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.

30

**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.

25

**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 2005, a typical 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 welcomed, honored, and respected our visitors, share our hearts, become friends, the Southern way, the Auburn Family way.

We drove down to Auburn, showed them around our campus and provided them club level seats, food and drinks, surrounded by welcoming and friendly Auburn Family folks.

After WSU beat UGA, I called Denny from the North Carolina Outer Banks, after the 2011 Auburn-Alabama Iron Bowl. “Kirk So” spic, 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. I gave my tickets to some Auburn grads. An Oregon grad 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 drinks, surrounded by welcoming and friendly Auburn Family folks.

We walked with them to the stadium.

Soon post game, I received a “thank you” note, some Cougar Gold cheese, a local Southern way, the Auburn Family way. We held hands, share our hearts, became friends, 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 E. Goldsworthy Jr. — 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 Aeronaautical 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 AF.

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 chemotherapy-modified calcium phosphate, with additives and natural medicinal compounds, which can improve biocompatibility. The corrected story is available at magazine.wsu.edu.

AN AMERICAN DREAM
Behnam Mozafari left Iran to become a police officer in the United States.

It wasn’t an easy path, but the Washington State University senior found success through the criminal justice program, internships, and research.

“I’m very excited about my career and how close I am to graduating,” Mozafari says. “It takes hard work, but WSU is there for you. There are ways to make your dream happen.”

MAGAZINE WINTER 2021
WASHINGTON STATE MAGAZINE WINTER 2021
from left: ROBERT W. SCHORR
’T 61 PHD AUBURN UNIVERSITY’
COLONEL, USAF/US SPECIAL OPERATIONS COMMAND (RETIRED)
ACWORTH, GEORGIA

KAEN GISH ’80

wsu.edu/impact/American-dream

From left: Robert Schorr and Denny Johnston. Courtesy Robert W. Schorr

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Scientists at the Pacific Northwest National Laboratory (PNNL) have also been monitoring and modeling regional snowpack and subsequent water flows for many years. Their results show warmer temperatures can affect snowpack.

Ruby Leong, a PNNL atmospheric scientist, says that, due to warmer temperatures, “even if there is no change in the amount of precipitation in the future, you would expect that the precipitation would be falling more as rainfall rather than snowfall.”

Increasing rainfall leads to faster melting of the snowpack. Leong and her fellow researchers, including PNNL watershed hydrologist Mark Wigmosta, study atmospheric rivers that dump a lot of warm rainfall. They have 40 years of measurements that show an increase in these rain-on-snow events.

And, “projections are also very clear that atmospheric rivers in terms of the frequency will increase,” Leong says.

Dust, as well as ash from increasing wildfires, add to the problem, she says. It collects on snow and reduces the ability to reflect sunlight, thus raising the temperature and leading to earlier melting.

As the availability of water supplies shifts earlier in time around the Cascade Mountains, water users must adapt. They rely on forecasts such as the Columbia River report and PNNL’s work to make adjustments.

The forecast helps improve understanding of where water is most critically needed now and in the future, Adam says. In addition to Adam, 19 WSU researchers are involved, along with consultants, the University of Utah, and the Department of Ecology.

Adam says this group and others at WSU want to work more toward formulating a number of “what if?” scenarios around water storage and scarcity.

For example, “what if we had the three-year drought that California had?” What would that do to our system? Adam asks. “What does that mean for managing our storage? What if we have a major northward migration of vegetation production?”

To examine possible answers, their model brings together a complex array of information, including land cover, elevation, river flows, snowpack, evaporation, irrigation demand, and more. The results can show alternative futures for climate, agricultural production, and water development.

Many farmers are already adjusting with more water-efficient irrigation practices, earlier planting, and different crops. Yet water will inevitably be curtailed for some users.

“We have this period of time where there’s not enough water to go around,” Adam explains. “In the western US, if there’s not enough snowfall, we will inevitably be curtailed for some users.”

Researchers at PNNL are simulating the feedback between farmers’ choices of crops and available water supply. With early water forecasts, this work can inform farmers’ choices of crops for adaptations to climate change.

“About a tenth of the first climate change signals show up in the snowpack,” Wigmosta says. “There’s going to have to be an ongoing effort on improved water use efficiency.”

Researchers at PNNL are simulating the feedback between farmers’ choices of crops and available water supply. With early water forecasts, this work can inform farmers’ choices of crops for adaptations to climate change.

“A lot of times the first climate change signals show up in the snowpack,” Wigmosta says. “There’s going to have to be an ongoing effort on improved water use efficiency.”

To those who are interested in the educational affairs of the state, and desire to see the best interests of the Agricultural College advanced, we cordially extend greeting in the first number of our college paper—The Evergreen.

Since these words appeared in March 1895, the student newspaper of Washington State University has provided a first draft of history, recording campus and Pullman news, life on the Palouse, student opinion, and more.

