WHEN YOU HEAR IT?

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I found stories and experiences which shed light on the beginnings of many WSU traditions. Butch has been directly involved in so many historic events and funny interactions, and I'd stand as a tangible part of WSU life after 40 plus years.” Baer worked nights.

Baer tracked down the last Butch. “It was a very weird task”—about a month before the first-ever Butch reunion, a fortyth birthday party for Butch during ESPN College GameDay in Pullman on October 20, 2018. During pre-game festivities, former Butches signed autographs. During the game, they were recognized on the field.

“It was the first time any of us were in the middle of the field without the Butch mask on. The crowd was cheering for Butch, but they were also cheering for us. It was a very weird feeling, but a very good feeling. A sort of nostalgia, kind of like déjà vu,” Baer says, noting, “The most rewarding part of this entire experience was reconnecting friends who hadn’t seen each other in years, even decades, and regaining friendships.”

Washington State College played its first football game as the Cougars in 1919. It wasn’t until 1927, when then-state Governor Roland Hatfield gave campus a cougar cub, that Butch T. Cougar was born. The mascot was named for Herbert “Butch” Meeker, a football star of the era.

Butch VI, the last of WSU’s live cougar mascots, was gifted to campus by then-state Governor Albert Rosellini in 1964. When the animal died in late summer 1978, students protested placing another live cougar in a cage and then WSU President Glenn Terrell decided Butch would take a different track. For the first two years before Butch VI died, Peggy Robison, a member of the Crimson Rally Squad, donned a Butch suit for games, and the costumed character became the permanent tradition.

That first year, students switched off suiting up. “It was sort of up to the rally squad to decide. Who was going to be Butch for this game?” says Dean N. Grevé (’81 Comm.), Butch from 1979 to 1981. “It was our committee. We were all sitting around, and it was like, ‘Who wants to do this? Who wants to wear the suit?’ Butch was a different front, a different shape, at every game”—until Grevé took over the role. “There was only one instruction when you were given the suit. ‘You can’t tell anyone you’re Butch.’”

Today, Grevé says, “I still watch every Coug game I can, and I loved going back to that role. The thrill of being out on the field with that group—it transported you. I don’t even like it when I was 20. But you feel that same energy running out there. I haven’t had that feeling in decades. What wouldn’t you give to put that suit on one more time.”

Have memories of Butch T. Cougar? Send them to wsm@wsu.edu

Butch T. Cougar is a WSU celebrity, in the spotlight at games, rallies, parades, and other events both on campus and off, including appearances at elementary schools and the wedding receptions of many WSU traditions. Butch has been directly involved in so many historic events and funny interactions, and I’d stand as a tangible part of WSU life after 40 plus years. I always tried to bring athletic ability and energy. Just like a cartoon character, you’re always bouncing. You’re constantly moving. I tried standing back, but handsprings, walking on my hands. I always wanted to take it to the next level. I thought if I could do that I would bring a lot more swagger to the character.”

— DAVE STODDILL, Butch from 1996 to 1998

“The fur itself only got washed, I’d say, maybe four or five times in a season. It would get so gross and stinky—like a dirty gym bag with layers and layers of different fragrances, whether it’s Febreze or just straight-up cologne. That was a stinky, stinky time. I don’t miss the smell.”

— ZACH WURTZ, Butch from 2003 to 2006

“It didn’t tell my brother or my sister or my roommates until I got unswathed. That was such a cool moment, almost as cool as the first time I dressed ‘Coug’S.” There’s so much pride in being the coolest guy on school and no one knowing I think, for me personally, it’s made my Cougar spirit and my Cougar pride more meaningful. I believe I’ve got a connection to Butch the character but also this ‘furternity’ that connects us and spans 40 years.”

— JOSH DIAMOND, Butch from 2004 to 2012

“Weird fact: Butch is very similar to the old one. But there is always something added that makes Butch cooler and better.”

— BRYAN CLARK, Butch from 2010-19

“As soon as I put the head on, it was showtime. It wasn’t mere Butch. It was Butch. I was always in the back of my head that was representing WSU. Tried to be warm, inviting, and outgoing. Everyone wanted to hug and high-five Butch and get their picture taken with you. You’re Butch. The Cougar. Everybody was happy to see you. They just eye up to 16 feet like everybody’s best friend.”

— DARRELL TURNER, Butch from 1991 to 1992

“Many of my friends now, after 30 years, are just now finding out that I was involved. It’s fun keeping it a secret when you’re in school. I was able to go up into the stands with friends and have fun with them without them knowing it was me.”

— DON ATKINS, Butch from 1985 to 1987

“I learned to walk like a guy. The character is a guy. And I said if I got the part I would play it as a guy. I would wear extra-large shoes. I wouldn’t lie on that. I was a guy. When people would shake my hand, I’d try to make sure it was very firm. My whole time as Butch I made sure everyone thought I was a guy.”

— TAMÍ (TUREK) ZAPATA, Butch from 1989 to 1992

“Being Butch is weird. You’re always bouncing. You’re always bouncing.”

