

IDAHO

HERE WE HAVE

S 24

DESIGN. PRINT. BUILD.

A U of I Team Aims to Revolutionize Housing
by 3D Printing Homes Out of Wood Waste



University
of Idaho

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Photo by Melissa Hartley

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Read it online at uidaho.edu/magazine.



The University of Idaho and innovation go hand in hand. For 135 years, we've developed solutions that propel our state forward, while stewarding our valuable natural resources responsibly.

This issue of Here We Have Idaho features stories of Vandals shaping the future with thoughtfulness and care for those who come after us. In every college and nearly every discipline, we find examples of students and faculty devising sustainable solutions to our state's toughest challenges.

A U of I team is transforming Idaho wood waste into reliable building materials via 3D printing. The PrinTimber project could revolutionize the construction industry and provide a valuable outlet for the immense waste from lumber mill production.

Four new faculty members in the College of Science embrace our commitment to sustainable solutions through their research. They ask big questions — from how we produce chemicals to how trees use water.

Forest management is critical to Idaho industry and affects animals like the Northern Idaho ground squirrel. Researcher Alice Morris explores how soil types may prevent the threatened squirrels from expanding their territory.

In the College of Art and Architecture, our students take a holistic approach to sustainable design. Inspired by her own experience, Ainsley Bauer crafted an award-winning chair that feels comfortable and looks great.

The U of I's Prison Education Initiative welcomed its first cohort in 2022 and will soon operate in three Idaho facilities. The program provides new opportunities for incarcerated individuals and aims to reduce recidivism rates.

Some of Idaho's tastiest products get a boost through the U of I Food Technology Center in Caldwell. The center supports the growth of companies like Zacca Hummus by providing processing and educational assistance, among other services.

You'll also learn about U of I researchers' work to sustain the lamprey populations in Idaho and about a student who spent an entire semester student teaching in Germany, creating a pathway for future education students to teach abroad.

Our impactful research combined with a rich student experience make the University of Idaho the standard bearer for higher education in our state. Our innovative solutions support industry and our natural resources and ensure a bright future for all of Idaho's citizens.

Go Vandals!

C. Scott Green '84
President



Campus in spring. Photo by Garrett Britton.

Here We Have Idaho

The University of Idaho
Magazine Spring '24

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For detailed information about federal funding for programs mentioned in this magazine, see the online version of the relevant story at uidaho.edu/magazine.

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GEMS SPRING '24

Shining examples of U of I's impact and excellence. Read more articles at uidaho.edu/news or follow University of Idaho on **FACEBOOK, INSTAGRAM** and **X**.

4 YEARS IN A ROW
U of I was named Best Value Public University in the West by U.S. News and World Report.



\$6 Million

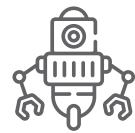
Grant for a U of I-led study investigating how Americans in rural communities perceive the extent of climate change.

\$131 MILLION

Raised since 2015 for scholarships and student success during the **Brave. Bold. Unstoppable.** campaign.

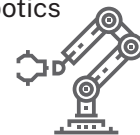
Thank you!

Learn more on page 26.



The state's **1ST** INDUSTRIAL ROBOTICS CERTIFICATES

are available through U of I, addressing rising labor shortages in robotics manufacturing.



8,000+

Native plants and trees planted since 2006 in the Palouse region by the Student Sustainability Cooperative.

\$90,000

Grant from the Idaho Department of Environmental Quality and the Environmental Protection Agency to purchase a composting unit to support sustainability on campus.



1,869

Number of freshmen enrolled in Fall '23, the second largest freshman class in U of I history.



2023

Year U of I was certified as a Bee Campus by the Xerces Society for work to conserve native pollinator species.

\$2.8 MILLION

Grant for U of I researchers to co-lead a national study to identify challenges for middle school math education in rural areas.



965

4-H clubs under the umbrella of UI Extension.

94%



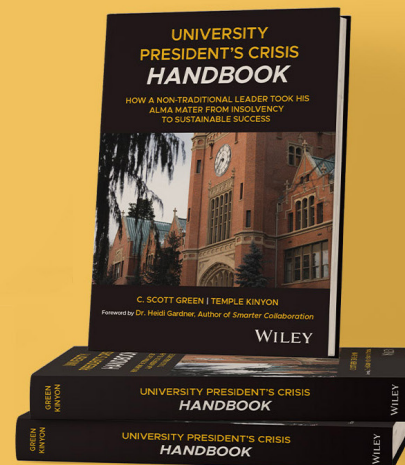
Student-athlete graduation rate in Fall 2023, a program record.

NO. 2

Moscow was ranked the second most affordable city for students in Idaho by University Magazine.

