Among the stacks

30

Pondering the piles
Feature
Piling up without foreseeable end, WSU researchers work to solve the “plastics problem” by making it a solution to our energy needs.

Upfront
From satellite observation to boots on the ground, Northwest climate patterns are laid bare.

10
125 years of being an indispensable WSU news source and training ground for student journalists.

11
Right here in our own backyard, who knew how sweet it is!

13
To shield and protect

16
Ripe for improvement — any way you slice it.

Cover: Stacked rocks at Bellevue Botanical Garden — a WSU Extension Master Gardener Partner (Photo: Jim Corwin/Alamy)

Left: A collection of over 1,000 wheels make up this fence near uptown (Photo: Joshua Snyder)
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Beyond time and distance

September 2006, a typically extremely hot and humid day in Auburn, Alabama. The Pacific Northwest WSU Cougars traveled East to play my Deep South Auburn Tigers.

During a pregame tailgate party at my parking spot near Jordan Hare Stadium, I espied some Cougar fans heading to the stadium. Some looked uncomfortable. One lady seemed unsteady; extremely hot, likely heat exhaustion threshold. I took her hand, led her to a shady chair, gave her water. We invited them to rest, share our BBQ and drinks.

We welcome, honor, and respect our visitors, share our hearts, become friends, the Southern way, the Auburn Family way.

We walked with them to the stadium. Soon post game, I received a “thank you” note, some Cougar Gold cheese, a local visitor’s sticker, share our hearts, become friends, the Southern way, the Auburn Family way.

In 2010, my wife and I traveled to Auburn, Alabama. We met Denny and Bonnie in Phinney for the Auburn-Oregon BCS National Championship game. I gave my tickets to some Auburn grads. An Oregon friend and I, Denny and Bonnie, watched the game from his desert condo.

WSU again traveled to Auburn in 2013. Denny and a friend stayed in our Atlanta home for a magnificent game weekend. We drove down to Auburn, showed them around our campus and provided them club level seats, food and drink, surrounded by welcoming and friendly Auburn Family folks.

After WSU beat UVA, I called Denny from the North Carolina Outer Banks; after the 2011 Auburn-Alabama (Iron Bowl) “Kick Six” epic, Denny called me from the Olympia Pig Bar. Both conversations had to overcome unspeakable stadium/bar noise.

Our mutual bucket list: Cougar-Tiger National Championship game. We welcome, honor, and respect our visitors, share our hearts, become friends, the Southern way, the Auburn Family way.

Discovering Goldsworthy

Thanks for the story about Harry Edgar Goldsworthy by Adriana Janovich. When I saw that name, I wondered if they named Goldsworthy Hall after him. [The hall was named after his father, Harry F. Goldsworthy Sr. — Ed.]

I lived in Goldsworthy Hall in 1976, my freshman year at WSU. Although my overall experience at Goldsworthy Hall was not pleasant, it is how I met my best friend, so the place is important to me. On Harry’s Wikipedia page, I found out that he lives in California, was born in Spokane, spent time in Pennsylvania at the Army War College, and in June 1967 he assumed command of the Aeronautical Systems Division at Wright-Patterson Air Force Base, Ohio. I grew up in Los Angeles and Spokane, worked in various human factors research labs in Pennsylvania for over three decades (including one job with the Navy), and now work in a lab at Wright-Patterson AFB.

Thanks to your story, I feel a little more connected to Harry Edgar Goldsworthy and the world seems just a little bit smaller and friendlier.

Correction

In the Fall 2021 story, “Mimicking nature,” 3D printed joint replacements heal better, rather than make a better fit. The innovative material used is chemistry-modified calcium phosphate, with additives and natural medicinal compounds, which can improve biocompatibility. The corrected story is available at magazine.wsu.edu.
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The great recession

BY LARRY CLARK

Hikers and nature lovers have watched for years as snow has shrunk away from mountains and glaciers. In the freakishly hot summer of 2021, even Mount Rainier saw its snowpack fade at an alarming rate.

The diminishing view of snow on mountain peaks foreshadows a much larger impact of warming temperatures on the Pacific Northwest. Declining snowpack means less water later in the summer for irrigation, fish, hydropower, residential, and other uses.

“We have a temporal mismatch between water availability and water demand,” says Jennifer Adam, Berry Distinguished Professor of Civil and Environmental Engineering at Washington State University.

In particular, the Columbia River basin derives an average 40-70 percent of its annual streamflow from snowpack melt. However, in recent years, the peak snowpack is earlier, the decline is faster, and the duration is shorter, leading to less water availability when it is needed most in the summer.

“The Pacific Northwest is particularly vulnerable to changes in the snowpack because of its outsized importance for storage. On average, we can only hold maybe 20 years of snowpack in our reservoirs. That’s in contrast with other river basins, like the Colorado or the Nile Rivers,” Adam says. “That’s in contrast with other river basins, like the Colorado or the Nile Rivers.”

Because water is so crucial for power, fish, and agriculture, the Washington State Department of Ecology commissions a long-term water supply and demand forecast every five years. Adam worked on the next forecast, slated for November release, that looks 20 years ahead and, for the first time, 50 years on.

One clear finding: “Dry seasons are getting drier. Wet seasons are getting wetter,” Adam says, noting these circumstances can lead to greater droughts and floods.
Evergreeners have written about the Vietnam war and its aftermath, the solar car race, and the Portland airport security scandal, which eventuated in the fates of two dozen police officers injured. More recently, they’ve covered the COVID-19 pandemic.

“Students do more than make memories at the Evergreen,” Prinkleton says. “It helps them develop the professional skills they need to succeed. Historically, that’s been the Murrow calling card: students at the undergraduate level who have a lot of hands-on experience. The paper has a history of moose, in a sense, it doesn’t change much over the years.”

The first issue of 1899 asserted, “Let the editorials be fearless. Not too radical, but exceedingly truthful. Not always fast thinking, but always commanding. Giving credit for all that is good, but speaking with undisguised mending. Giving credit for all that is radical, but exceedingly truthful. Not ‘Let the editorials be fearless. Not too radical, but exceedingly truthful. Not always fast thinking, but always commanding. Giving credit for all that is good, but speaking with undisguised mending. Giving credit for all that is radical, but exceedingly truthful. Not ‘Let the editorials be fearless. Not too radical, but exceedingly truthful. Not always fast thinking, but always commanding. Giving credit for all that is good, but speaking with undisguised mending. Giving credit for all that is radical, but exceedingly truthful. Not ‘Let the editorials be fearless. Not too radical, but exceedingly truthful. Not always fast thinking, but always commanding. Giving credit for all that is good, but speaking with undisguised mending. Giving credit for all that is radical, but exceedingly truthful. Not...
Scouting for a forgotten few

BY RYAN W. BOOTH

A COOLER LOADED WITH SMOKED SALMON AND COUGAR GOLD. Pendleton blankets with the price tags removed. Suitcase full of every possible academic tool needed. WSU Motor Pool Fed Ex Focus stickered with our logo and one that says, “How’s My Driving?”

When your research involves the Native people who served as US Indian Scouts, it means traveling vast stretches of the American West. Some of these people left behind are few and far between. It also means consulting with the tribes, who have every interest in how their ancestors’ stories are told.

My research focuses on the Northern Cheyenne and White Mountain Apache who served as scouts for the US Army from 1866 to 1890. They were forced into this role because of a conflict that would rage with the US government against other Native people. Why would they do that? The truth is that certain tribes hated other tribes. They fought their own “special forces.” They have been waiting a long time for their story to be told. We have so much to learn from them.

For some, they only realized the cost of their service when it was too late. US Indian Scouts participated in some of the worst Indigenous massacres at places such as Washita and Wounded Knee. After the 1890 Wounded Knee Massacre, James Tangled Yellow Hair remarked that this was “not at all brave on the part of the soldiers.” Yet he continued to wear the army blue uniform to stare off hunger, poverty, and the lingering possibility of being labeled “hostile” to the US government.

As I drove into the Washita Battlefield National Historic Site in Oklahoma, the place seemed desolate. It was hard to believe a battle. On a frigid November 27, 1868, Custer and his Seventh Cavalry rode into a village of about 300 Cheyenne people and shot 60 of them.

National Park Service signage refers to this as a “clash of cultures,” which also seems to dodge important historical questions. Who bears the burden of this battle and why does no one want to talk about it? The place is silent now, but it cries out for an amends.

As I traveled to Fort Huachuca, Arizona, it is one of the last active military posts from the US-Indian Wars. As I explored the oldest section of the army post graveyard, I noticed that White and Native soldiers were buried side-by-side. As was the custom, the wives and children of soldiers at the fort were mixed together. All were equal in death.

This fits with my knowledge of military history. I never served in uniform, but soldiers consistently report that the reason they fought was to help the buddy next to them. They may have joined for various reasons, but the thing on their mind was the “esprit de corps.”

The US Indian Scouts did as well. They wore a crossed arrows insignia on their uniforms and hats. When the unit was changed to a fast-moving cavalry, a car, a big, black pickup started to roar past me and then slowed to keep pace. I thought to myself, “Shoot. Now what?!” I casually looked over to see the folks in the truck waving, giving me a thumbs up and honking. I smiled and waved. As they passed me, I noticed a WSU sticker in their rearview mirror. We know something about an esprit de corps.