— BRAD TUREK, Butch from 1989 to 1992

“I don’t feel that much stronger. I feel like I’ve got a connection to Butch the character and to my experience.”

— ADRIANA JANOVICH, Butch from 2018-2021

“However, there was an added bonus: you’re a guy. You can’t tell anyone in band or on the Rally Squad or cheer team? It was pretty slow at first. It was pretty slow to track down alumni. Baer started tracking down former Butches “hoping it would lead to a stronger alumni group.”

Former Butches “was pretty small. We mainly via social media. My whole time as Butch I made sure everyone thought I was a guy.”

“After a half years to track down alumni Baer (’15 Econ.) some four and half years to track down alumni Baer started tracking down former Butches “hoping it would lead to a stronger alumni group.”

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Barry Warren didn’t want to be a baseball player. Or a doctor. Or lawyer. It’s not the typical response from a child, but when Warren was asked what he wanted to be when he grew up, he said school principal.

Warren (’19 Principal Cert.) recently realized his dream through a program at Washington State University’s College of Education that supports the recruitment of Indigenous teachers and school administrators.

Warren is an enrolled member of the Confederated Tribes of the Colville Reservation. His grandparents grew up and went to school in Inchelium, a town on the reservation’s eastern border, nestled against the Columbia River. Warren grew up in Spokane, but has fond memories of time spent with grandparents during the summer. “I always loved it there,” says Warren, who attended Spokane Falls Community College, majored in elementary education at Moody Bible Institute, and earned a master’s degree with an emphasis in upper elementary reading from George Fox University in Newberg, Oregon.

A summer internship brought him back to the Colville Reservation, this time to Nespelem. “There’s where I got my first Native language experience,” he says. “I got to take language with an elder in Nespelem. They said I was getting educated for the next generation. That kind of stuck with me.”

In an effort to work more closely with Native students, he took a teaching job in Hunters, south of Inchelium and across the river from the reservation in unincorporated Stevens County. He ended up staying eleven years. “I knew I wanted to get my...”
principal certificate, but the timing just never seemed to be right," Warren says. Then he got a call from WSU.

Warren learned of the Ti'toonq Cuckwoonewt Native Teaching and Learning Community Project, part of a four-year grant from the U.S. Department of Education’s Office of Indian Education and also funded through the Washington State Professional Education Standards Board. The name comes from the Nez Perce language and describes how Indigenous people view and understand teaching and learning. WSU Pullman is located on the traditional homelands of the Nez Perce Tribe. The “cuckwoonewt” of students—as the program calls them—examines the history of Indian education in the West and integrates Western education with Indigenous knowledge systems.

Ti’toonq Cuckwoonewt helped pay for Warren’s principal certification—and gave Warren an unshakable feeling. “I kept having this feeling while I was doing this that I was going to end up on the Colville Reservation,” he says. “I didn’t know what exactly that meant or what it would look like, but I had this sense that I was working toward it. I really cherished the idea of getting back to my family and my homelands.”

After Warren finished his principal internship with the Chewelah School District, he applied for various principal positions, all of which would serve some population of Native students, but none of which were on the Colville Reservation. He kept getting rejected.

Then he learned of an opening in Inchelium. “I thought, ‘Oh, this might be it.’ I don’t know if I’m ready.” As soon as he walked in for his interview, doubt faded to excitement and—ever more importantly—comfort. “It was just a natural fit,” he says. “I went into my interview, and there were pictures of my grandparents on the wall of the school because he was a World War II vet and they honor their veterans really well there.”

That history and Warren’s own perspective were as important to the school district as they were for him. He got the job. The rest of Jaeger’s journey was the result of the family, the confidence that comes from knowing you’re on the right path, and a willingness to work hard. Those three factors—along with education earned at Washington State University’s School of Hospitality Business Management (SHBM)—connect Jaeger with decades of other hospitality graduates.

“I was really lucky in that I always knew what I wanted to do,” says Jaeger (70), recalling an early conversation in which he predicted he’d follow his parents into hospitality. In 1963, his parents left Ritzville for Coeur d’Alene, Idaho, to become a part of Western Frontiers Inc. and its new North Shore Motor Hotel, the forerunner to the Coeur d’Alene Resort. Jaeger did odd jobs at the hotel. After graduating from high school, he enrolled at WSU, getting married during freshman year to his high school sweetheart, Ellen.

The nutrition and culinary classes weren’t his thing, but the business classes resonated, says Jaeger, who has served on the board of Idaho Independent Bank, now First Northwest Bank, since its founding in 1993. While at WSU, Jaeger’s father died in a plane crash, a painful turn; “he explains what the mentorship of then-Dean Joe Bradley, says Jaeger. He also served as president of Sigma Iota, the service club for SHBM.

Up, up, and beyond

Setting the stage for a career in tech, Jaeger had nowhere to go but up. As a preteen washing dishes in his parents’ Ritzville restaurant, the Circle T Inn, he was too short to do his first job. Some- one gave him a chance to stand on, launching what would become a career of more than 50 years in the hospitality industry.