For more than 125 years, the Daily Evergreen has done double duty, serving as both a source of information and a training ground for student journalists. The experience has helped alumni land jobs in newsrooms throughout the country—from the Moscow-Pullman Daily News and Spokane’s Spokesman-Review to the New York Times.

“I think of it as a learning lab for our students,” says Renee Paulkton, dean of WSU’s Edward R. Murrow College of Communication. “When I talk with our alumni, they sing it out as a turning point in their education. The Evergreen is almost like finishing school for our journalism program. It tries to live journalism experience in many respects. It’s something I really believe in. It is an outstanding student publication.”

The Evergreen technically isn’t a part of Murrow College. It is housed under WSU’s Office of Student Media and supported by services and activities fees, a student fee, and sales of ads and Chicoos yearbooks.

“A lot of Murrow students have worked there,” Paulkton notes. “But students from across campus can and do get involved. It’s one of those experiences that galvanizes students. You all pull together and work under the dummies’ deadlines. And you’re working on stories that make a difference.”

These stories have included cadets leaving campus to fight in World War II, the gym transforming into a sick bay during the 1918 Influenza Pandemic, the 1931 Rose Bowl, and the ringing of the Victory Bell to signal the end of World War II.
Evergreen has written about the Vietnam War, the student magazine scandal, the 1970 racially charged rally and strike, May 1880 eruption of Mount St. Helens, and May 1998 Greek Row riot that left nearly two dozen police officers injured. More recently, they’ve covered the COVID-19 pandemic. The students do more than make memories at the Evergreen. Pinkleton says, "It helps them develop the professional skills they need to succeed. Historically, that’s been theMurrow calling card: students at the undergraduate level who have a lot of hands-on experience. The paper has a history of malice. 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 fault finding, not always commending. Giving credit for all that is good, but speaking with undisguised plainness as to those things that injure the reputation of the college and lower the standard of college life. The college paper ought to be the voice of the student body itself—against all others, in favor of all that uplifts."

By the end of the 1970s, the Evergreen had published more than 144,700 pages in more than 13,000 issues. About 40 issues are lost to history. The rest are available in the Manuscripts, Archives, and Special Collections (MASC) at WSU. Pullman, MASC also contains copies of the College Record, the Evergreen’s predecessor, published in 1892 and 1893, as well as approximately 60 issues of alternative papers published by students graduated unaffiliated with the Evergreen, including the Unstrung (1939 to 1941), Burgerville Blues (1970), and more.

The Evergreen’s initial issue was 12 pages, carried no photos or bylines, and featured a section called “Personals.” It was printed at the Pullman News-Review, a practice that took place for decades. A staff member, and usually the section called “Personals.” It was printed at night editor, would walk or bicycle the copy for decades. “A staff member, and usually the section called “Personals."

The Evergreen had a margin of 1,200 maple trees along the Nooksack River and cold ravines near Mt. Baker. He is the first successful commercial maple syrup producer in the Pacific Northwest.

"When I started in 2011, I could barely get a drop out of the trees," McLeod says. "But now we’re producing 500 to 700 gallons of syrup per year. We just planted 3,500 new trees all over the property from swamps to the mountains—in shade, sun, all different environments—to see what does best."

Evergreen launched its website. Photography was all digital by 2002. News continues to be published online five days per week at dailyevergreen.com. Due to the persisting COVID-19 pandemic, the Evergreen went online-only for summer 2020 and switched to a weekly printed product last fall.

"When there was it was newspapers and an AP (Associated Press) type editor my sophomore year, I started hiring people and managing them," McLeod says—answering questions, doing research, and helping tinker with the production process.

"Eventually, Neil said he’d like to make commercial syrup. That was it," McLeod says. "If I made a mistake, I didn’t correct it. But I did get a drop out of the trees.

McLeod says: "If you can’t harvest trees the same way as in non-riparian zones, so many small landowners lose income from not being able to sell timber."

"If we make maple syrup production an income-generating opportunity for these landowners, they can actually recoup some revenue and also practice sustainable forestry and get certified," he says.

With 2019 grant funding, Ganguly’s team set up their first syrup research site at the UW Pack Forest in Eatonville. In 2020 they added additional sites including the WSU Environmental Field Station at Meyer’s Point near Olympia, which is managed by Shults.

Ganguly says their end goal is to estimate how much maple syrup can be commercially produced in Washington state and how large the trees must be to get a flow.

Shults plans to share UW’s research findings with landowners who are interested in commercial production but says there is also tremendous potential in the hobby scale. "It is a fun way of getting forest owners, families, and communities engaged with their forest," he says. "It can help create an attachment to the land that in the long run might prevent them from selling it off or subdividing."
When your research involves the Native people who served as US Indian Scouts, it means traveling vast stretches of the American West. The materials these people left behind are few and far between. It also means consulting with the tribes, who didn’t like much anyway.

A conundrum in all of this are the Indian Scouts. These were Native men who willingly took up arms to fight for the American government. For the most part, they lived good lives. They supported their families and communities. They accessed plentiful army rations, clothing, and shelter. Though they lived in an era of rapid change, they maintained 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.