For practical wisdom on navigating turbulent times, purchase a copy of "University President's Crisis Handbook." President Scott Green '84 and author Temple Kinyon '93 deliver a one-of-a-kind perspective on what helped Green shepherd the U of I through years of intense turmoil. U of I book sale revenue goes to the Vandal Healing Garden in memory of the four lost Vandal students and other lost Vandal students.

Visit: go.uidaho.edu/presidents-handbook



100 YEARS

Since the Life Sciences South building was completed and dedicated in 1924.

GOING TO GROUND

Researcher Explores Effects of Forest Management on Northern Idaho Ground Squirrel

Story by Ralph Bartholdt
Photos provided by Alice Morris



Researchers use radio telemetry to track squirrels to their underground burrows.



Alice Morris

Since Alice Morris began researching Northern Idaho ground squirrels in Bear, west of McCall, six years ago, she hasn't looked back.

Instead, Morris, a graduate student in the College of Natural Resources, looked deep into the ground, far afield and high and low in her effort to trap, collar and track the small rodent that is considered a threatened species.

Morris is among a group of researchers from the North Idaho Cooperative Fish and Wildlife Research Unit taking part in a long-term study that explores why Northern Idaho ground squirrels are losing ground in the only place they live: a small chunk of two counties in Central Idaho. Northern Idaho ground squirrels are smaller than their cousin, the seemingly ubiquitous Columbia ground squirrel. They have lost 99% of their historic range in the last half-century.

Researchers are evaluating the effects of thinning and burning forests in the yellow pine glades on the southernmost edge of the Seven Devils Mountains. Scientists want to know if the squirrels occupy areas where the forest was thinned by logging and the brush and understory were burned. They are assessing squirrel behavior and population changes as a result of those ingredients, Morris said.

"We think trees and shrubs have encroached — as a result of human fire suppression — into open meadows that the squirrels use for den sites," Morris said. "The lack of fire has allowed encroachment and degradation of habitat, so we hope to see if thinning and burning will create or restore habitat and whether we'll see population increases."

Relegated to small patches of Adams and Valley counties west of McCall in the Payette National Forest, the squirrels hibernate for nine months and emerge from their dens for three months annually in the summer.

"If we find the squirrels need forested areas to hibernate, then we potentially need to rethink management that may include thinning and burning to protect habitat," Morris said.

Morris earned an undergraduate degree in biology in Boston and worked in South America before heading west to Utah and Montana as a wildlife technician. She joined the University of Idaho squirrel project and leads a team as part of her research. As one of several teams on the project, Morris' group is composed of six members who research 10 study sites.

Team members can work 12 hours a day in summer as they capture, tag and release ground squirrels, weighing and measuring, collecting DNA and using radio telemetry to track squirrels to their winter hibernation nest, or hibernaculum. Through cameras and collars, squirrel behavior is also studied underground.

"I love working with these squirrels more than with any other species study system," Morris said.

She hopes to finish her research this spring.

"It's kind of bittersweet," she said. "The years have flown by."

The Northern Idaho ground squirrel project has for more than a decade been funded by U.S. Forest Service, the Fish and Wildlife Service and Idaho Department of Fish and Game. **I**



DESIGN. PRINT. BUILD.

U of I Team Aims to Revolutionize Affordable Housing With 3D-Printed Wood Waste

Story by **Alexiss Turner '09** and **Alissa Korsak '11, '16**
Photos by **Melissa Hartley**



IMAGINE HOMES RISING FROM THE REMNANTS OF TIMBER MILLS

Affordable housing is not a luxury, it's a basic need.

University of Idaho researchers are developing technology to make housing more affordable nationwide by using Idaho wood waste to make one of the most sustainable building construction materials on the market. They're combining sawdust and other wood byproducts with bio-based glue to create a medium for 3D-printing buildings and stackable bricks.

"We're trying to change the way houses are built in the United States," said Michael Maughan, associate professor in mechanical engineering. "It's too expensive, it takes too long, and we think we can do it with a lot less money, labor and injuries for construction workers."

Increased demand, rising building costs, a global pandemic and long-term supply chain disruptions led to some of the largest increases in home prices in recent history, with Idaho and Washington experiencing some of the highest jumps.

The interdisciplinary project, known as PrinTimber, is expected to positively impact Idaho's fast-growing construction industry. The colleges of Engineering, Natural Resources, and Art and Architecture are partnering with Auburn University on the project.

FROM SAWDUST TO SHELTER

"There's always an accepted way of doing things," said Randall Teal, professor and head of the U of I architecture program. "Our faculty and students are trying to look at things differently — to find new ways of doing things, to question them and to use our current discoveries for the greatest good possible."

Faculty members from the colleges of Art and Architecture and Natural Resources brainstormed an idea that would reduce the nation's affordable housing problem and

foster sustainable industry practices. They want to 3D print a house using natural materials, specifically sawdust and wood waste, which are readily available in Idaho from mills and wood processing plants. Nationally, U.S. lumber manufacturing generates 84 million tons of sawmill dust and waste per year.