The box got him to the counter; the rest of Jaeger’s journey was the result of the family, the confidence that comes from knowing you’re on the right path, and a willingness to work hard. Those three factors—along with education earned at Washington State University’s School of Hospitality Business Management (SHBM)—connect Jaeger with decades of other hospitality graduates.

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A writer in chief

Bill Gardner grew up on Pullman’s College Hill and thought for sure he was on track to be a teacher when he graduated from WSU. His father, Walter Hale Gardner, was a soil physicist at the University from 1950 to 1983. "It was I before I realized there were professions other than being a professor," he says. "If I stood out at the end of my driveway, every house I saw had a professor living there."

Gardner (C88, MA English), chief of police at Washington State University Police, got into police work almost on a whim. He drove to the campus station with a friend who wanted to apply and decided to apply, too. He worked as a full-time officer for WSU police from 1990 to 1993, then took a position with the Pullman Police Department as a school resource officer. By 2004, it was time for a change. Gardner left the force for business as he is an entrepreneur—most notably working with the undersecretary for Mexico’s Secretariat of Agriculture and Rural Development through a friend’s risk management firm. Gardner aimed to find ways to help Mexican agricultural products enter the global market, flying—often weekly—to Mexico City.

The experience helped him cultivate leadership skills. One rule-of-thumb he developed: for a partnership to be successful, both partners must need each other. "I always wanted a partner who doesn’t need you, you were in a risky place. And when you didn’t need your partner, you had a ball and everything explained."

His second rule is that one and one should make three. "Anybody can take one and one to make two, but you have to have the right people to make sure the things you are putting together are multiplying from a day-to-day perspective, my leadership is dependent on good work from my staff," says Gardner, who’s served as WSU’s police chief since 2008. Today, he oversees about 100 employees, plus some 50 student interns from WSU’s criminal justice program. As assistant director of public safety at WSU, Gardner sits on the system-wide Incident Command System team, formed to navigate the COVID-19 outbreak. "The COVID-19 experience has definitely been a challenge and a growth opportunity for me, he says.

Through his teaching goals have long been put to rest, Gardner has put his English degrees to use, writing several young adult books. "My sister has four sons, and she complained to me one day that there was nothing good for her kids to read," he says. His first novel, Race Against Time, was published by Covenant Communications in 2001 under the pen name Willard Boyd Gardner. He wrote two more, published in 2005 and 2007, focusing on how law enforcement officers deal with grief, trauma, and relationships—with a little time travel mixed in.

Gardner attended book signings and appeared on radio shows, sometimes alongside James Dashner, author of the popular “Maze Runner” series. But Gardner says he wasn’t really as noticeable a Dashner, nor did he enjoy the publicity. He eventually found something more his style: ghost writing. “I didn’t know how I’d feel about writing something and having someone else’s name on it,” he says. “but I loved it.”

Despite a career full of twists and turns, Gardner says, “I’m not sure I have another big change in me. I love the people here, and my grandchildren live in Pullman, so there’s no reason for me to leave. I would love to ghostwrite another book, though.”
Glass action
BY WENDA REED

Here’s an unorthodox business plan: Make one product. Give a portion from each sale to charity. Shan high-pressure sales tactics.

But with this business model, glassybaby—started in Seattle in 2001 by three-time cancer survivor Lee Rhodes—has succeeded beyond the founder’s wildest dreams. The handblown glass candleholders or drinking vessels, in 450 luminescent colors, generated $3.5 million in sales back in 2009 when Tracy Morgan (’91 Apparel, Merch., Des. & Tra.) joined the company.

For the past decade, Morgan has been at the heart of the company’s expansion. Annual sales now reach $20 million, and charitable giving totals $10 million.

After graduating from WSU, Morgan worked at Nordstrom as a manager, then buyer, before taking 10 years off to raise her three sons. “My husband said I was getting boring. Didn’t I want an outside life?” she remembers. “I’d been a customer of glassybaby for years and they knew me, so I asked for a job. I told them I could work 9:30 a.m. to 2:30 p.m., when I’d pick up my boys from school. They hired me to run the new Bellevue store.”

Then the company kept asking for more: “Could I run the store over the holidays? Could I oversee a new venture in New York City?”

“I have a hand in everything from production to R&D to sales,” Morgan summarizes. “Actually blowing glass? Not so much. ‘It’s incredibly hard.’ She is most gratified by the company’s commitment to giving. That began when Rhodes, as a mother of young children, was going through chemotherapy for cancer. She realized that some women were skipping treatments because they could not afford childcare, transportation, or other necessities. She found the light in a glass vessel to be incredibly healing and calming, and so created glassybaby.

Ten percent of revenue was given away until July 2018. Morgan says. The current giving model is: three dollars of every glassybaby votive sold goes to the White Light Fund, the company’s giving arm, to provide hope and healing.

Uncompensated care for patients with cancer and other diseases is still the biggest recipient. But money also goes to the care of animals (especially dogs) and the environment. Nonprofit charities can apply for $3,000 “baby grants.”