While I fulfilled an obligation to serve as a fellow at the Newberry Library in Chicago and visited sites for my dissertation, I found so much more on the highways of the American West. It took me to quiet places where few travelers venture. It took me to one of the busiest cities in our nation. It took me to some of the most profound historical places I’ve seen.

I have driven by Pompey’s Pillar a few times on my way to Miles City, Montana. I never stopped. This summer I finally stopped to see one of the only physical remnants of the Lewis and Clark expedition. On July 25, 1806, William Clark carved his name on some sandstone near the Yellowstone River. It was hard to see the old graffiti due to the pleasure-givers meant to protect it from the weather and people. The signage depicted the area as a “Crossroad of Events” and mentioned troops protecting the survey and railroad crews, but stood mum on the topic of my research, Indian Scouts.

I drove through Iowa in the Coug Car, a big, black pickup started to roar past me and then slowed to keep pace. I thought to myself, “Shoot. Now what?!” I casually looked over to see the folks in the truck waving, giving me a thumbs up and honking. I smiled and waved. As they passed me, I noticed a WSU sticker in their rearview mirror. We know something about an esprit de corps.

Ryan W. Booth is a doctoral candidate in history at WSU. He also teaches at WSU Vancouver.
To shield and protect

BY REBECCA PHILLIPS

LAST JULY, as the United States began its military drawdown from Afghanistan, a smaller American force toiled behind the scenes to ensure the safety of those remaining at the US Embassy in Kabul.

One of America’s largest diplomatic missions, the embassy, before closing in August, was a massive 15-acre complex protected by 16-foot blast walls, heavily armed US Marines, explosive-sniffing dogs, and lots of technology. In Diplomatic Security, our job is to protect the embassy, to work closely with the Department of Defense to ensure, everyone in that compound is safe,” says Matthew Percival (’01 Elec. Eng.), director of the Office of Technology Innovation and Engineering in the US State Department in Washington, D.C. “We had many visa discussions going on in Kabul during that time as people rushed to evacuate the country.”

Percival, a security engineering officer in the State Department’s Diplomatic Security Service, oversees much of the US counterintelligence effort and also leads teams in the development of high-level technology.

Since the Cold War discovery of the “Great Seal Bug,” a covert listening device ingeniously planted in the US ambassador to Russia’s Moscow study in 1952, the Diplomatic Security Service has employed people to detect such devices and prevent them from stealing national security information.

In 2020, Percival was presented the Robert C. Bannerman Diplomatic Security Employee of the Year award for his leadership in the development of an advanced cyber security system known as Rio Celeste, which deployed earlier this year.

“The question was, ‘How do we protect sensitive information in a world where streams of data are constantly flowing through the air creating vulnerabilities and potential threats?’” says Percivil. “Almost every agency overseas and in Washington, D.C. has some presence they need to protect. Our vision was to create a wireless countermeasure the entire government could use.”

To that end, Percival formed a team of radio frequency (RF) professionals from the US intelligence community and Pacific Northwest National Laboratory in Richland. Together they developed a system based on emerging technology in software-defined radios, which use digital and wireless technology instead of traditional analog.

The new system can analyze all RF in a specific area and then, through artificial intelligence and machine learning, provide real-time updates on dangers or vulnerabilities.

Radio frequency, a type of electromagnetic radiation, is emitted by cell phones as well as FM radio, broadcast television, computers, Wi-Fi routers, Bluetooth devices, GPS, and microwaves.

“Our system will detect any RF energy but we’re mainly looking for cell phones,” Percival says. “We want to make sure the classified discussions of top dignitaries like the secretary of state are private and protected. Cell phones are one of the main problems, especially overseas where they might be connected to another country’s network.”

Percival says RF technology has greatly advanced over the last decade with the advent of 5G mobile networks, the Internet of Things, connected to another country’s network.”

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Percival says RF technology has greatly advanced over the last decade with the advent of 5G mobile networks, the Internet of Things, and smart cities.

“It was the perfect time to leverage all the science and advancements that both the federal government and private sector have put into these,” he says. “Our goal is to continue evolving the Rio Celeste program for the next 10 or 20 years. It’s an area where our cities, buildings, and for us, the threat, will continue to advance as everything shifts to wireless.”

Prior to his current post, Percival worked for the US Foreign Service protecting lives, information, and US embassy facilities in Uruguay, Tunisia, El Salvador, and Russia.

“I’d be in charge of making sure everything worked, from counterterrorism ballistic-radiated barriers to security systems, alarms, locks, and cameras,” he says. “The discussions in our buildings are wanted by others, so it’s important to keep our diplomatic playbook safe.”

“As an American envoy living in Moscow, for example, we always found there were eyes watching us. There’s always counterintelligence and someone’s always following you. It’s just the nature of the job.”

Percival says beyond the RF program, they have an array of countermasures to protect US personnel and property, including systems for drones and incoming mortars.

“Security engineers like myself help manage our programs by developing those systems, choosing them, and working with the military,” he says. “It’s a great career, and I’d love to see more Cougs join our department.”

UPFRONT

By Rebecca Phillips

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Here’s a closer look at more of MASC’s treasures:

Jane says. One of MASC’s most recent acquisitions is a set of first editions of Jane Austen novels. Lorraine (Kaye) Hanaway (’49 Comm.), a founding member of the Jane Austen Society of North America, bequeathed four titles—Emma, Mansfield Park, Northanger Abbey, and Persuasion—upon her death last year at 93. She served as editor of the Daily Evergreen and managing editor of the then-alumni magazine Pow'wer before pursuing her dream of working as a writer in New York City and, later, at the University of Pennsylvania. Emma and Mansfield Park are leather-bound “triple deckers,” published in three volumes. Persuasion, Northanger Abbey, and Emma are largely in their original state and feature inscriptions and bookplates from former owners. “Jane Austen is one of the most loved authors in all of literature,” Bond says. But, “The WSU Libraries had no first editions of her work until now.”

Yes, Virginia. Leonard and Virginia Woolf built their library around the books the author inherited in 1904 from her father. MASC’s collection of titles from the couple’s independent Hogarth Press is among the most extensive in the world. [See the story that starts at the bottom of this page.]

Home Ec. Instructions for a “peanut butter omelet,” the proper placement of a meat thermometer, the right amount of time for curing firewood. These are just some of the tips found in a 1938 newsletter of “Homemakers Briefs” issued by Washington State College Extension. MASC is digitizing its collection of such bulletins, largely an effort that continues to the present.

Papal bull. Thirty-eight days before his death, Pope Innocent III—on June 8, 1216, in Perugia, Italy—confirmed the rights and property of the Order of St. Lazarus, which tended to the sick and lepers in particular. The edict is written on vellum and includes the Papal seal cast in lead and attached to the document with silk thread. It was previously given 506 copies of The Compleat Angler to MASC, including all seventeenth-century editions.

Complete anglers. Joan and Vernon Gallup donated more than 15,000 rare books related to angling and outdoor sports in 2011. Then valued at $1.8 million, the collection comprises the largest single gift in MASC history. It includes a full set of 19 first editions of Henry Abbott’s privately printed birch books, Oswald Crawfurd’s annotated copy of The Compleat Angler, and a 1653 first edition of Izaak Walton’s The Compleat Angler. The Gallups had previously given 586 copies of The Compleat Angler to MASC including all seventeenth-century editions.

HOW VIRGINIA WOOLF’S LIBRARY CAME TO WSU

by Trevor Bond

In 1967, English professor John Ewell took a sabbatical to England with his wife, Karen, and their three sons, Sean, Eric, and Kirk. It would become the most important sabbatical ever for the Washington State University Libraries.

During their time in England, the Ewells met Fred Lucas, a bookstore owner, who in turn introduced them to author and critic Leonard Woolf, spouse of Virginia Woolf, arguably the most innovative British writer of the twentieth century.

“When we were about to leave, Dad asked if he could please see the Hogarth Press’s first edition of T.S. Eliot’s The Waste Land,” Sean Ewell recalls. Leonard retrieved a copy, “its boards covered with what looked like a hand-marbled blue paper. My mother, without thinking, said, ‘Oh, it’s blue, my favorite color!’ She immediately felt foolish for saying it. But Leonard locked his eyes on her, made a mid-course correction away from dad and toward my mother. ‘Is it? It’s mine too!’ he said, while at the same time tossing the book through the air toward my father who lunged, bobbled, but finally retained possession of the volume.’”

That very book is now in a climate-controlled vault on the Pullman campus.

After Leonard’s death in 1969, Lucas mentioned in a letter to Ewell that his Bow Windows Book Shop had acquired the bulk of the Woolfs’ library. Ewell immediately contacted G. Donald Smith, director of WSU Libraries, who supported the purchase. After a 25-minute trans-Atlantic call, WSU negotiated to buy the collection for 11,000 British pounds ($26,000 then, and roughly $192,000 today when adjusted for inflation).