"Only about 40% of a tree is converted into lumber," Maughan said. "That means there's a lot of waste that's either left in the forest or used for lower-value products."

The team brought in U of I engineers and renewable material specialists to develop a construction material based on wasted wood fibers. They also needed to create a 3D printer prototype and the glue — called resin — to hold the wood fibers together.

"Our faculty and students are trying to look at things differently — to find new ways of doing things, to question them and to use our current discoveries for the greatest good possible."

**- RANDALL TEAL,
HEAD OF U OF I'S
ARCHITECTURE PROGRAM**

Robert Carne, a mechanical engineering doctoral student, and other students on the team, are developing and testing a 3D printer capable of producing structural walls for a house out of sawdust and resin as a prototype for industrial use. The goal is to create a large-scale, mobile printer capable of printing construction elements for a home with little human interaction on the construction site.

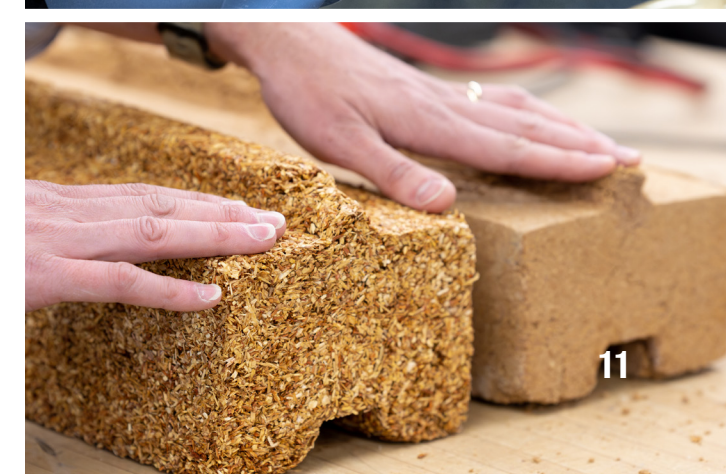
"Before pursuing my graduate degree, I worked in residential construction. It's dangerous, you work long hours, and it's extremely expensive to build a home," Carne said. "That's the most important thing to me: being part of the old way of doing things and blazing the trail using a renewable resource."

3D printing with an abrasive material like sawdust is very different from using smooth plastic filament typical in hobby 3D printing. The engineering team is refining a custom printer design and a continuous layering method to adhere the layers of the printed material using a specialized resin.

The team wants to create a plant-based resin to bond the wood fibers together. If they succeed, the new construction material will be completely bio-based, as wood is already a renewable natural resource.

Once the substance cures, it needs to be strong, heat resistant and insulating — the same quality indicators of any building construction material. An added challenge is ensuring the uncured wood and resin mixture can be easily pushed through the 3D printer.

"Everything is a tradeoff," said Armando McDonald, professor of renewable materials chemistry. "Any change we make to the wood-to-resin ratio and the chemical or organic breakdown of the resin itself



affects how the material runs through the printer, how fast the material cures, how strong the material is and how much it can withstand environmental factors.”

McDonald is working with partners at Auburn University to analyze how different plant-based and synthetic resins react to pressure, heat and other elements to identify the best binding agents.

The team’s bio-based wood and resin products will be energy efficient compared to recent 3D printing construction ventures using concrete. Concrete requires a large amount of heat to create a dry powder ready for mixing, which releases carbon dioxide into the atmosphere. The PrinTimber material doesn’t require this energy.

“No one else is using novel composites in the way we are,” McDonald said. “Our research team is incredible. We’re nimble, we interact, we get things done.”

TIMBER TECH

3D printing the wood and resin mixture takes several hours, so graduate students on the PrinTimber team started thinking of ways to test the material without putting it through the printer.

They devised a stackable brick, known as the TechnoLog, formed with the same material used in the 3D printing process. Compressed into a brick shape and allowed to cure, this material is showing promise as a second construction method.

“With the PrinTimber project, we’re really hoping to address the needs at every level and make a meaningful impact,” Teal said. “The TechnoLog will hopefully provide an easy-to-use, low-tech product that allows for an easy entry point for use within the construction industry.”

Architecture master’s students Mallory Bermensolo, Jim Severt and Tavia Dahl took first place in Fall 2023 with the TechnoLog product in Boise State University’s Entrepreneur Week’s Hacking for Homebuilding Pitch Competition. The team earned \$9,000 in the statewide contest.

Meanwhile, U of I Boise faculty members and graduate students are researching the product and exploring how it can fill gaps in the construction industry.

“Our research here in Boise is focused on state-of-the-art review, testing and showcasing PrinTimber to larger audiences through events like Hacking for Homebuilding and international conferences,” Dahl said. “Through engagement with the local and international community, we create a feedback loop. This allows us to design and create something as a team that can fill gaps in the industry.”