Morgan sees the outreach as part of the “glassybaby family,” a feeling she finds akin to the connection between WSU graduates. “In the same way we say ‘Go Cougs’ whenever we recognize another graduate, people bond over their experiences with glassybaby.”

Heaven so fine
BY ADRIANA JANOVICH

Rob Mercer can trace his roots in the region to 1886, when his great-grandfather settled there to raise sheep ultimately becoming one of Frosser’s prominent early businessmen.

Eight decades later, in 1908, the family founded Mercer Ranches, installing the area’s first irrigation and adding wine grapes—also a first in the Horse Heaven Hills—in 1972. Three decades after that, in 2005, Mercer Estates Winery produced its first vintage.

Today, the family grows more than two dozen varietals across more than 3,000 acres in the Columbia Valley and Horse Heaven Hills viticultural areas for Chateau Ste. Michelle, 14 Hands, Thurston Wolfe, Columbia Crest’s H3 wine series, and of course their own Mercer, Mercer Family Vineyards, Mercer Bros., Eagle & Plow, Subsol, and ICAN labels.

“Our overriding philosophy is to represent Washington state in the best way we possibly can, making approachable wines for people to enjoy,” says Rob Mercer (’91 Poli. Sci.), who serves as company president and was recently named the 2020 Honorary Grower by the Auction of Washington Wines.

Mercer runs the business with his brother, Will (’93 Busi.), whose work in national sales has earned their wines a presence in all 50 states. “I would say the Mercer Bros. Cabernet Sauvignon—with aromas of ripe red fruit, blackberry pie, dried cranberries, brown sugar, and warming spices—is probably my favorite,” says Mercer, noting the Mercer Cabernet Sauvignon Caradele 7 and Eagle & Plow Block 93 Cabernet Sauvignon round out his top three. The Block 93 is particularly special as it’s the Mercer’s charitable wine with proceeds dedicated to supporting service men and women and their families. During the pandemic, proceeds are earmarked to support COVID-19 first responders.

After college, Mercer spent five years as a captain in the U.S. Marine Corps, reenlisting after 9/11 to serve in Iraq. He stayed in the Reserves until 2012. From 2013 to 2015, he served on the Washington State Wine Commission and still makes it his mission to advocate for Washington’s wine industry and its growing importance on the national scale. That’s the story I keep trying to tell,” he says.

Mercer serves on the WSU Viticulture & Enology Advisory Board and is a member of the Horse Heaven Hills Growers Association. The nonprofit Auction of Washington Wines, which recently honored him, benefits Seattle Children’s Hospital and WSU’s wine science research.

“I was obviously very pleased and honored and humbled to be given the award,” Mercer says. “Most importantly, I feel like it was recognition from leaders in the industry that the people at Mercer Family Vineyards—the employees—are growing high-quality grapes from which we can make high-quality wine. It’s really a recognition of the team rather than me personally.”

The team includes winemaker Jeremy Santo (’93 Busi.), Mercer’s wife Brenda (’90 Tra.), and their three children: Reagan and twins Byler and Thomas. “Our kids are coming up as the next generation,” Mercer says. “The only way we can be successful in this business is to be sustainable—taking care of the ground, vines, crops, and also the people that help us work those crops.”

To that end, he says, “We focus a lot on our stewardship program. We have about 15 areas on the farm that total about 2,000 acres that we set aside for wildlife habitat. We’ve planted thousands of trees for wind protection and replanted native grasses. And we have a very extensive monitoring program to ensure we’re being as efficient as possible with our water practices.”

The family business is three-pronged and employs 200 to 300 people, depending on the season. In addition to making wine and growing grapes, Mercer Ranches raise carrots, onions, corn, seed, kale, broccoli, alfalfa, and Timothy. In all, the family farms nearly 7,000 acres of agricultural land. And, says Mercer, “We look forward to building on all of those things and diversifying even further.”

BILLOW LEFT TO RIGHT: ROB MERCER, VSU, BRENDA MERCER, VSU, WINEMAKER JEREMY SANTO, VSU, AND WILL MERCER (COURTESY MERCER FAMILY VINEYARDS)
It starts with gnocchi, drenched in butter and nutty brown butter, and ends with roast pork shoulder, porcetta-style. In between, this celebration of the author’s Italian heritage and authentic Italian fare offers a lush narrative detailing traditional dishes—and a distinctive sense of place. In these 278 delectable pages, Teresa Lust delivers the warmth of Italy, delveing into the culture, cuisine, history, and geography of her ancestral land and providing approachable recipes alongside heartwarming anecdotes about members of her extended family. Zia Giannopina teaches her how to make cloud-ride polenta dumplings using wrinkled, old, thick-skinned russet potatoes and without measuring a thing. Cousin Cattarina overflows her first pot of zuppa dei morti—soup of the dead—with savory cabbage, Italian sausage, day-old bread, and a rich, homemade chicken broth. In Italy, readers learn, there’s an old saying: Gallina vecchia fa buon brodo. An old hen makes good broth.