I noticed a few older graves. One headstone stated “Curly, Custer Scout, May 22, 1923.” Another one read, “White Man Rains Him, Alias Mahr-Itah-Thee Dah-Ka-Roosh, Montana, Private, Indian Scouts.” Sadly, most historians, let alone average Americans, do not know these names. These men were Apsáalooke (Crow) warriors. Though their actions were tragic, they were simply doing what they were told. They were following orders and maintaining the status quo.

For me, the most powerful moment was seeing the Newberry Library. The entrance of the building was marked by a statue of a Native man. I entered and found myself in a room filled with books and maps. It was a fitting place to conduct my research. The place was silent now, but it cries out for an amends.

All along the journey, I passed out gifts from my mobile storehouse. The blankets went to homeless friends and collaborators. The cheese and smoked salmon found its way to a few grateful associates. In my own way, I attempted to smooth some 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.

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 Wounded Knee and Sand Creek. After the 3880 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 somber. It was hardly 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.

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 the heart is to protect their friends as well as themselves. The cemetery made that more real to me.

The US Indian Scouts did as well. They wore a crossed arrows insignia on their uniforms and hats. When the unit was disbanded in 1847, the insignia transferred to the US Army Special Forces, where it lives on to the present day. Those Native men who served in uniforms represented a unique moment that is unlikely to come around again. Their service represented 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 if we are willing to listen. Otherwise, the past will continue to haunt the present.
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 10-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 (’11 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 secrets and planting malware. “The discussions in our buildings are wanted by others, so it’s important to keep our diplomatic playbook safe.”

As an American living in Moscow, for example, we always 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 countermeasures to protect US personnel and property, including systems for drones and incoming missiles. “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.”

“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-rated 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.

“In Diplomatic Security, our job is to secure information in a world where streams of data are constantly flowing through the air creating vulnerabilities and potential threats,” says Percival. “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, and smart cities.

“We have a lot of this kind of stuff,” marvels Bond (’17 PhD History), pointing out a notation inside the front cover detailing the purchase price and year: $1.16 in 1939. Later, a quick Google search shows a similar edition, published in London in 1666, featuring a portrait frontispiece of the author.

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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 (Kure) 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 Powers 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 from the 1930s and 1940s, with a focus on research by female faculty such as Leila Wall Hunt, head of foods and nutrition, who, in 1938, issued one detailing the benefits of a light afternoon snack.

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 donated by the Friends of the Library in 1951.

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 5,806 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 Ebrood 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 Ebroods 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 Ebrood 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 Ebrood that his Bow Windows Book Shop had acquired the bulk of the Woolfs’ library. Ebrood 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 219 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 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 33rd birthday in 1917, a first edition of Sir Walter Scott’s *The Abbott*. 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—right 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.
BY REBECCA PHILLIPS

SEA TTE 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 felt 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.”

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.

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
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 reaching 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 to help improve the fruit’s quality—“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."
Cranberries

BY ADELE B. 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 fowl and deer and other meats to make pemmican. Colonists called them “cranberries” for the resemblance of their blooms to the head of a sandhill crane. Eventually, “cranberries” became cranberries—and a colonial staple.

“They are excellent against the Scourvy,” John Josselyn wrote in his 1672 New England’s Rarities Discovered in Birds, Beasts, Fishes, Serpents, and Plants of That Country. “They are also good to alay the fervour of hot Diseases.” And, he noted, “The Indians and English use them much, boozing 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 out of sugar. Stories that had traveled across the Atlantic were nearly or completely depleted.

Cranberries were first cultivated in the early 1800s on Cape Cod. Washington state’s commercial cranberry industry wasn’t born until the latter part of the nineteenth century. Since the early 1920s, research from Washington State University has helped it flourish. Today, Washington cultivates some 1,800 acres of cranberries and ranks among the top five cranberry-producing states.

Year-round, per capita consumption is 2.3 pounds, nearly all in the form of juice. 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 acid. 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 round in the freezer.

Washington state’s industry, concentrated along the “Cranberry Coast” in Grays Harbor and Pacific Counties, experienced slow growth between the late 1800s and early twentieth century. The fruit is finicky. Cranberry 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 1990s, running the Cranberry Museum on the site. Another Cranberry Museum in Grayland explores the history of the Furford Picker/Pruner, which revolutionized harvest when it was invented in 1957 by picking berries while simultaneously pruning vines.

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Wet harvest is used for cranberries that will be processed. Fresh ones are picked by small hand. Harvest season is six to eight weeks in September, October, and November. Or, just in time for the holidays.

That’s when Jamie Callison makes his favorite cranberry recipe: a simple sweetened sauce. The recipe is so easy that the executive chef at WSU’s School of Hospitality Business Management at Carson College of Business recites it in a few sentences. “It’s basically the zest and juice of one orange, one cup of sugar, one cup of water, and one bag of cranberries.” Callison says, “You cook it all together until the cranberries start to pop, and you’re good to go. Sometimes, I’ll add a little Cointreau at the end, or Grand Marnier.”