Bermensolo knows how important this feedback loop is to the project and interviews industry experts, building code specialists and local builders to understand how the product fits market needs.

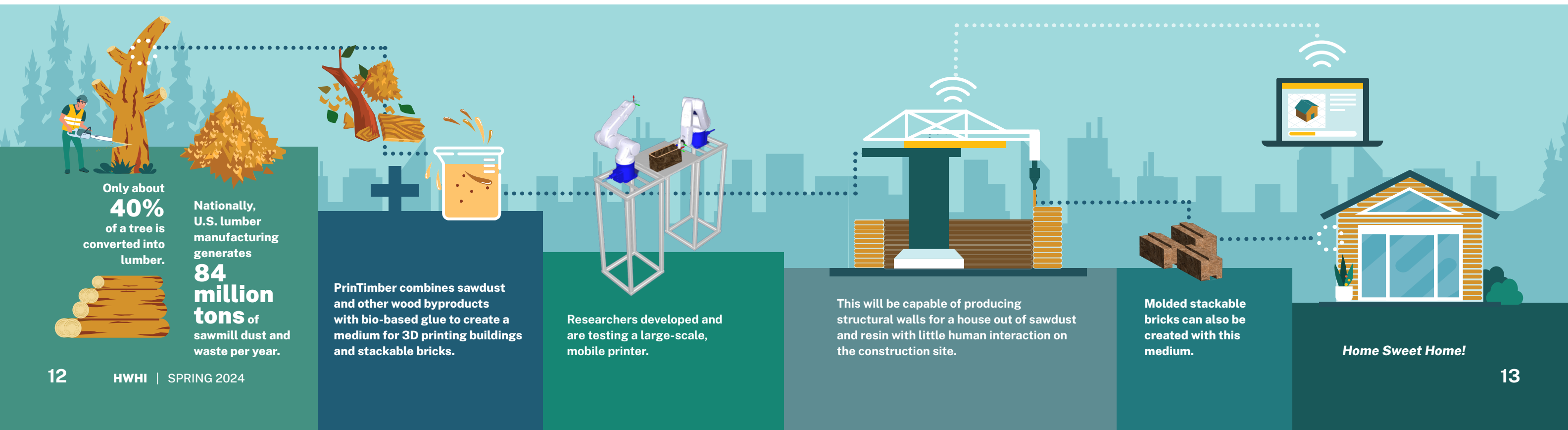
“Getting real-time feedback from industry experts allows us to pivot and redirect our strategy as needed so we’re not wasting time,” Bermensolo said. “Additionally, listening to what others

are doing and what the needs of the market are allows us to be creative in the solutions we provide.”

Dahl values the team’s commitment to sustainability, resiliency and the emphasis on waste as a valuable resource.

“The opportunity to be part of such an innovative project has been really exciting,” Dahl said. “Others have worked with wood waste, but PrinTimber is dedicated to creating a product that is 100% bio-based, circular and cost effective — and I get to contribute to that.”

This spring, the team plans to construct a small shed using TechnoLogs in the Lupine Flats community in Moscow — a planned community being built on land owned by Moscow Affordable Housing Trust. Future plans include building an entire small house with the product. The TechnoLog would become an additional pathway for sustainable homebuilding. 🏠





STUDY SHOWS OUTFITTERS AND GUIDES INDUSTRY BOOSTS STATE'S ECONOMY

By Lori Rock
Photo by Melissa Hartley

Contributing nearly \$600 million to Idaho's economy in 2022 alone, the outfitters and guides industry creates over 4,900 jobs annually and brings in over \$50 million in state and local taxes. These findings are part of an economic contribution study by University of Idaho and the Hayden Lake-based company GuideTime.

The first of its kind in over 30 years, "The 2022 Contributions of the Outfitters and Guides Industry on Idaho" study shows the outdoor industry's contributions to the state's economy. U of I economics Professor Steve Peterson led the study. Jimmy Bulger, an economics major,

led a team of undergraduate students who contributed to the study.

GuideTime was co-founded by father and son, Sam and Danilo Jankovich. Sam attended U of I from 1979-80. They developed an app that provides a real-time database for future outdoor research projects. After meeting with Idaho Department of Commerce representatives and U of I Entrepreneur Director George Tanner, they realized that the data obtained from the app development could be included in a contribution study for the entire industry. **I**

SCHOLARSHIPS ADDRESS IDAHO PHYSICIAN SHORTAGE

by Emma Zado '23
Photo by Melissa Hartley

Nine years ago, Idaho WWAMI had only \$7,000 in scholarships to award to their students.

In 2023, Idaho WWAMI and its partners awarded students over \$800,000 in scholarship money.

Idaho WWAMI held its inaugural Scholarship Reception last fall honoring donors who support the program's commitment to help solve Idaho's physician shortage.