Lust grew up as an American-Italian family in Yakima, regularly eating risotto, polenta, hand-shaped ravioli, and homemade fruit preserves. Her mother’s and grandmother’s handwritten recipes helped spark her love for cooking and the food of her heritage. In her college years, Lust spent a semester in Japan, which was also a formative experience for her. Her home is in LA’s Little Tokyo to the Lone Pine, California, camp.

Lust’s culinary career led her to further explore the connections of her mother’s cooking and trace the origins of her grandmother’s dishes. She learned Italian, taking classes during the off-season and, of course, traveling throughout Italy. Now living in New Hampshire, Lust teaches Italian at Dartmouth College—she’s an abbraccio there, too—as well as leading cooking classes. Her first book, 1998’s Pass the Polenta: And Other Writings from the Kitchen, like this one, is part memoir, part cookbook.

Taste is divided into three parts—one for each of the regions of Italy that Lust explores. In Piedmont, enjoy bagna cauda, piccolle, and hand-stretched breadsticks. In Maremma, find chestnut tortelli, homemade ricotta, and bruschetta with figs and Gorgonzola. And in La Marche, look for spaghetti with shrimp and creamy tomato sauces, fresh egg tagliatelle, and tagliatelle with summer squash, basil, and squash blossoms.

Lust’s mouth-watering journeys transport armchair travelers and inspire home cooks. Her voice is elegant and welcoming; she avoids being fussy and friendly. And that’s the overall tone of any good feast: charming, gracious, good-natured, and inviting.

—Adriana Janovich

An Eye for Injustice: Robert C. Sims and Minidoka
EDITED BY SUSAN M. STACY
WSU PRESS: 2020

She’s sitting on the edge of a suitcase, holding a pint-sized purse and partially eaten apple. Bundles of belongings surround the bewildered child, staring off camera.

Yuki Llewellyn was nearly three years old when she was sent along with her young, single mother to the Manzanar War Relocation Center. They had been evacuated from their home in LA’s Little Tokyo to the Lone Pine, California, camp.


Sims learned of America’s confinement of Japanese Americans as a doctoral student in the late ’60s. He was angered by the inhumanity of their imprisonment as well as the sad commentary on the education system of America that would permit an event like that to go unnoticed in the education career of someone who is presumably going to go out and teach American history.

The U.S. government forcibly relocated nearly 120,000 people of Japanese ancestry on the West Coast, most of whom were American citizens. This included entire families, orphans, and adopted children. The Minidoka War Relocation Center, like Manzanar, opened in 1942.

Sims made it his life’s work to research, write, and teach about the incarceration. Shortly after arriving at Boise State University in 1979, he discovered several boxes of Minidoka-related materials at the Idaho State Historical Society. Those boxes led to one of his first research projects at Boise State—and fueled a lifelong passion. For more than forty years, he traveled throughout the Northwest, talking to former internees about their experiences.

Sims dreamed of writing a book, and this well-curated compilation honors that wish and captures compelling history. It’s a fitting testament to his commitment not only to preserving the past but to promoting social justice.

The paperback volume—a selection of scholarly writings and speeches from 1978 to 2022 as well as photos from his personal collection.

Sims taught at Boise State until 1999, serving for a time as dean of the College of Social Sciences and Public Affairs. He also served on the Boise City Planning and Zoning Commission and Idaho Humanities Council.

The girl in the picture was released with her mother in 1945 with $25 and a pair of government-issued bus tickets. She went on to work for 37 years at the University of Illinois, Champaign-Urbana, where she helped start the Asian Studies program and retired in 2002 as assistant dean of students and director of registered organizations.

—Adriana Janovich

Tahoe and its People: A Natural History of Mount Rainier National Park
JEFF ANTONELIS-LAPP
WSU PRESS: 2020

When people say, on a sunny and clear Seattle day, “The mountain is out,” there’s no question what mountain they’re talking about. The mountain is Rainier. At 14,410 feet above sea level, it looms large, not only on the horizon but in Washingtonians’ collective sense of place and importance.

Washington’s tallest mountain—majestic, snow-capped, commanding—has been a source of inspiration for thousands of people who are drawn to the nature and history of Mount Rainier National Park.

Antonelis-Lapp takes a hands-on approach, peppered his explanatory text with personal anecdotes and direct observations of archaeology, geology, plant life, alpine ecology, flora, fauna, and more. Cover to cover, his love of the place permeates the pages. Part field guide, part memoir, part textbook, Tahoe serves as a solid introduction to the nature and history of Mount Rainier National Park.

—Adriana Janovich

Sarah Bernhardt: The Divine and Dazzling Life of the World’s First Superstar
CATHERINE REEF ’83 ENGLISH
CLARIION BOOKS: 2020

This fast-paced biography of “The Divine Sarah” Bernhardt, written for young readers, opens in 1866 Paris with the young actress looking for work at the famed Opéra. The Bernhardt becomes the greatest tragedienne of her time, known the world over for her exploits both on stage and off. Catherine Reef, who specializes in condensed biographies for middle- and high-schoolers, moves quickly through the extraordinary life of arguably the first modern celebrity with short, approachable chapters.