Cranberries pair well with pork, chicken, beef, and—of course—turkey. Slather some sauce on day-after-Thanksgiving sandwiches. Sauté some into oatmeal. Or, serve some with line or another kind of red cheese. Callison pairs cranberry sauce with WSU-developed Cosmetic Crop® apples and WSU’s signature canned Cougar Gold sharp cheddar. “You need the fat from the cheese and the sweetness from the apple to balance it out,” he notes.

His other favorite uses are relishes for terriers and pates, chutneys for game meat such as deer and elk, and sugar-coated cooked whole fruits to decorate desserts. “Those little candied cranberries look amazing,” he says.

Dry cranberries add texture and a sweet-tart element to salads, such as shaved Brussels sprouts and kale with walnuts, hazelnuts, pistachios, or pecans. “One of our house salads is angula, Cosmetic Crop® apples, and dried cranberries,” Callison notes. Cranberries—dried, fresh, or frozen—are also great baked into muffins, scones, turnovers, and tarts.

Betsy Rogers (“BS Comm”) pairs them with Breaburn or Golden Delicious apples to make her mom’s cranberry-apple pie. “It was always something we had at Thanksgiving,” says Rogers, a personal chef in Seattle. She founded Ovens to Betsy twenty years ago, transitioning from public relations to doing what she loves more: cooking.

“I’ve always liked tart things, and I just love the taste of cranberries,” she says. “When I was little, I’d eat them straight from the freezer, just pop them in my mouth with no sugar or anything. I’m not sure I’d do that now. But it’s funny how cranberries are so associated with Thanksgiving. We really should do more with them all year.”
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.

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The team’s 12–12 2020–21 record in the Pac-12 kept it in the Top 25 for the 2021–22 season. 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.

“I loved our fight and loved our spirit. It’s 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.”

“Week by week was our focus,” head coach Kamie Ethridge said of the team’s drive to get into the Top 25. “We work 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!”

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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 team has elevated WSU’s standing among top programs, 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 near-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 top 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 ground-breaking, 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.”

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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 wonder 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 products, such as tortoiseshell, horn, and ivory.

But because the polymers were strong, lightweight, and flexible, the need for physical sorting while recycling a wide range of plastics. The different polymer composition, for example, of a water bottle and a milk jug, prevents melting 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 plastic types. The goal is to make a recycling system that can handle 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 Biotechnology, including former postdoctoral researcher Shaoqun Xie and Chuhua Jia (’21 PhD Chem. School of Chemical Engineering and Bioengineering, including former postdoctoral researcher Shaoqun Xie and Chuhua Jia (’21 PhD Chem. School of Chemical Engineering and Bioengineering, including former postdoctoral researcher Shaoqun Xie and Chuhua Jia (’21 PhD Chem.

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 future engineers and researchers. “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 Indraiall Chowdhury and Markus Flury investigate just how plastic particles move through water and soil, and how much plastic is actually in soil.

“Once we deconstruct one polymer, 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’re also studying the fundamentals of this specialized catalysis. For example, Lin wants to ensure that catalysts and other key catalysts remain stable for a long time, after many uses.

He also wants the technology to get 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 fossil fuels and help mitigate CO₂ emissions.”

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 Voiland 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 wastewater treatment plants and then into the biosolids that spread onto the soil.

Many plastics end up in 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 Voiland 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.
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 temporarily or permanently trap the nanoscale polystyrene particles. Polyethylene is often found in packaging materials and disposable food containers.

Unfortunately, polyethylene, the most common plastic material, doesn’t easily bind with organic matter and slips through sand filters. Chowdhury wants to better understand the fundamental ways tiny plastic particles move, with the intent of capturing as much plastic as possible in wastewater and drinking water treatment systems.

We look at the traditional filtration systems and how we can actually improve them to better remove this plastic,” Chowdhury says. “People 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.”

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.

Huyr says the impact of plastics on soil and plants is similarly mysterious. “Is the impact as bad as in the ocean or do soils have more resilience toward plastic pollution? Does the plastic hinder plant growth?” Huyr asks.

At the moment, we don’t see that because the biosolids 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.

Huyr notes that plastic itself is inert and not really toxic, unlike many pesticides with toxic effects. Plastics, however, can absorb chemicals on their surfaces. 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). A 2013 study found that BPA disrupts hormonal processes and causes genetic abnormalities. Many companies have changed plastic products and removed BPA from their compositions.

There are still many questions to answer about plastic in soil and plants. “We are really working on whether plastic particles can potentially be taken up by plants,” Huyr 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 in both conventional and organic agriculture, so Flury’s investigations often intersect with horticulturist Carol Miles’s work on biodegradable plastic mulch.