WSU also bought books from Leonard’s London residence in 1974, an additional 400 volumes that Leonard had loaned to his nephew, Cyril Woolf, and 100 books from Quentin Bell, Virginia’s nephew and biographer. WSU librarians noted the incomplete holdings of the Hogarth Press, which the Woolfs founded in 1917, and immediately began collecting those titles—an effort that continues to the present.

Among the highlights of the Hogarth Press Collection are three copies, including both bindings, of Two Stories, the first volume published by the Hogarth Press, limited to 150 copies, hand-set, and hand-printed by the Woolfs in their living room, and a copy of the privately circulated Poems by C. N. Sidney Woolf, published in 1918.

Today, the Woolf Library fills 231 shelves of books, totaling roughly 9,900 books, housed in a secure room, in WSU’s Manuscripts, Archives, and Special Collections (MASC). It is a glorious, massive, and far-ranging collection. It is a library of libraries.

Virginia inherited a large library from her father, Sir Leslie Stephen, author of numerous works and the first editor of the Dictionary of National Biography. She also inherited her brother Toby’s books and those of her mother, Julia.
Leonard brought his own library to the marriage, including his classical texts from university, books that he reviewed, and volumes he collected. Friends associated with the Bloomsbury group and others gave the Woolfs more books. Both Leonard and Virginia reviewed many more books now in the library. There are scores of books that Virginia rebound or repaired, books with pictures drawn by her father and brother, and books annotated by Leonard.

One of my favorite books in the collection is a gift Leonard gave Virginia for her 35th birthday in 1917, a first edition of Sir Walter Scott’s *The Abbot*. At her birthday tea, the couple made a major decision. They would start the Hogarth Press, which in time would become a highly influential publisher of Modernist literature, including nearly all of Virginia’s works, T.S. Eliot’s *The Waste Land*, and the first English versions of Sigmund Freud’s works, as well as hundreds of other titles.

WSU professor emerita of English Diane Gillespie recalls first seeing the collection when she arrived in 1975. “My PhD-level work on Virginia had prepared me to use and introduce others to Leonard and Virginia’s personal library. Then housed on an upper floor in the older Holland Library building, the books were a special province of librarian Leila Luedeking. With infectious enthusiasm, she brought out treasured hand-printed books, annotated the incomplete and sometimes inaccurate seller’s catalog, and provided me with lists of any categories of holdings that might interest me. Although I was overwhelmed by the possibilities, I felt very lucky to be here.”

With the formation of MASC in 1978, library staff moved the collection, shelving it by call number along with other rare book collections. In 2010, I hired Andrew McCarthy (’06 MA, ’10 PhD English) and Nora (Wiechert) Kuster (’05 MA Amer. Stud., ’09 PhD English) to help move the Woolf Library to its own section of the rare book vault. “The Woolf collection made me realize that authors operate in dialogue with others who have come before them,” Kuster says. “They do not think, write, and create in a vacuum. An author’s personal library provides a physical marker of that community.”

Throughout the decades, MASC has welcomed scholars from around the world to work with the Woolf Library. During her tenure at WSU and into her retirement, Gillespie has mined the collection for numerous books and articles. “Because much of my research involves relationships between visual and verbal arts, I was delighted by the first editions of Virginia’s writings, published by the Woolfs’ Hogarth Press with illustrations and dust jackets designed by Virginia’s sister, Vanessa Bell,” she says. “Although I had made research trips to other archives, art galleries, art dealers, and private collections, mostly in England, I was delighted to find—eight here in the Woolf Library—31 of the 82 illustrations for my first book, *The Sisters’ Arts: The Writing and Painting of Virginia Woolf and Vanessa Bell*.”

Gillespie has also examined the range of surprising titles published by the Hogarth Press, including detective novels, a novel about war refugees, a volume spoofing wedding rituals, an etiquette guide, a book of advice about investing, a collection of last words, and books on religion, heart health, and diet.

The Woolf Library continues to inspire researchers. Kathryn Manis, a WSU doctoral candidate in rhetoric and composition, spent last summer as a graduate fellow taking digital photographs of books in the Woolf Library that Virginia repaired or re-covered as well as Woolf’s American first editions. Manis contributed these images to the Modernist Archives Publishing Project (MAPP), an international collaboration between faculty at universities in the United States, Canada, and the United Kingdom. MAPP is creating a critical digital archive of early twentieth-century publishers, beginning with Leonard and Virginia.

“Hands-on learning with primary texts has been one of the most important elements of my own research and of my teaching,” Manis says. “Primary source work, at all levels of education and for all majors and specialties, grounds your engagement with something in its material reality.”

Trevor James Bond (’17 PhD History) is associate dean for digital initiatives and special collections at WSU Libraries.
Seattle photographer Irwin Nash (pictured above) had a knack for shooting portraits. You can see it in the eyes and demeanor of the Yakima Valley migrant farmworkers who gazed into his lens 50 years ago.

The long-forgotten photos bring to life Latino families who once cut field asparagus, prepared meals, or celebrated a teen girl’s quinceañera.

Nash documented many of these activities at the Ahtanum and Crewport migrant labor camps in the Yakima area from 1967 to 1976. He often traveled with the migrant community and followed them during their turbulent struggles to obtain fair pay and other farmworker rights.

In a 2021 interview, Nash said he chose these types of projects because he “wanted to call attention to the plight of a segment of the population that has never received the recognition and compensation merited by their contribution to our society.” His collection—319 rolls of 35mm film—was purchased in 1991 by Washington State University and housed in its Manuscripts, Archives, and Special Collections. Only the barest of information and history was provided with the photos.

Nearly 30 years later, as part of a larger project to digitize Depression era newspaper clippings, librarian Lipi Turner-Rahman decided to revive the Nash collection. At the Kimble Digitization Center in Terrell Library, she hired students to scan material and add descriptive metadata.

Last June, with the help of grant funding and donations, her team digitized the last of Nash’s 9,500 photos and posted them online. Now, they are asking for the public’s help to identify them.

“The Kimble Digitization Center is important because part of our charge as a land-grant university is to give all Washington residents access to library materials,” says Turner-Rahman. “Not everyone can drive to Pullman or visit during open hours. “I feel that digitizing these photos allows greater access for the people in the photos and it’s important that they are the ones who actually see it. Having it online should make it easier for them to encounter photographs of themselves, their parents, and grandparents. It provides an affirmation of who they are and validates their lives and community.”

The difficult part is collecting the identities and stories that go with the photos. To that end, Turner-Rahman created the Nash Photo Collection Facebook group where the public can comment and share memories and thoughts.

“We want to add information in a respectful way, to let their community do the storytelling,” she says. “The database we are creating will also be useful for scholars and genealogists.”

Many of the people in these photos have been identified but hundreds more remain unknown. The public is invited to share information through Facebook or by contacting Lipi Turner-Rahman directly via email ilipi@wsu.edu, phone at 509-335-4849, or letter.

View the photos: magazine.wsu.edu/extra/nash-photos

Wallis ’68 Civ. Eng. and Marilyn ’64 Speech and Hearing Sci. Kimble provided funding for the Kimble Digitization Center as well as the Wallis and Marilyn Kimble Northwest Historical Data Base.
Seanna Hewitt didn’t always care for pears. The ones she picked up at the supermarket were often unpredictable, overripe, or hard as a rock.

But as a doctoral student interested in food sustainability, Hewitt (19 PhD Molecular Plant Sci.) was reacquainted with the fruit and joined the Washington State University Genomics Lab in pursuit of a more perfect pear.

When Amit Dhingra, now a professor and head of the department of horticulture at Texas A&M and adjunct professor at WSU, launched the lab about 15 years ago, he recalls how many researchers were trying to solve the pear ripening problem through the lens of applies.

“Initially, pears weren’t even on my radar,” he says. “A farmer, Chuck Peters, reached out to me and said, ‘I hope you’ll work on pears.’”

As Dhingra met with growers across the country, he heard a similar sentiment about the need for new knowledge and tools for the pear industry. In turn, the lab set out to sequence the pear genome and explore the inner workings of fruit.

Pears don’t typically ripen on the tree. Instead, they spend time in cold storage which kickstarts the production of a ripening molecule: ethylene.

People who put unripe fruit in a brown paper bag also take advantage of this molecule. The ethylene released from the fruit gets concentrated in the bag and speeds up the ripening process.

In packing houses, pears are often treated with ethylene after their cold spell. But in recent years Dhingra, Hewitt, and fellow WSU researchers have discovered there’s more to it than just ethylene.

When Hewitt joined the lab in 2014, she began to investigate the molecules and molecular pathways that might promote ripening, specifically in D’Anjou pears. Along with Bartlett and Bosc, D’Anjous are among the top varieties grown in the Pacific Northwest.

The compounds and molecular pathways she identified, along with those identified by her predecessors in the lab, hold potential as targets the industry could use for regulation—turning genes on and off to improve the fruit’s quality—and fine-tune ripening.

For instance, producers who treat pears with a compound called 1-MCP—which slows or in some cases completely blocks ripening at harvest, could ship the fruit to its destination. Then they could apply a compound like glyoxylic acid, which can overcome 1-MCP, and restart ripening as needed.

“If we can solve the ripening problem in pears, we can do it in almost any fruit,” Hewitt says.