Bernhardt—in addition to being unconventional, glamorous, and provocative—was a fabulous fabulist, famous for embellishing or altogether altering her stories. Reef takes care to objectively sort myth and misinformation from the diva’s narrative, deftly showing how Bernhardt grew from a strong-willed, quick-tempered child with a distinctive voice, petite frame, and frizzy hair to a living legend who flaunted her independence and larger-than-life personality.

—Adriana Janovich

Horsaraing in America: A Novel
SID GUSTAFSON ’76, ’79 DVM
SLEIPNIR PUBLISHING: 2020

Bozeman novelist and equine veterinarian Sid Gustafson writes what he knows: horses, Montana, and ethical issues in American horseracing. His fourth novel follows a female veterinarian from the Blackfeet Indian Reservation to Uptown New York for a temporary job at a racetrack. Her journey—both philosophical and personal—delves into animal welfare concerns and unscrupulous horse owners, while Gustafson draws from his own experiences to craft his characters, inform his storytelling, and shape his settings. While the genre is quite specific, his prose is approachable and often poetic.

—Adriana Janovich

NEW MEDIA

A Blissful Feast: Culinary Adventures in Italy’s Piedmont, Maremma, and Le Marche
TERESA LUST ’86 BIOC
PEGASUS BOOKS: 2020

WASHINGTON STATE MAGAZINE FALL 2020

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The Ephraim High School Athletic Hall of Fame welcomed Jim Forkeast (’73 Gen. Studies) as a 2020 inductee. Forrest played football and basketball at WSU before a career with the Canadian Football League. His Venise TV journalist Enrique Cerna (’75 Comm.) has joined WSU’s Board of Regents. Before retiring from Cascade Public Media’s KCTS 9 in 2018, he spent 23 years producing and hosting current affairs programs and documentaries. He also reported and produced numerous new segments for national PBS programs, provided election analysis for PBS Northwest, and moderated senatorial, congressional, gubernatorial, and mayoral debates. He serves on the Washington State Historical Society Board of Trustees, Yakima Valley Museum Board of Directors, and King County Telethon’s Citizens Advisory Committee. Sandra Stauffer (’77 Comm.) has retired after 29 years in law enforcement, most recently as a code enforcement officer in Lakewood.

Dan Larson (’78 Elem. Ed.) retired from the Arlington School District after 43 years. He was a third-grade teacher at Kent Prairie Elementary School, and taught and coached at middle and elementary schools. Marsh Fletcher Morris (’79 Microbio.), who played with the Badminton Club at WSU, won a gold medal in mixed doubles badminton at the 2019 National Senior Games in Albuquerque, New Mexico. She also won a bronze in women’s doubles and finished fifth in singles. Terry Peterson (’79 Ag. Econ.) is the CEO of the West Lion, Oregon-based Pacific West Bank.

Carrie Ryles (’96 Arch.), a San Francisco-based partner of the international architectural firm Skidmore, Owings & Merrill, has served on the company’s executive committee since 2016. During the current COVID-19 crisis, she helped get the entire company working remotely. Frank Dooley (’84 PhD Ag. Econ.) is the new global chancellor at Purdue University, where he had served as senior vice provost for teaching and learning. He’s responsible for overseeing academics for more than 31,000 Purdue students earning online degrees. The Society for Range Management recognized Maura Laverty (’87 Range Mgmt.) with a 2020 Outstanding Achievement Award for Land Stewardship. Laverty, range program manager for the Umatilla and Wallowa-Whitman National Forests and invasive species program manager for the Wallowa-Whitman National Forest, is a career U.S. Forest Service professional who has worked in Washington, Colorado, Idaho, and Oregon. Kathleen McChesney (’87 Lib. Arts), a leading expert in addressing the Catholic Church’s sexual abuse crisis, received the 2020 Laetare Medal, the oldest and most prestigious honor given to American Catholics. McChesney was recruited by the United States Conference of Catholic Bishops in 2002 to establish and lead its Office of Child Protection. She joined the FBI in 1978 as a special agent, eventually reaching the bureau’s third-highest position as executive assistant director.

Brad Rawlins (’87 Comm., Spanish) has been named director of the School of Media and Journalism at Arkansas State University. Rawlins will lead the academic programs in multimedia journalism, creative media production, KASU radio, printing services, and student media, including The Herald, ASU-TV, Red Wolf Radio, and the Delta Digital News service.

The Indianapolis-based architecture firm CSO has named Laura Schellinger (’87 Int. Des.) a partner. She has worked in marketing at the company for more than 15 years. Deborah Gracido (’88, ’95 MA Elec. Eng.) has been named associate laboratory director for the National Security Directorate at the U.S. Department of Energy’s Pacific Northwest National Laboratory. The Directorate includes a $100 million research portfolio and 1,300 staff members. A recipient of the DOE’s Outstanding Woman in Engineering award, she serves on the executive advisory board for WSU’s Volland College of Engineering and Architecture as well as WSU’s School of Electrical Engineering and Computer Science.