Over the past five years, Idaho consistently ranked as one of the fastest-growing states in the country, taking the No. 2 slot in 2022 with a 1.8% population increase. Despite this, Idaho remains in the bottom 10 out of 50 states for physicians per capita.

As the only medical school in the state training MDs, Idaho WWAMI focuses on training medical students who are Idaho residents to serve the needs of the state's largely rural population. The program partnered with health care organizations like Blue Cross of Idaho Foundation for Health and St. Luke's, as well as private individuals, to secure scholarships.

Blue Cross of Idaho Foundation for Health Executive Director Kendra Witt-Doyle said Idaho WWAMI's dedication to the state is why Blue Cross of Idaho chooses to support the program.

"We have a physician shortage here in Idaho and I think Idaho WWAMI really understands that and is trying to meet that need and get Idaho kids the medical education that they need to meet the needs of Idaho," she said. **I**



NUCLEAR ENERGY CORRIDOR APPROVED BY DEPARTMENT OF COMMERCE

By Alexiss Turner '09
Photo by Brown Photography

The University of Idaho College of Engineering and a consortium of Idaho leaders in advanced nuclear energy innovation were recognized by the U.S. Department of Commerce's Economic Development Administration (EDA)

for their ability to strengthen workforce development and the region's capacity to manufacture, commercialize and deploy technology.

U of I is part of the Idaho Advanced Energy Consortium leading the development of the Intermountain West Nuclear Energy Corridor. The EDA's designation is part of a new economic development initiative, the Tech Hubs program, to bring funding to regions across the nation identified for their high potential to become epicenters for globally competitive innovation.

Initial funding of \$500,000 and official EDA designation opens the opportunity for up to \$70 million in additional federal funding to the state to carry out the nuclear energy tech hub's mission. The phase two submission process is underway and, if funded, will substantially expand the role of clean nuclear energy in the state and nation:

"U of I leads decades of competitive research in next-generation nuclear technologies, advanced manufacturing, cyber-physical systems and supply chain management," said Suzanna Long, dean of the College of Engineering. "Our longstanding programs have deep connections to worldwide industry leaders. With direct access to nuclear and cybersecurity simulation laboratories and expansive online programs, we have tremendous ability to generate the advanced energy professionals needed to strengthen not only Idaho but also the U.S. economy." **I**



GOLD, BOLD AND COLD

Moscow Brewer Scores With Vandal Victory Lager

Story by David Jackson '93
Photos by Melissa Hartley

Even before his alma mater contacted him about making University of Idaho's first licensed beer, Graham Lilly '12 had already secured his own kind of Vandal Victory by turning a hobby into a job.

After earning his bachelor's degree in microbiology, Lilly was planning to go to medical school when he decided he needed a break, which he spent experimenting with homebrewing beer. By the time his break ended, he had a different plan — turning his new passion into a career.

"I had a doctor friend who tried to stage an intervention," Lilly said, laughing. "It was really awkward. My mind was already made up."

Fueled by his interest in learning more about the science of brewing, Lilly established Hunga Dunga Brewing Company in Moscow in 2016. In 2023, after working with U of I for several years on the project, he rolled out Vandal Victory Lager.

"We're selling kegs to local bars and restaurants and cans out of our taproom and through select grocery stores," he said. "It's been one of our bestsellers, especially during football season."

Wanting to stay connected to U of I has always been important to Lilly, so he was thrilled when the university reached out to him about creating a licensed beer to represent the Vandal brand.

Lilly worked with several U of I departments and the Collegiate Licensing Company during the process of creating the beer, gathering input on everything from the name to

the style of beer to the design of the label, which is a hybrid of Hunga Dunga's logo and the iconic image of Joe Vandal.

His commitment to U of I extends to helping those who are interested in learning more about brewing by guest lecturing on beer and brewing science for the College of Agricultural and Life Sciences. Lilly has also shared his industry knowledge with would-be brewers by providing internships at Hunga Dunga, something he'd like to continue.