Understanding these nuances at the molecular level could help improve food sustainability, reduce food waste from consumers, and even prevent losses that often occur before harvest.

The discoveries also bring new ideas to Washington state’s $250 million pear industry. Fresh sliced pears, for instance:

“That’s the ticket,” Dhingra says. “If you slice it and sell it, a ten-cent pear is now worth a dollar and ten cents. There’s so much margin to be made in the industry.”

In partnership with the WSU School of Biological Systems Engineering and with funding from the Washington State Department of Agriculture, the lab is now developing packaging that’s just right for fresh sliced pears and the ripening research continues.

Meanwhile, Hewitt is now working as a scientist in the horticulture industry and sees the fruit in a different light—full of potential and promise, in many ways, thanks to basic research inspired by growers. As she puts it, “There’s still hope for the pear.”

— Rachael Webber Holm
Cranberries

BY ADRIANA JANOVICH

CRIMSON-COLORED CRANBERRIES offer a pleasing pop of color and tart, tangy taste to the holiday table. Aside from the traditional turkey, these inherently festive fruits might just be the most iconic Thanksgiving ingredient. They are, after all, more American than apple pie.

Centuries before European explorers arrived in North America, Native peoples were consuming wild cranberries, combining the crushed fruit with tallow and deer and other meats to make pemmican. Colonists called them “cranberries” for the resemblance their blooms have to the head of a sandhill crane. Eventually, “cranberries” became cranberries—and a colonial staple.

“They are excellent against the Scurvy,” John Josselyn wrote in his 1672 New England’s Rantines Discovered in Birds, Beasts, Fishes, Serpents, and Plants of That Country. “They are also good to alay the fervour of hot Diseaseth.” And, he noted, “The Indians and English use them much, stewing them with sugar for Sauce to eat with their Meat: and it is a delicate Sauce, especially for roasted Mutton; Some make tarts with them as with Goose Berries.”

October, the height of harvest, is National Cranberry Month, but perhaps it should be November. According to the Agricultural Marketing Resource Center, Americans consume nearly 400 million pounds of cranberries per year. Twenty percent, about 80 million pounds, occur during the week of Thanksgiving, celebrated for the first time 400 years ago.

Large American cranberries (Vaccinium macrocarpon) may or may not have been on the table. If they were, they most likely weren’t in the form of sweetened sauce. In November 1621, Pilgrims were still relatively new to cranberries and essentially weren’t in the form of sauce. In fact, an overwhelming majority—95 percent—of cranberries are processed, mostly for juice but also for dried fruit and canned sauce. Just 5 percent of cranberries grown in the United States are sold fresh. Fun fact: the fresh ones float. And bounce. That’s because of four tiny air pockets inside the fruit. Technically, they are epigynous, or false, berries.

Marketed as “America’s original superfruit,” cranberries, close cousins of blueberries, are low in sugar and high in acidity. They’re also rich in antioxidants and vitamin C. And they’re good sources of A, K, E, and B-complex vitamins. Research has linked their nutrients to prevention of certain cancers as well as decreased blood pressure, improved immune function, enhanced oral health, and reduced urinary tract infection. Plus, they store well, lasting about a month in the fridge and year in the freezer.

WASHINGTON STATE MAGAZINE WINTER 2021

WASHINGTON STATE'S INDUSTRY, concentrated along the “Craberry” in Grays Harbor and Pacific Counties, experienced slow growth between the late 1800s and early twentieth century. The fruit is finicky. Cranberries are difficult to grow in the early 1920s, Washington State College sent plant pathology student Daniel James “DJ” Crowley to Long Beach to investigate the pests, weeds, and diseases affecting cranberry crops. He returned in 1923, establishing the Cranberry Research Station and serving as its superintendent for three decades. Early on, he proposed using overhead sprinklers to protect vines from frost, a practice growers were initially slow to adopt but is still widely used.

The Pacific Coast Cranberry Research Foundation (PCCRF) purchased the station and 40 acres of land in the early 1980s, running the Cranberry Museum on the site. Another Cranberry Museum in Grayland explores the history of the Furfed Picker/Pruner, which revolutionized harvest when it was invented in 1957 by picking berries while simultaneously pruning vines.

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**World of difference**

BY RJ WOLCOTT

Ethridge, a former University of Texas standout and Olympic gold medalist, has shown steady progress year-over-year since arriving in Pullman in 2018. The success of Ethridge’s teams has elevated WSU’s standing among top prospects, netting exceptional new players who join a roster of improving players.

Several of these players, including freshman Tara Wallack, spent their summers excelling in international play in preparation for the 2021–22 season.

Wallack, the lone freshman on this year’s roster, is the newest international player to join WSU since Ethridge took charge. Her high school playing days in Canada included back-to-back British Columbia Provincial Championships in 2019 and 2020. During provincial play, Wallack averaged 26 points and 15 rebounds per game.

WSU also added Australian guard Tayah Burrows and Arizona State transfer Keeli Burton-Oliver during the offseason.

Burrows spent last season playing for the Perth Lynx in Australia’s National Basketball League where she shot 36.8 percent from the floor and dished out nearly two assists per game. She was named the team’s Youth Player of the Year for her efforts.

Burton-Oliver, a Seattle native, was a successful forward at Eastlake High School in Sammamish. Twice named Washington Class 4A player of the year, Burton-Oliver was the twelfth-best ranked player at forward in ESPN’s 2020 class.

In addition to last season’s successes on the court, WSU’s women’s basketball team earned its highest ever cumulative grade point average with 3.62. It was enough to earn the team’s first ever Top 25 Team Honor Roll recognition from the Women’s Basketball Coaches Association.

“This top 20 academic achievement tops off a remarkable, and groundbreaking, 2020–21 season for WSU women’s basketball,” Ethridge says. “This team is setting a standard of excellence on the court and in the classroom. Being selected to the WBCA Academic Top 25 Team Honor Roll is a reflection on how much pride and determination our student-athletes have each day, as they seek to maximize the special opportunity of succeeding as student-athletes.”

“Get used to this program being in the Top 25!”

** THEY GATHERED FROM AROUND THE WORLD AND MADE A MARK ON COUGAR BASKETBALL. **

Reputed by Charlize Leger-Walker, a breakout star who earned Pac-12 Freshman of the Year honors, the women’s basketball team from Washington State University earned their first NCAA Tournament invite in 30 years to cap off a tremendous 2020–21 campaign.

The Leger-Walker sisters from New Zealand, Charlisse and Krystal, are among several international talents—from Canada and Turkey to Rwanda and Israel—who form the core of a Cougar lineup poised to capitalize on the program’s momentum during the upcoming 2021–22 season.

The Cougs upcoming season will kick off at the Bahamas Hoops Pink Flamingo Championship in Nassau. The Bahamas, on November 25–27 this event is the largest early-season event in college hoops. WSU will play the University of Miami (Florida) the first day of the event and will face on perennial contender North Carolina State on November 27.

The team’s 12–12 2020–21 record in the Pac-12 kept the team near the top of the standings with eighth-seed Stanford. But unlike the prior three decades, it wasn’t the end of the Cougs’ season. The team earned its first NCAA Tournament berth since 1991 as a ninth seed, facing off against eighth-seed South Florida in the first round. Heading into the fourth quarter tied at 45, WSU came up just short, falling 53–51.

Charlisse led the Cougs in scoring for the twenty-second time that season with 18 points, with Johanna Teder, a sophomore guard from Estonia, contributing 16 points of her own.

“Loved our fight and loved our spirit. I’m just what we have been all year,” head coach Kamie Ethridge said after the game.

“We had a great third quarter to put us in a position to be in another close game against a high-quality opponent.

“I think in every sense of the word, we gave ourselves a chance to win a close game. They made a couple of more game-winning plays than us and we didn’t make enough shots tonight to get us a win, but I’m very proud of our team.”

At Washington State University, athletes share a common goal: to make WSU a beacon of excellence in the Pacific Northwest and beyond. The WSU women’s basketball team exemplifies this dedication.

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Plastic is a big word. It encompasses a dizzying array of material throughout the world, as anyone can attest, from yogurt containers and car parts to hard lawn chairs and flimsy grocery sacks all around us.

That also means a giant amount of waste products, from a floating island of plastic trash in the north Pacific to stacks of plastic waiting to be recycled or just crammed into landfills. While many of us might see a nearly insurmountable problem, Hongfei Lin also sees a vast, untapped resource.
Lin, associate professor of chemical engineering at Washington State University, and his research team are working on a plastic recycling solution that bypasses tedious and inefficient physical sorting and sequentially breaks down different types of plastics using chemical means. They’ve already had success with producing jet fuel and high-quality industrial lubricants from plastic waste such as milk bottles.

Meanwhile, other WSU scientists are studying how tiny plastic particles move through wastewater treatment systems, what effects those plastics have on soil health (and how much is even in soil), impacts of the global plastic waste trade, and ways to reduce agricultural use of traditional plastics by replacing them with soil-biodegradable options.

Plastic waste is a problem with a lot of angles. Each researcher approaches that conundrum in a different way, but all with the goal of a more sustainable world with less plastic making its way into the environment. Lin, for example, wants to see recycling scale up quickly, since only 9 percent of plastic is recycled now. It could lead to a more circular economy where used plastic becomes an asset.