Miles, a professor at WSU’s Northwest Washington Research and Extension Center at Mount Vernon (NWREC), has experimented with plastic mulch for more than 20 years, studying its effects and testing improved products with industry partners.

“Whether it’s at the bottom of fruit trees near Yakima or under organic strawberries in the Skagit Valley, plastic mulch retains water, keeps fruits and vegetables cleaner, and controls weeds,” she says. “It can essentially make a crop model to a more sustainable way of viewing a material like plastic.”

Tilling useful plastic mulch back into the soil, where it will safely decompose, is also important for weed control without herbicides, while maintaining a favorable soil temperature.

Lisa DeVitter, associate professor and small fruits scientist at NWREC, teamed with economist Suzette Galinato, assistant director of the WSU School of Economic Sciences Impact Center, as part of a national research effort to support sustainable practices such as biodegradable mulches.

In an expansion of Miles’s work, they are testing biodegradable mulches that are made with fully organic-approved ingredients. Because existing soil-biodegradable mulches are made from starch and a blend of polymers that come from plant-based and synthetic sources, they do not meet the federal National Organic Program’s requirements for organic farming.

“I’m very excited to work with new materials and develop technologies that could help sustainably grow organic, specialty crops in an economical way, while reducing plastic waste,” DeVitter says.

By reducing plastic waste, whether it’s covering the ground in a field of strawberries with biodegradable mulch or converting a mound of bottles and jugs, both the economy and the environment can win. Even with technological solutions, though, the plastic problem can seem to be mountain-size, literally in some cases.

“If you go to India, you will see trash mountains filled with plastic,” Chowdhury says. “They’re growing higher than 200 feet.”

As recycling technologies, such as Liu’s catalytic method, create new ways to deal with these piles of plastics, countries and people will see economic gains. That’s already happening with the global plastic waste trade.

As a WSU doctoral student, Yikang Bai (‘21 PhD Socio.) found that the import of plastic waste was associated with growth in gross domestic product per capita in lower-income countries. Bai and Jennifer Green of Utah State University analyzed 13 years of data, from 2003-2013, on the global plastics trade against economic measures for 85 countries. They found a positive impact of taking in those waste plastics.

Even though the plastic waste adds to the environmental burden of those importing countries, they are seeing financial benefits. With increases in plastic recycling, the circular economy could raise those countries’ standard of living even more.

The prospect of changing the approach to plastics inspires scientists such as Miles and Liu.

“I’m very enthusiastic that we can develop technology and make contributions toward a sustainable society. It makes my work feel valuable,” Liu 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 planet.
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 overseen 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 if I would clerk for ‘Why
Shaken but still stirring

BY ADRIANA JANOVICH

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 for its craft cocktails, comedy shows, live music, and theme nights—from tiki to disco. Football coaches and other athletic staff would gather on the mezzanine after home games. Football coaches and other athletic staff would gather on the mezzanine after home games. Music, and theme nights—Tiki to disco. Football coaches and other athletic staff would gather on the mezzanine after home games. Music, and theme nights—Tiki to disco.

During Etsi Bravo’s pandemic-related closure, they missed their patrons most. “I would usually have the opening shifts, and I would see the same people very day,” Blake says. “It’s always fun to hear their stories.”

Online sales of house-made, hand-crafted cocktails and discounted 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 dad, John Loos (’85 Ag.), encouraged her to become a Coug.

In summer 2020, things worsened when lockdowns, Blake says, “worsened our standing in the eyes of our customers.” They had to add a kitchen at Etsi Bravo, they started two new establishments was already underway. The Prestons partnered with Etsi Bravo patron and former WSU student Raustin Memon on both. Cybelle 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.”

Left: Blake (Loos) Preston behind the bar at Etsi Bravo. Kar Eakle/Moscow-Pullman Daily News
Below: Will Vinton and Marc Evans. Courtesy Marc Evans

“It had all it. There was all this glamor and built in drama, so Evans says. He also recalls the story of his friend with a certain nostalgia for the characters Vinton created.

The charismatic, ground-breaking clay animator was his personal idol. He was told that renowned stop-motion clay animator was not really interested in doing a film. “It was an honor to be on a project that Evans agreed. Filming started on Claymates in 2016.

Evans spent five years working on the film, which premiered at the prestigious Tribeca Film Festival in summer 2021 and, shortly after that, was shown at the Ancey International Animation Film Festival in France. He wrote, directed, produced, and did some editing on the film, he said.

In his first major project, The Glamour and the Squid, documented the career and personal struggles of famed Seattle clay artist Marco Collins, credited with popularizing bands such as Pearl Jam, Nirvana, Foo Fighters, Beck, Weezer, Garbage, and the Presidents of the United States of America. Evans directed and produced the 2015 film, which he also worked on for five years.

Before that, he had a career in sales that took him and his wife, photographer Angela McCaw (Evans) ’05 Comm) in Phoenix, San Francisco, Salt Lake City, and San Diego.