Duane Fotheringham (’89 Elec. Eng.) is president of Huntington Ingalls Industrial’s Technical Solutions Unmanned Systems business unit, following the company’s acquisition of Hydroid, Inc. Fotheringham had previously served as Hydroid’s president and chairman of the board. Mark J. Reed (’89 Agri.) is the University of Nebraska at Kearney’s new dean of the College of Education. He comes to the position from Texas A&M University-Commerce, where he was associate dean of the College of Education and Human Services, and associate professor of secondary education, department of curriculum and instruction. Mark Wright (’89 Comm.) is a recipient of a 2020 Hall of Achievement Award from WSU’s Edward R. Murrow College of Communication. He’s a two-term anchor for KING 5 in Seattle.

Shauna Corry (’90 MA Int. Des., ’92 PhD), a professor of interior design, is the new dean of the College of Art and Architecture at the University of Idaho. In 2007, Corry was the first to receive UI’s Hoffman Award in Teaching Excellence. In 2015, she won UI’s Outreach and Engagement Award of Excellence. Aarón Sele (’89) has been named to the State of Washington Sports Hall of Fame’s class of 2020. Sele led North Kitsap High School’s baseball team to a state title in 1988 before pitching at
The only way to guarantee your bottle is to join the Wine-By-Cougars Wine Club

winebycougars.com

Wine-By-Cougars Wine Club is free to join for WSU Alumni Association members.

CLASSNOTES

WSU, where he helped the Cougars win three conference championships. Drafted by Boston Red Sox in 1991, Sele played for several teams—including the Seattle Mariners, Los Angeles Dodgers, and New York Mets—before becoming Special Assignment Scout for the Chicago Cubs. ⚽ Architect JERRY DASKEN (’92 Arch.) has joined MBI Companies Inc. in Chattanooga, Tennessee. ⚽ RANZ MISHLEWY (’94) is the senior editor at Z2 Comics. Mishlewsky previously worked as managing editor at Heavy Metal Magazine. He won Diamond and Harvey awards in 2009 for DC/Vertigo State. His anthology graphic novel based on 51 songs by Tori Amos. In 2018, he adapted Nikki Sixx’s memoir The Heroin Diaries as a storyboard artist, working on rock videos for bands such as Aerosmith. He also served as lead artist for Philips Media’s Realtime 3D initiative, art director on Aladín: The Fate of Agrabah for Disney Interactive, and creative director of Star Trek: Tactical Assault and Master of Orion II for QuickSilver Software. At WSU, he served as graphics manager of The Daily Evergreen. ⚽ ERIC LINDSAY (’95 History) is vice president and legislative director for the Paralyzed Veterans of America Texas Chapter and member of the Governor’s Committee on People with Disabilities. Lindsay retired as a lieutenant colonel after serving in the U.S. Army for 21 years. ⚽ ERIC JOHNSTON (’98 Civ. Eng.) is the new public works director in Bellingham. He had served as interim public works director since August 2019. Before that, he was an assistant director of public works, in charge of the operations division, and—from 2001 to 2012—he served as city engineer in Oak Harbor. ⚽ Convergence Architecture has promoted ALLEN KABANUK (’98 Arch.) to associate principal. He has 21 years of professional design experience in all phases of commercial, industrial, and public projects. ⚽ JAMIE MCCALLEY (’98 Comm.) is a recipient of a 2020 Hall of Achievement Award from WSU’s Edward R. Murrow College of Communication. As a supervisor for the Associated Press in San Francisco, she’s covered three Summer Olympic Games, two Winter Olympic Games, the World Cup in Brazil, a Super Bowl, and four World Series. Her beat includes the San Francisco 49ers, San Francisco Giants, and Golden State Warriors. In 2018, she was named AP’s Sportswriter of the Year. ⚽ KENNETH R. COLMAN (’99 Soc. Sci.) has stepped down from his position as commanding officer of Helicopter Maritime Strike Squadron Seven Zero. He earned a commission through Officer Candidate School in 2000 and was designated a naval aviator in 2001. Coleman deployed in support of Humanitarian Assistance Disaster Relief Operations in Surattra, Indonesia, following the tsunami in 2004, as well as in support of Operation Enduring Freedom. In 2015, he took the HM-51 Officer of the Year. His decorations include the Defense Meritorious Service Medal, three Navy Commendation Medals, three Navy Achievement Medals, and numerous unit and campaign awards.

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By AdriaNna JanovicH
CLASSNOTES
Federal Vet High School. STEPHANIE BENNETT (39 Cm. Jr.) is a basic Law Enforcement Academy trainer aide counselor officer at the Washington State Criminal Justice Training Academy. At the University of Idaho history professor AMY CANFIELD (’04 MA, ’08 PhD History) has been appointed as state coordinator for the National Votes for Women Tour. In 2019, she was honored with the Idaho brightest Star Award. She also was a 2019 recipient of the LC State Women’s Leadership Award. On campus, Canfield advises the Women In Lasting Leadership Club and organizes Women’s History Month activities. She also serves on the Idaho Historic Sites Review Board and boards of the Lewiston Civic Theatre and Idaho Humanities Council.