“Plastic wastes are a huge reserve,” Lin says. “If you don’t consider it a waste, it becomes a useful resource for many years.”

David Attenborough, a 94-year-old documentarian and natural historian, sums up the idea in his 2020 memoir, *A Life on Our Planet*:

> “By changing our approach to the use of our resources, a growing number of people believe that humanity could eradicate waste and come to mimic nature’s cyclical approach.”

FROM BOTTLES TO JET FUEL

Plastics didn’t start out as a problem. It was a wonderful material that was cheap and easily shaped into any number of items. Its first iteration, as celluloid, actually came from a desire to replace rare animal materials such as mother-of-pearl, ivory, and horn. The first fully synthetic plastic, Bakelite, was invented in 1907 and marketed for its insulating capabilities in a rapidly electrifying society. Following that breakthrough, the word “plastic” became a catch-all term for synthetic polymers—long chains of carbon atoms in repeating units constructed primarily of fossil fuel-based chemicals.

Because the polymers were strong, lightweight, and flexible, manufacturers quickly started identifying polymers for new forms and marketed for its insulating capabilities in a rapidly electrifying society. Following that breakthrough, the word “plastic” became a catch-all term for synthetic polymers—long chains of carbon atoms in repeating units constructed primarily of fossil fuel-based chemicals.

The need for materials in World War II led to a rapid, 300 percent explosion of plastic production. Plastic pipes for airplane fuel, plastic lenses for goggles, plastic film for ship sails, and plastic bags to combine during a peace treaty are just a few examples of early plastic applications. Even when plastics are separated mechanically and processed, the resulting material isn’t great. Disposible water bottles, for example, are shredded, heated, and then extruded to fibers for other applications. Those processes tend to change the properties of the plastics, Lin says. After a water bottle is recycled and goes through the mechanical process, it degrades the material and it won’t be suitable for that application again. This is called downcycling.

A typical mechanical recycling process also can’t bring together two types of commingled plastic and make a new plastic. The different polymer composition, for example, of a water bottle and a milk jug, prevents meltng them together and turning the result into a useful material. They are not compatible.

“To address this, there’s an alternative approach in chemical processing,” Lin says. “We break the plastics down to monomers and then use the monomers as a building block. This is almost the same as producing plastics from petroleum.”

The plastic types have different chemical bonds. Lin’s research is identifying specific catalysts that will break the bonds of a plastic type, without affecting the other types. The need for physical sorting while recycling a wide range of plastics.

“Our idea is to convert a mixture of plastics sequentially,” Lin says. “This really depends on the catalysis, and if you can design a highly selective catalyst for every step of the process.”

Lin and his fellow researchers in the Gene and Linda Voiland School of Chemical Engineering and Bioengineering, including former postdoctoral researcher Shaopeng Xie and Chuhua Jia (‘21 PhD Chem. Eng.), have already proven the concept with the multilayer plastic films that are composed of polyethylene terephthalate (PET), common number one plastics such as water bottles.

Using a specific catalyst, they converted 90 percent of the polyethylene into jet fuel and lubricants in an hour at a moderate temperature.

The researchers used ruthenium (a “noble” metal in the platinum group) on carbon as the catalyst and a commonly used solvent. The conversion took place at a temperature of 220 degrees Celsius, which is more efficient and much lower than 500–600 degrees Celsius that would be used in pyrolysis.

Changing parameters such as temperature, pressure, and solvents can produce different products, Lin says.

“Once we deconstruct number one plastics, we’ll send the residue to the next stage and convert nylon and then to convert polyethylene in the final stage. We can gather useful products from each conversion unit and eventually could utilize all these waste plastics,” he says.

As the team works on applying the chemical process, they’ll also study the fundamentals for the specialized catalysis. For example, Lin wants to ensure that ruthenium and other key catalysts remain stable to the next stage and convert nylon and then to convert polyethylene in the final stage. We can gather useful products from each conversion unit and eventually could utilize all these waste plastics,” he says.

As the team works on applying the chemical process, they’ll also study the fundamentals for the specialized catalysis. For example, Lin wants to ensure that ruthenium and other key catalysts remain stable for a long time, after many uses. He also wants to improve the technology that gets into the world. “My passion is to grow and develop the technology in the lab, so it will mature and then commercialize,” Lin says. “It’s a pressing need and, if it’s cost-competitive, we reduce the use of more fossil fuels and help mitigate CO2 emissions.”

Lin and his WSU team collaborated with researchers from the University of Washington and Pacific Northwest National Laboratory, with support from the Washington Research Foundation and the National Science Foundation, on the catalytic approach to plastic recycling.

Lin says another purpose of his work is training a workforce for industries and research. “It’s not just products, but people. Renewing resources in a circular economy is the future.”

WHAT’S IN THE WATER AND SOIL?

Recycling plastic scrap can lead to a more sustainable world, but it’s clear that plastics are already widespread in the environment. WSU researchers Indrash Ghosh and Markus Flury investigated just how plastic particles move through water and soil, and how much plastic is actually in soil.

There is a lot of research going on about plastics in the ocean,” says Flury, a soil sciences professor working out of the WSU Puyallup Research and Extension Center. “We have a fairly good idea how much plastic is in the oceans and that we need to really address that issue. However, we don’t really know how much plastic is in the soils.”

Flury explains that plastic is more difficult to analyze in soil. Since plastic is carbon-based, it is hard to separate plastic from natural, carbon-based organic matter that’s already in the soil. He suspects the same widespread problem of plastic micro- and nano-particles exists in soil as in water, so Flury and others are looking at methods to analyze and quantify the plastic in terrestrial settings.

One way is to try to remove natural organic matter. The plastics would remain and can be filtered to identify what type of plastic it is, such as polyethylene, polypropylene, or polycarbonate.

“You can try to identify the type of plastics and then also see where it ultimately came from,” Flury says. “Polyester fibers are likely from clothing, dissolved during washing in your washing machine. That goes into the wastewater treatment plant and then into the biosolids that spread onto the soil.

Many plastics from wastewater treatment end up on soil, especially for agricultural use. They generally have positive effects, Flury says, particularly if applied to drier areas in eastern Washington, but questions remain about plastics in those biosolids.

Flury’s investigations into plastics in soil connect to Chowdhury’s research on plastic in wastewater and drinking water. An assistant professor of civil and environmental engineering in the Voinland College of Engineering and Architecture, Chowdhury has found some of the mechanisms that allow tiny pieces of plastic bags and foam packaging at the nanoscale to move through a wastewater and drinking water environment.

Lin notes that people throw almost everything in the recycling bin, even items that won’t be recyclable, and that’s especially true for plastics. They decompose very slowly in natural environments, which is why recycling is a preferred option.

“Waste plastics are a huge reserve,” Lin says. “If you don’t consider it a waste, it becomes a useful resource for many years.”

“Waste plastics are a huge reserve,” Lin says. “If you don’t consider it a waste, it becomes a useful resource for many years.”
Silica surfaces, such as sand, are often used as part of drinking water filtration. Chowdhury and his research team found that silica has little effect on slowing down the movement of plastics.

Natural organic matter in water resulting from decomposition of plant and animal remains, on the other hand, can either temper or permanently trap the nanoscale polyethylene particles. Polyethylene is often found in packaging materials and disposable food containers.

"We have seen these plastics escaping into our drinking water, and our current drinking water system is not adequate enough to remove these micro and nanoscale plastics," says Lin. "A 2013 study found that people consume about the amount of plastic in a credit card each week. The health effects of plastic ingestion are still mostly unknown."

Hury says the impact of plastics on soil and plants is similarly mysterious.

"The impact as bad as in the ocean or do soils have more resilience toward plastic pollution? Does the plastic hinder plant growth?" Hury asks.

"At the moment, we don’t see that because the biodegradable probably overwhelm the negative effect of the plastic in terms of plant growth," he says. "But microplastics could potentially be taken up by plants. To have an effect, though, would require pretty high concentrations of plastic."

Hury notes that plastic itself is inert and not really toxic, unlike many pesticides with toxic effects. Plastics, however, can absorb chemicals on their surface. Moreover, plastics often have additives, such as dyes or plasticizers to make them more malleable.

Some of these additives have been revealed as toxic, including bisphenol A (BPA). Pat Hunt, Meyer Distinguished Professor in the WSU School of Molecular Biosciences, has published several high-profile findings that BPA disrupts hormonal processes and causes genetic abnormalities. Many companies changed plastic products and removed BPA from their composition. There are still many questions to answer about plastics in soil and plants. "We are really working on whether plastic particles can potentially be taken up by plants," Hury says. "We have also done some work with earthworms, to see whether they are affected by plastics if they eat them."

**TO MULCH PLASTIC**

Plastics have a key role both conventional and organic agriculture, so Flury’s investigations often intersect with horticulturist Carol Miles’s work on biodegradable plastic mulch.

"The hypothesis was, you know, that the bioplastics would potentially impact soil health and microorganisms," Flury says. "We have not found any evidence for that at the moment. Biodegradable plastics seem to perform fairly well, and do not seem to have any negative impacts on soil health as far as we can detect or measure."