When his stepfather died, Evans and his stepbrother, Kevin Noland of Spirit Lake, Washington, worked together.

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Mark Matthew ‘Marq’ Evans (’05 Busi) was aware of Will Vinton and his iconic work. But it wasn’t until the documentary filmmaker read an online article about the nap and fall of the “Father of Claymation” that he reached out in the hope of telling the story.

Dreams of clay

BY DANIEL P. SMITH

Mark Matthew ‘Marq’ Evans (’05 Busi) was aware of Will Vinton and his iconic work. But it wasn’t until the documentary filmmaker read an online article about the nap and fall of the “Father of Claymation” that he reached out in the hope of telling the story.

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creative. "So, I say, "my wife and I quit our jobs and sold everything."

The Washington native—Evans was born in Yakima and grew up in Tri-Cities—moved to Bremerton, where he works on films and other projects in his basement and teaches filmmaking at Olympic College. He and his wife formed The McCaw, a creative studio that, according to his LinkedIn page, "produces films, photography, books, special events and other unclassifiable works."

Last year, The McCaw published two books, Bands by Balje, inspired and created by his son, Jude McCaw Evans, 10, and Bear by Bear: 25 Cocktails for Seasonal Living. The McCaw also directs creative duties for Cow by Bear, a dinner party experience in San Diego and Seattle.

Evans earned his master of fine arts in film/cinema/video studies in 2020 from the Vermont College of Fine Arts. He lists in film/cinema/video studies in 2020 from

Diego and Seattle.

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 (37 Mat. Sci. and Eng., ’92 MS Eng. Mgmt.). "And, says Diane (’81 Psych.). "We find Cougar everywhere."

They’ve waved the flag from Angkor Wat and Antarctica to the deck of a sailboat in the Adriatic Sea, while standing atop the Great Wall of China, riding canoes in Danube soaking in Iceland’s Blue Lagoon, and swimming in the world’s largest rooftop infinity pool at the Marina Bay Sands luxury hotel in Singapore.

"I think one of the best flag waves we’ve done was in Victoria Falls, in Devil’s Pool on the Zambia 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 Busi., History) and Jamie Ohl Turner (’16 Busi.), and son-in-law Chris Turner (’13 Elec. Eng.), to South Africa.

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

The couple gets many of their travel ideas—ballrooming over Massai Mara in Kenya, marveling at the monolithic statues on Easter Island, viewing the "Sarajevo Roses" memorializing the siege of Sarajevo in Bosnia-Herzegovina—from Instagram. "It’s really a interesting spot and build a trip around it," Diane says. Phil identifies himself on LinkedIn as an "International Man of Leisure." Before that, he spent 30 years in the nuclear engineering industry and retired in 2016.

The couple, who met in Stephenson Hall at WSU and married in 1987, attended a travel blogger conference in spring 2016, coming away with a contract 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." Phil's says. "We haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a continent where we haven’t found a 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The movie takes place in a world where the ruling class is called the Council of Elders, who have strict and rigid rules for their society. The protagonist, Aang, is a young boy who discovers he is the Avatar, a being who is a spiritual and physical embodiment of the four elements: earth, water, air, and fire. As the Avatar, he is responsible for maintaining the balance between these elements and the natural world.

In the movie, Aang travels to the Northern Water Tribe, where he learns how to master the element of water. He then goes on to the Southern Water Tribe, where he encounters a young girl named Katara. Katara teaches Aang how to use the waterbending technique to create and control water.

The movie also explores the themes of love, loss, and redemption. Aang's relationship with Katara is a central aspect of the story, and their journey together is filled with challenges and obstacles. The movie ends with Aang mastering firebending and becoming the last Avatar.

The movie is visually stunning, with beautiful landscapes and epic battles. It also features a talented cast of characters, includingvoiced by Noah Ringer, who is an exceptional voice actor for Aang.

Overall, Avatar: The Last Airbender is a masterpiece of animation and storytelling. It is a must-watch for anyone who loves adventure, fantasy, or animation in general.
The Summer edition of **visiting WSU alumni.**

**WASHINGTON STATE MAGAZINE WINTER 2021**

**WSUAA members only**

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 **VENNIE OCHLIEVICH** CUNNINGHAM (’80 Ham. Dev.). The first-generation farmer and her sister, Belinda Kelly, a mixologist and recipe developer, left the corporate world as new moms, and ditched their long commutes from rural Pierce County to the Seattle area.

A recruiter for Microsoft, Kelly founded the Happy Camper Cocktail Company, serving drinks from her vintage trailer. Cunningham, a project manager for Redfin, got into residential real estate and garlic farming. Inspired by their new endeavors, the sisters came together in 2017 to create their small-batch syrup company. The first 1,500 bottles sold out in six months.

Washington State University tested samples and formulated processing instructions to get the products ready for retail. WSU “has been instrumental in the success of our business,” says Cunningham, who completed the university’s Food Systems Program’s Cultivating Success course at the WSU Puyallup Research and Extension Center. Both sisters also finished the WSU Better Process Control School Training.