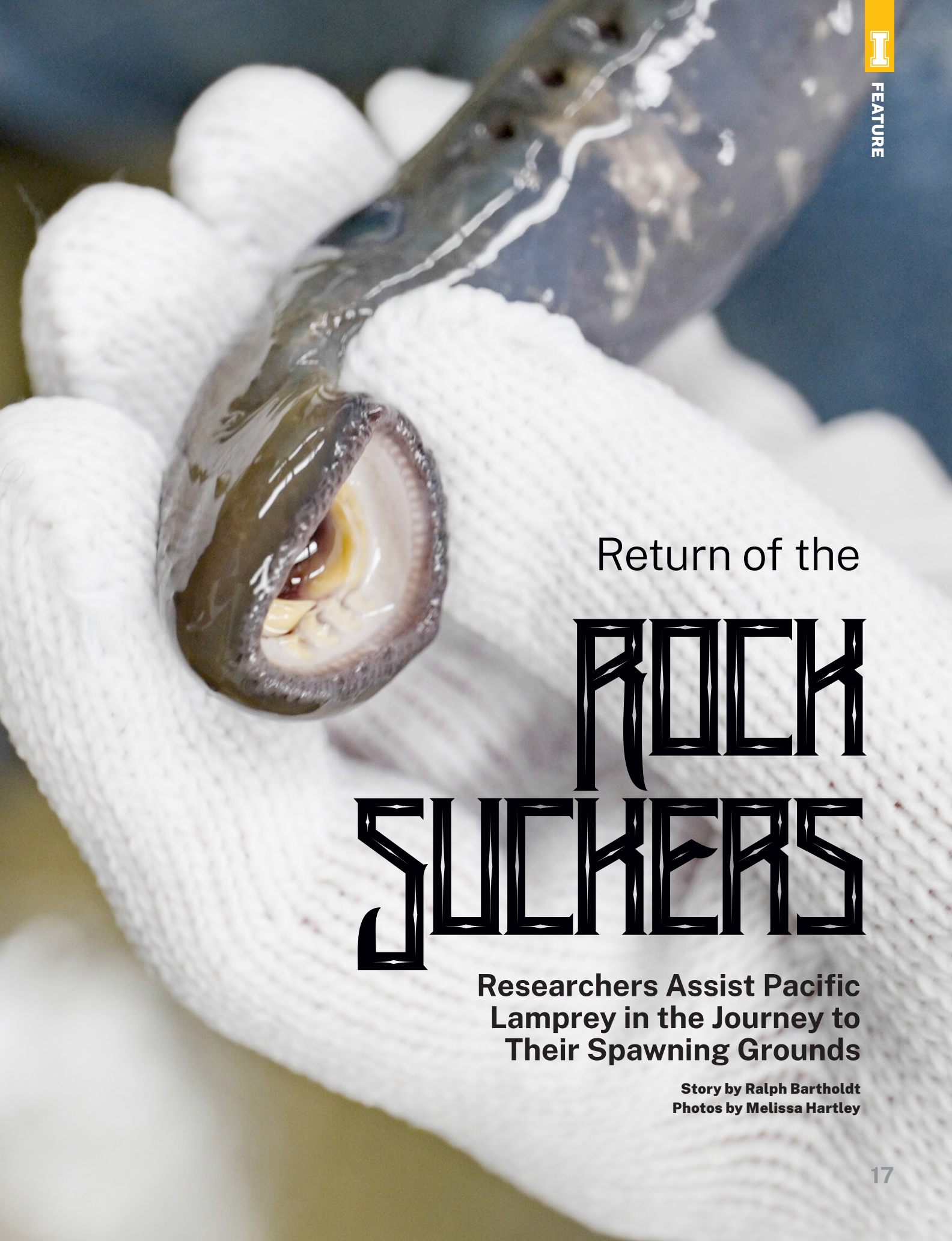
"The lectures started when a former U of I professor of mine asked me to come in and talk about brewing," Lilly said. "There are students who are really interested in the science and nuances of brewing. Maybe we can help inspire others to go down that path."

Looking back at how Hunga Dunga began, Lilly, who is working on creating a U of I-licensed hard seltzer, said it was worth going through uncertainty and fear to create a business based on something he loves to do.

"It was daunting — it was kind of a terrifying thing to embark on," he said. "But if you have something you want to pursue, even if it doesn't make sense to others, don't be afraid to follow your dreams because you never know what might happen." **I**



Graham Lilly '12



Return of the

ROCK SUCKERS

Researchers Assist Pacific Lamprey in the Journey to Their Spawning Grounds

Story by Ralph Bartholdt
Photos by Melissa Hartley



Researchers identify each lamprey using a handheld device that recognizes passive integrated transponder tags embedded in the fish.

Rock suckers and vampire fish are among the monikers given to Pacific lamprey for their parasitic lifestyle and ability to climb through a river rapid using the sucking disc of their mouth to scale rocks.

Known simply as heésu, or eel, to the Nez Perce people, lamprey were an important source of food and medicine, and the town of Asotin, Washington, took its name from a mispronunciation of Hesuutin, a Nez Perce word that means “place of the eels.”

Neighboring Asotin Creek was a favorite place for tribal members to harvest the slim, scaleless fish that spend much of their adult life in the ocean before traveling upstream from the Pacific to freshwater tributaries to spawn.

Although the Columbia River dams have impeded the voyage of the lamprey to their freshwater spawning streams for almost a century, University of Idaho researchers are working closely with the Nez Perce and three other basin tribes that belong to the Columbia River Inter-Tribal Fish Commission to ensure that lamprey are a stable inhabitant throughout their former freshwater range.