**THE PLASTIC CIRCLE**

Tilling useful plastic mulch back into the soil, where it will safely degrade after providing benefits to crops. Breaking down plastic waste into valuable products, which will lower the amount of fossil fuels extracted. The circular economy can take us past a throwaway model to a more sustainable way of viewing a material like plastic.

"I’m very enthusiastic that we can develop technology and make contributions toward a sustainable society. It makes my work feel valuable," Lin says.

"Everyone should play a part though, Flury says. “The solution to the plastic problem is multifaceted. One of them, for instance, is recycling. Another one is to reduce the use of plastics in the first place. We also need to reuse. Instead of a single use plastic bag, you have a multiple use plastic bag," he says.

"The change in mentality could make the biggest difference. Rather than plastic waste, we could have plastic scrap, upcycled into something new and useful or just turned back into the soil where it won’t harm the plant."
He was rejected and waitlisted, then waitlisted again. When it came down to it, FA’AMOMOI “MOI” MASANIAI III didn’t have the money to attend law school. But that didn’t stop him from pursuing his dreams of becoming a lawyer and ultimately a judge. “I knew what I wanted to do. I just didn’t have the means to do it,” says Masaniai (’92 Crim. Jus.), who’s believed to be the first person of Samoan heritage to serve on the bench of a Washington state court. He’s also believed to be the first graduate of Washington’s Law Clerk Program to be appointed to the bench. “It’s huge for my culture,” he says. “It’s huge for Polynesian people. It’s huge for us from White Center.”

The Metropolitan King County Council unanimously selected Masaniai to fill a vacancy on the bench in King County District Court in early 2021, nearly three decades after he had been inspired by something his dad said. He was posing for photos in his cap and gown at his Washington State University graduation. “My dad said, ‘Hey son, you look like a judge in that robe,’” recalls Masaniai, who, at that point, wanted to be a police officer like his uncle. Twelve years later, he passed the bar exam, qualifying to sit for it by completing a four-year program informally known as “Rule 6.” Authorized by the Washington Supreme Courts Admission and Practice Rule 6 and oversen by the Washington State Bar Association and Law Clerk Board, the Law Clerk Program allows aspiring attorneys to work and study with an experienced lawyer or judge instead of going to law school.

Masaniai had grown up “in the poorer parts” of San Francisco and Seattle, moving to Washington state in 1984 when he was 14. He played football at Evergreen High School and WSU, walking on to the Cougar football team his junior year. When he did go to class, he says, “I always sat in the back. I always came late, and I always left early.” By fall of senior year, his grades slipped to their lowest point: under a 1.0. Graduation took five years. He had to quit football to pull it off, but he was able to bring his grades up. He credits his coaches and a tough criminal justice professor for helping him buckle down. He needed her class, which he had previously dropped, to graduate. On the first day of his second attempt, in front of a full house in the Todd Hall auditorium, she singled him out. “She said, ‘I think you can do better,’” he recalls. “She said, ‘You will come to class. You will take all the tests. You will take all the quizzes.’” She pushed me, and I responded. I don’t remember her name, but if she’s still alive I want to thank her.”

He got an A in that class and spent the following summer training for the police academy. During physical fitness testing, he blew out a knee. The injury ended his police dream. Within a month, he was working aboard a fishing boat in Dutch Harbor. “That taught me what I didn’t want to do with my life,” says Masaniai, who went on to work a series of odd jobs while pursuing a career in criminal justice.

He had applied for “five or six” positions but wasn’t landing interviews. To get his foot in the door, he started volunteering at Tukwila Municipal Court. He remembers asking a bailiff in an otherwise empty courtroom if he could sit in the judge’s chair. “I sat in it, and thought, ‘This is where I want to be one day.’” Masaniai worked his way up from part-time volunteer to full-time court clerk. “I would ask the judge I would clerk for: ‘Why
Shaken but still stirring

By Adriana Jandovich

Blake (Loos) Preston ('14 Wine Busi. Mgmt.) never intended to run a restaurant.

She broke into the hospitality business as a bartender, working night shifts during college, and ended up falling in love with the job and her future husband. Cory Preston was a regular who would drop by after his own shifts. In 2015, a year before they wed, the couple opened their first establishment. Etsi Bravo is Pullman’s premier nightclub and lounge, popular with Washington State University alumni as well as current students, faculty, and staff. It quickly became known as a local business. Etsi Bravo is Pullman’s premier nightclub and lounge, popular with Washington State University alumni as well as current students, faculty, and staff. It quickly became known as a local business.

In 2020, things worsened when online sales of house-made, nonalcoholic mixers and discount gift cards helped the Prestons, then parents of a newborn daughter, get through spring 2020. Their first child, Cameron, was born about two months before the pandemic. "The silver lining is getting to spend more time with her," says Blake, who transferred to WSU her senior year. Her daughter, John Loos (’85 Ag.), encouraged her to become a Cruig.

In summer 2020, things worsened when restrictions loosened and people started going back to restaurants. Etsi Bravo, operating under a nightclub license, wasn’t eligible for reopening. With online sales dropping, the Prestons worked out another pandemic plan for reopening. With online sales dropping, the Prestons worked out another pandemic plan for reopening.

The Prestons partnered with Etsi Bravo patron and former WSU student Raminet Memon on both. CyrusBale Café, a coffee shop and bar on the first level of Adams Mall, opened in August, the same month the Prestons’ second child, a boy named Oliver, was born. Memon and the Prestons are also slated to open a restaurant and night club in autumn in the basement of Adams Mall.

Pandemic or no pandemic, downtown or on College Hill, Blake says, "We always want to provide a safe and fun place for everyone."
They wave the Washington State University flag wherever they go. And they go a lot of places, places where their favorite condition can be difficult to find.

Since 2016, the Tri-Cities couple behind Open Door Travelers have waved the flag on all seven continents, documenting their journeys on social media and their blog, posting reviews as correspondents for an itinerary-building website, and acting as unofficial ambassadors for WSU.

“We really enjoy waving the flag and having that Cougar connection,” says Phil. “I think one of the best flag waves we’ve done was at Victoria Falls, in Devil’s Pool on the Zimbabwe side,” Diane says. “The water’s going over the falls, but there’s a natural pool you can swim and hang out in. It was an epic flag wave.”

The COVID-19 pandemic cut short their 2020 travel plans. The Ohls, who are often away for a month or two at a time, had planned to cruise the Danube and Volga Rivers and make their first trip to Cuba. Their next big trip is slated for January 2022 when they plan to take their children, Tate Ohl (18 Bus., History) and Jamie Ohl Turner (16 Bus.), and son-in-law Chris Turner (13 Elec. Eng.), to South Africa.

“Cuba’s still high on our bucket list—rolling your own cigars, diving,” Phil says. “So are India, Russia, and Greenland.”

They’re often asked to name their favorite place but agree it’s impossible to pick. They particularly enjoyed San Sebastian, Spain, though. And the most remote location they have visited was “probably the Faroe Islands. It felt even more remote than Antarctica,” Phil says. No matter where they travel, the Ohls always find their way back home. Both are platinum level members of the WSU Alumni Association, and Phil is a member of the WSU Tri-Cities Advisory Council. He formerly served on the Department of Mechanical and Materials Engineering Advisory Committee at WSU Pullman.

“We haven’t found a continent where we haven’t found a Coug,” Phil says. “We run into Huskies around the world, too—particularly when we wave our flag.”

Looking back on a fast forward

BY DANIEL P. SMITH

On May 7, 2011, at age 16, Kayla Heard made history as Washington State University’s youngest-ever graduate. A decade later, she reflects on her unconventional journey and discusses her post-WSU life.

Heard (’11 Soc. Sci.) displayed an early aptitude for learning. She identified letters at seven months, read flash cards at 18 months, and recited the names of presidents by age 3. She earned her high school diploma at 10 and her associate’s degree at 14, all remotely.

“My mother is from the Philippines, a culture that highly values youth education, and she applied remote learning to increase the velocity of my education.”

Heard applied to Washington State given the university’s pioneering work in remote education. From her so-called “nerd cave”-the bedrooms of her Union, Washington, home that was packed with journals and books as well as books like The Jungle and volumes on ancient Roman mythology—the history major explored tales of the past and studied how humans achieved great things with a mix of self-reliance and mental fortitude. She applied those qualities herself in the then-rather primitive world of remote learning, where assigned readings, weekly assignments, and online discussions paled in comparison to the snazzy virtual classrooms of today. “I had to create my own structure, check my assumptions, and break down seemingly larger-than-life goals into manageable pieces.”

Though ready to charge into the workforce, Heard found employers reluctant to hire a 16-year-old. Resourceful and pragmatic, she enrolled in an online MBA program before securing—quite intentionally—a job as a medical office coordinator. “I real- ized my upbringing led to a different level of social development than my peers, so I wanted to build strength and capacity in social interactions.”

In 2014, Heard landed a call center position with Zonar Systems, a Seattle-based firm that provides smart fleet management solutions. She later moved into quality assurance testing and product management. “I fell in love with tech and its ability to inject value into the world.”