**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 ORMSTRONG** (’91 Bus.) is the chief development officer and president of the Swedish Medical Center Foundation. Previously, she was the associate dean for advancement at 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 funding 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 HOSSFELD** (’96 Poli. Sci.) is an assistant professor at the University of Washington School of Law. Prior to joining the university community, he served as a federal prosecutor in the Antitrust Division of the US Department of Justice. **DAVID ELMS** (’81 Arch.) is associate architect for ALSC Architects of Spokane. Elms has 40 years of architectural experience. **RANDY COOK** (’98 Arch.) received the Vitange Leadership Award for the Seattle region. He is managing principal of the Tacoma-based TCF Architects. Vitange is a CEO coaching and peer advisory organization, and its annual award honors members who demonstrate leadership, excellence and impact on their business, the Vitange group, and community.

This **apple drink recipe with seasonal syrup highlights:**

**SIMPLE GOODNESS SISTERS’ FACEBOOK**

With a boost from a $50,000 USDA Value-Added Producer Grant, they recently started a café 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, mint, and huckleberry spruce tip. The November subscription box features rhubarb vanilla bean, blueberry lavender, and berry sage. Other offerings are lemon herb, marionberry mint, and huckleberry spruce tip. The sisters also sell a floral sugar 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 multino syrup “to almost every single state” and have been spotlighted in Sunset magazine, King 5 TV’s Evening program, and RFD-TV’s FarmHer. They’ve also hired their first two employees. Summer intern Meggie Dukan and Emily Dukan are Cousins—and sisters, too.

**BY ADRIANA JANOVICH**

The Summer edition of 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.
JOSHUA EVANS (’03 Theatre Arts) founded Act One Theatre Camp in Gig Harbor, California, just before the COVID-19 pandemic hit. Evans has taught theatre and his team “replaced the stage with the camera,” he says, transitioning the program online with a focus on stories and music videos. Children in the United States, Canada, Mexico, Uruguay, Saudi Arabia, and other countries were able to participate in a safe outlet for creativity and socializing.

O’NEILL of City Year Seattle/King County. Lambert previously was executive director of the Bicycle Club and Washington Bikes. She is a board member for the Northwest Gifted Children’s Program, where she led the development of a spay/neuter clinic in Austin, Texas. LISA ROMAN (’12 Psych.) helped launch Canada’s first gold medal in women’s basketball for the Olympic team in 2012. She also worked as public information officer for Overlake Medical Center & Clinics in Bellevue, where she held the hospital’s gold medal for the COVID-19 pandemic.

ROBERT FRANKLIN (’04 MBA) has an impressive resume as an expert for a history film about the Manhattan Project and as director of the U.S. Army’s first Olympic medal, a bronze, as part of the medical director at Saving the World. He also played in the Slovenian basketball league and in the real estate services sector and is currently a principal architect at ALSC Architects of Spokane.

ARON BAYNE (’79 Ed.) earned his first Olympic medal, a bronze, as part of a team in the men’s basketball. Bayne played for the NBA’s Toronto Raptors, Phoenix Suns, Boston Celtics, Detroit Pistons, and San Antonio Spurs. She also played in the Slovenian basketball league as well as for the German Basketball Bundestag. NATHAN GOODALE (’98 PhD) is the medical director at Saving the World.

TROY BISHOP (’15 PhD) is deputy athletics director for the University of Idaho and then Arizona State University. His work specializes in the area of intercollegiate athletics and event operations. Previously, he was athletic director for Westminster University and deputy athletics director for the Oregon College of Art and Design.

ROBYN CROSSLEY (’16 Comm.) is the spokesperson for the Audubon Public Relations Department. Crossley previously worked as a reporter for the Week in Lima and was named to one of the three chairs at the Manhattan Project Electronic Field. She was produced by the National WWII Museum in New Orleans.

OAKLEY CHERRY (’21 Hosp. Busi.) received her bachelor’s degree in business administration from the University of Washington. She is currently a project manager at ALSC Architects of Spokane.

VALERIE RATHBONE (’11 Nursing) is the medical director at Saving Pet Adoption Center in Roseburg, Oregon. She previously worked at the Idaho Humane Society and the Connecticut Humane Society.

OSCAR H. ASHCROFT (’55 Arch.) is the architect of the City of Westbury, New York. O’Neill previously held various roles at the University of Idaho and then Washington State University. She led a team with an annual fundraising goal of $100 million. TROY BISHOP (’93, ’04 MA Arch.) is principal architect at ALSC Architects of Spokane, where he provides design direction for the company’s team of architects. GALE BIRKINGER (STANLEY) (’04, ’06 MA Arch.) is an associate architect at ALSC Architects of Spokane, where he provides design direction for the company’s team of architects.

HALVORSON (’56 Enviro. Eng.) is a professor of physics and astronomy at the University of Mississippi and a researcher at Connect Corporate’s 2021 list of young professionals in the real estate services sector and is currently a principal architect at ALSC Architects of Spokane.