“They are a really unusual and interesting fish that once were common from the ocean to the headwaters of the Snake and

Salmon rivers,” said James Nagler, a professor of zoology whose research encompasses a variety of sea-run fish including trout and salmon.

Using blood samples taken from netted lamprey and scanning the tubular fish with a compact ultrasound device, Nagler and his team are developing a method of sexing fish and determining their maturity. This helps biologists know which fish to move upstream to spawning sites and which ones may be kept in tanks until they are ready to be released into tributaries.

Fish that enter spawning streams before they are mature must spend as many as two years in the stream, making them vulnerable to predators.

“I think a lot of immature lamprey are lost like that,” Nagler said.

One of the conservation and restoration efforts by member tribes, including the Umatilla, Yakama and Warm Springs, is



catching migrating lamprey at Columbia River dams as part of a translocation effort. Biologists and technicians transport lamprey around dams to allow access to upstream spawning areas.

“Lamprey are culturally important to the tribes and provide immeasurable benefits to the ecosystems in which they reside,” said Laurie Porter, the commission’s lamprey project leader. “The translocation programs were initiated to halt the population decline, prevent additional extirpation and to restore lamprey to sustainable harvestable levels throughout the historic range.”

Results from the monitoring programs confirm that translocation and artificial propagation benefit populations, and lamprey numbers are increasing because of the efforts, Porter said.

Because male and female lamprey look the same, and early maturing fish are indistinguishable from late maturing fish, biologists are seeking ways to determine sex and age so an

“Lamprey are culturally important to the tribes and provide immeasurable benefits to the ecosystems in which they reside.”

**- LAURIE PORTER
COLUMBIA RIVER INTER-TRIBAL FISH
COMMISSION PROJECT LEADER**

appropriate number of mature males and females are released to spawn. Meanwhile, immature fish would be held until they are ready to spawn, thus limiting predation and ensuring good spawning success.

Once a month in the basement of the College of Natural Resources building on the U of I campus, Nagler, fellow researchers and assistants remove lamprey, one fish at a time, from a holding tank.

“We get together here for a few hours monthly and collect data from the fish we have,” Nagler said.

Each fish is identified via its passive integrated transponder (PIT) tag. The fish are weighed and measured, a blood sample is collected, and the fish are given an ultrasound exam to help identify sex and monitor the growth of sex organs before they are returned to the tank.

Lamprey that mature while in biologists’ possession are released back into the river and tracked to the mouth of spawning streams that have PIT tag recognition devices.

During the monthly sessions, data is collected in an assembly-line fashion from individual fish by a half dozen biologists clad in rubber boots to keep their feet dry as water from tanks



Blood samples help biologists determine each lamprey’s maturity.



Working with the Columbia Inter-Tribal Fish Commission, zoology Professor James Nagler is helping ensure lamprey are a stable inhabitant throughout their former freshwater range.

sloshes onto the concrete floor or drips from the bodies of wriggling lamprey.

Graduate student Nick Hoffman is the day's acting fish wrangler. He dips a net into the tank, removes writhing lamprey from the cold water and transports them to a cooler — like one used on a camping trip — filled with sedative-laced water. The fish are active and wriggling, making them difficult to handle unless they are sedated. From there, the lamprey, less active now, go through the assembly line.

"We started with a hundred but one escaped (likely back into the river) and we released some because they had matured," said Lea Medeiros, a U of I research scientist who today is operating the compact ultrasound device.

Seventy-eight remain.

"They are super squirmy," said Hoffman. "They can slip through a gap — they're pretty sneaky."

The fish can also climb fish ladders, and the rapids of rivers and streams, using their sucker mouth to pull themselves up, but once they enter fresh water, Pacific lamprey quit eating.

"They actually lose body weight and get smaller," said Medeiros.

Once each lamprey is sedated, weighed, measured and their blood drawn to test hormone development, Nagler measures the gap between the two fins on its back. Because the fins grow closer together as fish age, the measurement could help determine maturation in the future.

The ultrasounds show the development of sex organs.