Today, the 26-year-old, who earned a second degree and is gaining in cybersecurity, designs user interfaces for Zonar software. She performs user-experience (UX) research on market environment, design patterns, pain points, and more to ensure Zonar customers enjoy a positive, seamless experience. “I talk to people around the world about their needs and problems and learn about where technology is headed, which is all incredibly exciting.”

Though dealing with twenty-first century technology, Heard sees an undeniable link to her WSU history studies. “Everyday as a UX researcher, I’m trying to see the world through others’ eyes. That’s emotional intelligence. I began to develop during my Washington State studies, where I started to understand the many variations of norm and had my eyes opened to different possibilities.”

Making waves around the world

BY ADRIANA JANOVICH

Phil and Diane Ohl’s travel tips: magazine.wsu.edu/extra/ohl-travel

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Psychiana Man: A Mail-Order Prophet, His Cult, and the Power of Belief in Hard Times

BRANDON R. SCHRAND

WSU PRESS: 2021

This is the true and bizarre story of a largely unknown, mail-based, self-help, American religion with “a money-back guarantee” and the charismatic, publicity-craving confidence man who established it in, of all places, Moscow, Idaho.

Frank B. Robinson was a drunk and a vagabond who couldn’t seem to hold down a job until he invented one. He didn’t graduate from college but he called himself a doctor. He certainly wasn’t a psychologist, but he called himself Robinson. His own writings were a rich source of evidence that he was facing deportation.

Born in England, in 1886, Robinson traveled to Canada with one of his three younger brothers, given up by his father and new stepmother. He worked across Canada before taking a train to Portland, Oregon, where he signed up for the US Navy, claiming to have been born in New York. He was soon discharged for drinking and for being, as records described him, “unsuitable to his character.”

He spent years roaming the Pacific Northwest, getting and losing jobs. The prospector’s dream and evading rescue. She survives on cattails, birds and climbs too high. She was only trying to get a glimpse of a nest in a tree. But Mama aims to ground her, forbidding Aggie from carrying her own anger and pain. She meets Burnably, Aggie’sastic older brother who milks cows and hunts for bears, and develops a crush on Cabot, a 12-year-old hobo boy.

While remaining out of sight, sleeping in trees, and tending to her physical and emotional wounds, Aggie discovers a sinister plot to hurt her family. But, to try to change the course of events, she must learn to trust, reveal herself, and face the truth.

A retired civil litigation lawyer in southern California, Cohoon and his wife Rosanna Jane Cohoon (78 Ricks) have a daughter who, like Terrey and Matthew, went to Stanford, and a son who, also like Terrey and Matthew, practices medicine in SoCal.

This tension-filled sequel combines medicine and malpractice with motifs of greed, fraud, sexism, and more. Cohoon’s writing demonstrates understanding of the medical profession, particularly the brutal, 8-hour work weeks of residents, and sets the scene for another volume in his Medical Students series.

—Adriana Janovich

Sugar Birds

CHERYL GREY ROSTROM ’80 MA ENGLISH

SHE WRITES PRESS: 2021

Aggie “Aggie” Hayes is a spirited and out-of-the-box 10-year-old who ditches school and climbs too high. She was only trying to get a glimpse of a nest in a tree. But Mama aims to ground her, forbidding Aggie from carrying her own anger and pain. She meets Burnably, Aggie’sastic older brother who milks cows and hunts for bears, and develops a crush on Cabot, a 12-year-old hobo boy.

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—Adriana Janovich

Bad Medicine

JAMES B. COHÖ NON ’76 BIDL

TOUCHPOINT PRESS: 2021

James Cohoon is back with another contem- porary medical thriller starring the two main characters from his first novel. Even tempered Terrey Jamison, now newlywed and living in San Diego, are serving as medical residents in San Diego when someone from their past comes back with a plea.

Suddenly, they’re in the thick of a dan- gerous adventure, this time aimed at righting the wrongs of the past. Terrey and her husband need to convince their suspicion: a local doctor is blaming desolate and vulnerable families of hundreds of thousands of dollars, promising a cure-for their children’s brain cancer.

The collection was renamed by the tribe. After it was finally secured, the Spalding-Allen Collection to Oberlin College in Ohio, along with Spalding’s letter that established its prov- enance. It remained there until 1942, when Oberlin College loaned the collection indefi- nitely to the Ohio Historical Society (OHS). The collection languished in storage until inquiries in 1970. But Oberlin College faculty couldn’t find it. After identification in the mid-1970s, the OHS agreed to loan the collection to the National Park Service for display at the Nez Perce National Historical Park.

In 1991, the OHS suddenly recalled the collection, valued at $680,100. The OHS agreed in 1996 to sell the collection to the Nez Perce Tribe for that amount but gave them only six months to raise the money. Considering the tribe’s resources, it was a daunting sum.

The ensuing fundraising campaign went global and raised the profile of the cause. Support came from schoolchildren’s bake sales and car washes, MTV public service announcements, and donations from grunge bands Pearl Jam, Soundgarden, and other mu- sicians. The 20,000,000 dollar deal donated to the final and the Nez Perce Tribe raised the amount with a day to spare.

Trevor James Bond, codirector of the Center for Digital Archival Research and an associate dean at WSU Libraries, tells this fascinating story through interviews with Nez Perce experts such as Nakia Williamson-Cloud, historical records, and media reports. As part of his research, Bond commissioned photographs of the collection, which are included in the book and emphasize the stunning details of the Nez Perce clothes, horse regalia, canoes, and the rest. Williamson-Cloud also recorded interpreta- tions of several items, available on the Plateau People Project.

In June 2021 ceremony, 25 years after it was finally secured, the Spalding-Allen Collection was acquired, traded, sold, and eventually owned. Spalding spoke against Native culture and demanded that the artifacts be repatriated. After their migratory life and settle as Christian farmers, all while gathering and bartering away their material items of native craft.

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The Summer edition of visiting alumni. Washington State University alumni. Mahsu.edu/join
Washington State Magazine is going exclusively to WSUAA members. Make sure you don’t miss out by visiting alumni.wsu.edu/join to become a member today.

Classnotes

Think of it as farm-to-table but for your home bar. Simple Goodness Sisters crafts specialty syrups for cocktails and mocktails using Washington-grown ingredients, including herbs and edible flowers cultivated by VENISE (DRLLEVICH) CUNNINGHAM (‘77 Busi.) has retired after serving 40 years as a volunteer firefighter with Adams County Fire District No. 5 in Othello. He remains secretary/treasurer of the district. MARC FOPHR (‘77 Busi.) has retired after serving 40 years as a volunteer firefighter with Adams County Fire District No. 5 in Othello. He remains secretary/treasurer of the district.

DAVID ELMS (‘81 Arch.) is associate archivist for ALSC, Archivists of Spokane. Elms has 40 years of library experience.

ADÉ ARIWOOLA (‘84 Busi.) is serving in his position as Federal Way finance director after 35 years in finance management. Previously, Ariwoola was finance director for the city of Elmhurst, financial services manager for King County, Chelan County chief accountant, and a financial officer for EPIC, a Yakima nonprofit organization.

RANDY COOK (‘86 Arch.) received the Vintages Leadership Award for the Seattle region. He is managing principal of the Tacoma-based TCF Architects. Vintages is a CEO coaching and peer advisory organization, and its annual award honors members who demonstrate leadership excellence and an impact on their business, the Vintage group, and community.

MELLISA HAMWOOD-ROM (‘89 MA Ag. Econ.) is interim vice chancellor for Student Affairs and supports the university in various roles since 1989.

ANDY DAY (‘91 History) is chair of the Washington Tourism Alliance board of directors. Day has been a member of the board since 2012 and was previously executive director of the Pacific County Tourism Bureau. Day also serves on Pacific County’s Lodging Tax Advisory Committee and the Marketing Advisory Board of WSU’s Carson College of Business.

TRACY OSTRIM (‘91 Busi.) is the chief development officer and president of the Swedish Medical Center Foundation. Previously, she was the associate dean for advancement for the College of Arts & Sciences at the University of Washington. ANGELA JONES (‘94 English) is director of the Bill and Melinda Gates Foundation’s Washington State Initiative, which provides support for early learning, education, and preventing family homelessness. Jones was previously the CEO of Washington STEM and has worked in education for more than 25 years.

CHRIS HOSFELD (‘96 Pal. Sci.) is an assistant professor at the US Army War College and a colonel in the US Army. He was awarded Excellence in Service and Excellence in Innovation for the 2020-21 academic year. JEFFREY ABBOTT (‘97 DVM, ‘94 PhD Vet. Sci.) is leading WSU’s Diagnostic Challenge, simulated case-based exercises in which students diagnose and treat animals as they might in the real world.

With a boost from a $50,000 USDA Value-Added Producer Grant, they recently started a cafe and subscription service. The Simple Goodness Soda Shop opened last October in the historical coal mining town of Wilkeson. The inaugural Cocktail Farm Club box mailed out in March with recipe cards, mixers, and more. Membership doubled between the first and second shipments. Top-selling flavors are rhubarb-vanilla bean, blueberry lavender, and berry sage. Other offerings are lemon herb, marionberry mint, and huckleberry spruce tip. The November subscription box features rhubarb vanilla bean and fig cardamom shrub.