THOMAS EDGIN (’20 Gen. Phys. Sci.) is a certified test data by the American Culinary Federation. He is the current agricultural student unit executive chef at WSU, where he oversees the bakery, grill, and beverage program for T-House. LISA ROMAN (’12 Psych.) helped launch Canada’s first gold medal in women’s basketball for the Olympic team in 2012.

ELIZABETH WILEY (’50 Arch.) is principal architect at ALSC Architects of Spokane, where he provides design direction for the company’s team of architects.

JENNIFER (SHAFAK) ALLEN (’02 Psych.) earned a doctorate of education in leadership and professional practice from Texas A&M University. She has been the director of special services at the Kennewick School District and a board member for the Northwest Gilford Foundation (’99). ELAINE (BLAY) DAVEY (’52 Poli Sci.) is an executive director of Cascade Bicycle Club and Washington Bikes. Lambert previously was executive director of the Bicycle Club and Washington Bikes.

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IN MEMORIAM

JACK ROGERS was already renowned for his work on Xylariacae. He had described many new species of Xylaria. He is commonly found growing on dead wood, including X. magnolia, which grows from blackened magnolia fruit and resembles burned matches during our period. Mycological Society of America founded in Florida, in the early 1980s. This fungus was abundant. And participants kept presenting it with specimens.

It was like they were bringing him gifts,” recalls Lori Carris (’83 MS Plant Path.), chair when she was hired. Their offices were next door, and he taught his opinion was.” If he had an opinion and it differed from yours, you would know what his opinion was.”

He loved all aspects of the job, and he did them well.” And he worked on a number of higher-level university committees. He loved anything to do with fungi,” says Murray. “He really was the complete package,” Murray says. “He was a good joke. And he was very vocal in terms of explaining his position.

He knew Rogers for 43 years, coming to WSU in 1978 as a graduate student at WSU, and he was department chair when she was hired. Their offices were next door, and he taught to work. “It was kind of a challenge to see if I could get there before Jack,” Carris notes. “The only time I took off consistently was Wednesday afternoon.”

That’s when he went fishing. Rogers also enjoyed bringing friends and colleagues. “He loved being out in the woods. He loved anything to do with fungi,” says Carris, who worked with Rogers for 43 years, including team-teaching a course for nearly a decade. She first met him as a graduate student at WSU, and he was department chair when she was hired. Their offices were next door, and he taught a graduate course on ascomycetes and fungi imperfecti across the hall. Timothy D. Murray (’80 BS, ’83 PhD Plant Path.), chair of plant pathology, “never worked harder in a class than when I took his class.

He knew Rogers for 43 years, coming to WSU in 1978 as a graduate student, then joining the faculty in 1983. Rogers was his professor, colleague, chair, mentor, friend.

“He really was the complete package,” Murray says. “He was a great scholar. He won awards for his research. He was very prolific in terms of publication. He was an engaging and committed teacher. And he worked on a number of higher-level university committees. He loved all aspects of the job, and he did them well.”

He was also “a real character,” Murray says. “He loved to tell a good joke. And he was very vocal in terms of explaining his position. If he had an opinion and it differed from yours, you would know what his opinion was.”

Rogers traveled the world for research and to collect specimens, helping curate WSU’s Charles Gardner Shaw Mycological Herbarium. For more than 30 years, he received funding from the National Science Foundation for his research, which Carris says, “really laid the foundation for a lot of the work on Xylariaceae that is going on today.”

He is survived by his wife of 63 years, Belle, and their two daughters, Becky and Barb, and their families.
November 4, 2019, Williston, North Dakota.
76, December 30, 2020, Shelton.
('66 Home Econ.), NEVA E. MCLEMORE
Conway.
JOHNSON ('66 Physics, Math.), 77, December 9, 2020,
Las Vegas, Nevada.
HASTINGS ('66 Math.), 75, August 16, 2020,
August 20, 2020, Spokane.
CAVANAGH ('65 MA T Busi.), PATRICIA C. SMITH
84, July 16, 2020, San Diego, California.
CHARLES PEARCE ('65 MA English),
California.
81, July 26, 2021, Modesto, California.
('62, '68 MA T Phys. Ed.), 83,
('69 Ag. Econ., Alpha Gamma Rho), 74,
2021, Woodinville.
('69 Comm.), 76, July 29, 2021, Prosser.
('69 MABUSI), 85, July 3, 2021.
('63, '65 MBA Busi.), 81, October 21, 2020,
('63 MS Mat. Sci.), 79, July 30,
('69 MA German), 75, July 11, 2021,
('70 S. SHAPIRO ('74 MA English),
70, July 21, 2021, Olympia.
Walla.
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. Before the letter breaks off Ptolemaios requests that his father kindly receive Galates," 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."

"In every season, we are proud to partner with Washington State University to improve the lives and financial well-being of students and alumni."

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."