DALE GREEN (’04 Lib. Arts) has been promoted to commander of the Aberdeen Police Department. JOHN LAMANNA (’04 Kinезio) has been hired as head coach for men’s basketball at Whitman College. JAKOB PETERSON (’04 Bus.), a certified public accountant, joined Opalawn Dillow in 2010. She manages the individual tax group in the firm’s Vancouver office and specializes in individual, trust and estate taxes. JIM LAWLESS (’07 Soc. Sci.) is the new police chief in Edmonds. He had served as assistant chief since 2018. In 2013, he was the department’s officer of the year. EMILY WICKS (’08 Poli. Sci.) has been promoted to associate enforcement academy trainer advisor for Washington State Patrol. AMY CANFIELD (’04 M.A., ’08 PhD History) has been appointed as state coordinator for the National Votes for Women Tour. In 2019, she was honored with the Idaho brightest Star Award. She also was a 2019 recipient of the LC State Women’s Leadership Award. On campus, Canfield advises the Women In Lasting Leadership Club and organizes Women’s History Month activities. She also serves on the Idaho Historic Sites Review Board and boards of the Lewiston Civic Theatre and Idaho Humanities Council.

TAMARA ROBERTS (’13 Civ. Eng.) is a civil engineer and lieutenant at the U.S. Navy base Camp Lemonnier in Djibouti. Hersheyv Edith Architects has promoted project accountant STACY RUTHERFORD (’13 Int. Bus.) to associate. Walsh Construction has promoted ABBY ANDERSON (’16 Civ. Eng.) to assistant superintendent. JORDAN NESBIT (’18 DVM) has taken over as head veterinarian at the hospital in Hayden, Idaho. TOM MURGATROYD (’19 Mar. Eng.) has joined the sales team at Colmac Industries as an applications engineer.

IN MEMORIAM
MAKONIA CASTEN (’41 Ag.Eng.), 93, September 3, 2015, Gannettville, George.
WIZZLE LILIE BUCKNER (’45 Fin. Arts.), 96, March 8, 2020, Santa Monica, California.
FRANK EUGENE KEPNER (’10 PhD Comm.), 86, August 27, 2017, Salt Lake City, Utah.
ELAINE RUSSELL (’47, ’49 MA soci.)

VERNON DALE ATWOOD (’60 Ag. Econ.), 83, February 5, 2017, Pinnewell, Oregon.
HELEN LOUISE BURGESS LINDHORST (’60 Ed.), 82, March 15, 2020, Lake Forest Park.
JOY ANN ALLAN (’61 Home Econ.), 77, August 5, 2016, St. Cloud, Minnesota.
GILDA MAY ELLIOTT (’65 Soto.), 88, October 31, 2019, Bend, Oregon.
KATHLEEN M. BULLOCK (’66 Comm.), 75, January 9, 2020, Olympia.
DALE LAVERNE PREEDY (’68 Arch.), 74, March 16, 2020, Rockaway Beach, Oregon.
KAREN H. LINDHORST (’60 Ag. Mech.), 83, March 8, 2020, Spokane.
NANCY LU GALE (’60 Ag.), 89, March 15, 2020, Vancouver.
JANETH M. DELUCA (’64, ’68 MA Music), 77, February 29, 2020, Seattle.
One of the most extreme effects of COVID-19 is severe, deadly pneumonia caused by inflammatory storm. Viral infection researcher Santanu Bose and his team at WSU could calm the reaction in patients’ lungs through a new discovery. They found a lung protein that signals virus infection. Blocking the function of this protein could save lives.

Serving the public good and tackling real problems is a part of WSU’s 130-year history.
Ambiente 432, comprised of 12 motion-responsive resonator horns suspended from the ceiling and strategically organized, "really sets the tone for your visit," says Ryan Hardesty, curator of exhibitions and collections at the Jordan Schnitzer Museum of Art at WSU.

Hardesty wanted something "surprising, unexpected, that really pushes the boundaries of what art can be" in that particular gallery — and that’s just what Trimpin’s Ambiente 432 is to me," he says. "It’s not a static experience. It’s an experience that I think empowers the visitor. In some ways, you’re in charge. You’re actually activating this work of art. Your presence in the space is going to affect your experience of the work."

Ambiente 432, part of the museum’s permanent collection, is "played" by visitors moving through and activating the space — and impacting their own experience with the kinetic sound sculpture. The installation is tuned to 432 Hz, the vibration frequency known as “Verdi’s A.” Composer Giuseppe Verdi favored the standard, which studies have shown helps calm anxiety, decreases heart rate and blood pressure, and generally has a soothing effect.

Trimpin, a recipient of a MacArthur “Genius Grant” Fellowship, explores sound, vision, and movement in combinations of music and mechanics. The Seattle-based artist, composer, and inventor goes by his last name.

“Significant artworks really need to be seen and experienced more than one time,” Hardesty says. "I think we build relationships with artworks over time. And it’s my hope that this work becomes a community favorite, an iconic work of our permanent collection.”

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