The sisters also sell a floral-salt glass rimmer, floral salt glass rimmer, recipe cards, and three ebooks: Garden to Glass: Grow Your Own Cocktail Garden, The Drinks That Built Us, and The Classics. Garden to Glass is also available in hard copy.

Since launching their business nearly five years ago, the sisters have shipped their multisyrup syrups to “almost every single state” and have been spotlighted in narcotics magazine, King 5 TV’s Dining program, and Food Network’s FarmHER.

They’ve also hired their first two employees. Summer interns Meggie Dakan and Emily Dakan are Cousins—and sisters, too.

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BY ADRIANA JANOVICH
O’NEILL, board member for the Northwest Gifted and Talented Association in the real estate services sector and is a loan center. She has 23 years of experience in otorhinolaryngology.

 revoke the animal’s legal ownership.

 countries were able to participate in a safe virtual event.

 strategy. Wiley was digital director for KING 5 in Seattle, where she manages the

 Casino in Nevada.

 roles at the University of Idaho and then as a professor of history at WSU. The

 assistant director of the WSU Tri-Cities Department. Crossley previously worked as a reporter for KING TV. She

 the Manhattan Project that was nominated for a 2021 Daytime Emmy Award. He is

 with a focus on movies and music videos. The program was online again in

 back to in-person activities for summer 2021, but Evans plans to transition

 BEATTY, an assistant winemaker at Quilceda Creek Winery in Woodinville. Previously, he was

 Baynes played for the NBA’s Toronto Raptors, Phoenix Suns, Boston Celtics, Detroit Pistons, and San Antonio Spurs. He also played in the Slovenian basketball league in the interior Pacific Northwest, and he

 in the rise of complex hunter-gatherers in the Indonesian Upper Palaeolithic cave.

 I. WANG (’54 MS Agri.), 96, April 8, 2021, Republic.

 2021, Santa Fe, New Mexico.

 2021, Medina.

 2020, Kennewick.

 2018, Sherwood, Oregon.


 2016, Chesterfield, Virginia.

 2015, Philadelphia.


 2013, Jacksonville, Fla.

 2012, Madison.

 2011, Walla Walla.

 2010, Walla Walla.

 2009, Madison.


 2007, Seattle.

 2006, Walla Walla.

 2005, Portland.

 2004, Seattle.

 2003, Seattle.

 2002, Seattle.

 2001, Seattle.

 2000, Seattle.

 1999, Seattle.

 1998, Seattle.

 1997, Puyallup.


 1995, Seattle.

 1994, Seattle.

 1993, Puyallup.


 1988, 2021, Santa Fe.


 1979, 2021, Kirkland.


 1972, 2021, Kirkland.


 1968, 2021, Kirkland.


 1966, 2021, Kirkland.

 1965, 2021, Kirkland.

 1964, 2021, Kirkland.


 1962, 2021, Kirkland.


 1960, 2021, Kirkland.

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 1958, 2021, Kirkland.

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 1922, 2021, Kirkland.

 1921, 2021, Kirkland.

 1920, 2021, Kirkland.

 1919, 2021, Kirkland.

 1918, 2021, Kirkland.

 1917, 2021, Kirkland.

 1916, 2021, Kirkland.

 1915, 2021, Kirkland.

 1914, 2021, Kirkland.

 1913, 2021, Kirkland.

 1912, 2021, Kirkland.

 1911, 2021, Kirkland.

 1910, 2021, Kirkland.

 1909, 2021, Kirkland.

 1908, 2021, Kirkland.

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 1906, 2021, Kirkland.

 1905, 2021, Kirkland.

 1904, 2021, Kirkland.

 1903, 2021, Kirkland.

 1902, 2021, Kirkland.

 1901, 2021, Kirkland.

 1900, 2021, Kirkland.
in memoriam

JACK ROGERS was a longtime professor and mycologist for WSU's Department of Plant Pathology in the College of Agricultural, Human, and Natural Resource Sciences. A past president of the Mycological Society of America (MSA), he wrote or cowrote more than 230 scientific papers and two books. Among his accolades are the Wisconsin Alumni Research Foundation's R.M. Wade Award for Instruction, the MSA's Distinguished Mycologist Award (2004), the Library Excellence Award for Service to WSU Libraries (2005), and the WSU Sahlin Faculty Excellence Award for Research, Scholarship, and Pathology in the College of Agricultural, Human, and Natural Resource Sciences. For more than 30 years, he received funding from the National Science Foundation for his research, which, Carris says, “really laid the groundwork for the field of mycology.”

BY ADRIANA JANOVICH

PHOTO BRUCE ANDRE


Heinzelmann (’67 Speech & Hearing Sci., Pi Beta Phi), 76, June 30, 2021, Modesto, California. 

Hastings (’66 Busi.), 76, June 5, 2021, Richland. 


Gleed (’65 MA German), 75, July 11, 2021, Corvallis, Oregon. 

Carroll (’64 Comm.), 79, April 12, 2021, Ocean Park. 

Lindblad (’63, ’65 MBA Busi.), 81, October 21, 2020, Blackfoot, Idaho. 

Owens (’63 Econ.), 80, June 15, 2021, Olympia. 

Ristine (’62 DVM), 88, June 24, 2021, Lacey. 


Mason (’71 Geol.), 78, July 23, 2021, Pullman. 


McKinley (’71 Zool.), 82, October 31, 2020, Walla Walla. 

Swanson (’70 Ag. Econ., Alpha Gamma Rho), 74, July 4, 2021, Spokane. 


Nugent (’71, ’74 DVM), 85, November 16, 2020, Las Vegas, Nevada. 

Violette (’71, ’74 DVM), 80, July 5, 2021, Spokane. 

Ewing (’71 Fine Arts), 68, January 28, 2021, Richmond. 

Bell (’71 Geol.), 78, July 23, 2021, Pullman. 


Nowojski (’68 MA T Phys.), 85, October 26, 2020, Lake Forest, California. 

Bishop (’68 MA German), 81, July 26, 2021, Modesto, California. 

Weber (’71, ’74 DVM), 80, July 5, 2021, Spokane. 

Pearce (’71 Pharm.), 97, August 9, 2017, Hillsboro, Oregon. 


Larsen (’74 PhD Vet. Sci.), 69, November 25, 2020, Issaquah. 

Garrett (’74 Poli. Sc.), 64, August 21, 2020, Walla Walla. 

Bishop (’74 MA German), 75, September 21, 2021, Corvallis, Oregon. 

Brown (’71 Zool.), 78, June 14, 2021, Richland. 

Johnson (’71, ’74 DVM), 85, November 16, 2020, Las Vegas, Nevada. 

Ruhling (’71 PhD), 77, July 30, 2021, Pullman. 


Olson (’71 Crim. Jus.), 57, March 5, 2018, Bellevue. 

Davis (’71 Geol.), 78, July 23, 2021, Pullman. 


Martin (’71 Econ.), 69, August 2, 2021, Coeur d’Alene. 

McKenna (’71 Geol.), 69, August 2, 2021, Coeur d’Alene. 

Ashby (’71 MS Socio.), 66, July 15, 2021, Corvallis, Oregon. 

Hutchinson (’71 Econ.), 69, August 9, 2021, Spokane. 

Williams (’71 Fine Arts), 64, August 21, 2020, Walla Walla. 

O’Toole (’71 Fine Arts), 66, July 14, 2021, Richland. 

Wright (’71 Math.), 69, August 9, 2021, Spokane.

Park (’71 MS Edu.), 64, January 22, 2021, Corvallis, Oregon. 

Carroll (’71 MEd Couns.), 74, October 21, 2020, Wenatchee. 


Martin (’71 Econ.), 69, August 9, 2021, Spokane.


Johnson (’71 Econ.), 69, August 9, 2021, Spokane.


SOME REMNANTS ARE TINY, scarcely one by two centimeters. Even the biggest pieces aren’t that big, stretching some seventeen by eight centimeters.

They are treasures just the same. The Papyrus Collection at Washington State University Libraries in Pullman holds 26 fragments in Arabic, Coptic, and Greek—edges fraying, fibers showing, peppered with holes—dating from 332 BCE to 600 CE or possibly later.

Two are from a certain Ptolemaios. One is among the collection’s largest fragments and contains more lines of text than most of the other pieces.

“In this letter the sender . . . writes to his father Tryphon to inform him that a man named Galates is bringing a letter to him and that Galates then intends to meet with the strategus,” explains Lincoln H. Blumell, associate professor in the department of ancient scripture at Brigham Young University, in “A Second-Century AD Letter of Introduction in the Washington State University Collection.”

The strategus is an ancient Greek officer. Blumell theorizes “perhaps the request had something to do with Tryphon putting in a good word to the strategus on behalf of Galates. If such is the case, it could also be supposed that Tryphon is a person of some standing, since he had the ear of the strategus.”

“These rare antiquities were the media for the written word of their day,” says Gayle O’Hara, manuscripts librarian. “They are a vital part of the trajectory of human communication and provide rich context to our place in the world.”

FALLING FOR COMMUNITY COMMITMENT

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As a not-for-profit credit union that puts our members first, we continue the commitment of helping one another when it’s most needed.