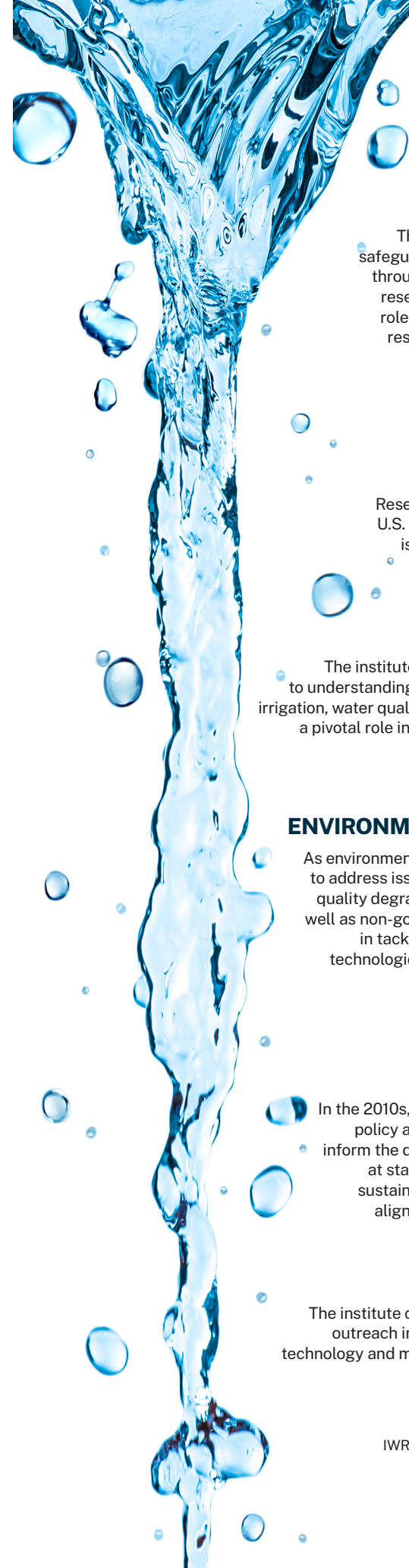
"This is a male, you can see this black part which is testes, and they will get bigger as the fish matures," Medeiros said.

She lays an anesthetized lamprey onto a tray and rubs an electronic monitor over its belly. In a female fish, the ultrasound screen shows silvery white specks.

"That's the ovary, and you can see the little white spots are forming eggs," Medeiros said.

Since translocation began in 2000, thousands of Pacific lamprey have been moved upriver, around dams and released in places like Asotin Creek, the south fork of the Salmon River, the south fork of the Clearwater River and tributaries to the Grand Ronde River.

"These fish were historically really important to Columbia River tribes, so this research could help bolster populations of these threatened indigenous fish," Nagler said. **I**



MAKING EVERY DROP COUNT

The Idaho Water Resources Research Institute (IWRRRI) has safeguarded the state's water resources for more than 60 years through research, education and outreach. As one of 54 water research and technology centers in the nation, it plays a vital role in developing innovative outreach programs that provide research-generated information to water managers, agency research scientists and the public.

1963 THE EARLY YEARS

IWRRRI was established as part of the Water Resources Research Act, which created a network of institutes across the U.S. Its primary mission was to address pressing water-related issues through scientific research, education and outreach.

1980s TO '90s RESEARCH AND EDUCATION

The institute's research activities expanded, significantly contributing to understanding and managing Idaho's water resources. Projects involved irrigation, water quality, groundwater resources and water policy. IWRRRI played a pivotal role in educating students and professionals in water resources.

2000s TO '10s ENVIRONMENTAL CHALLENGES AND INNOVATION

As environmental challenges intensified, the institute stepped up efforts to address issues like water scarcity, climate change impacts and water quality degradation. Collaborations with state and federal agencies, as well as non-governmental organizations, became increasingly important in tackling these complex problems. The institute also embraced technological advancements, using geographic information systems, remote sensing and modeling tools to enhance research.

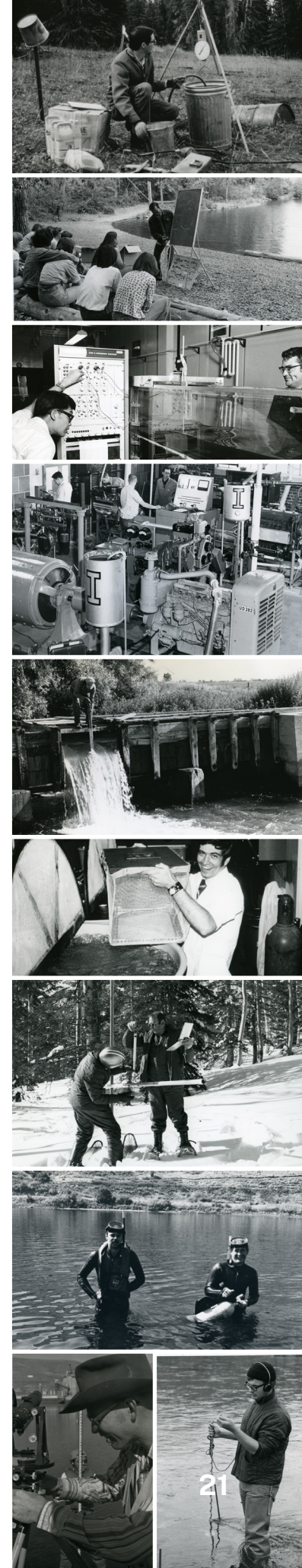
2010s TO 2024 POLICY AND LEGISLATION

In the 2010s, the institute became deeply involved in influencing water policy and legislation in Idaho. Its research findings and expertise inform the development of water management strategies and policies at state and local levels. It contributes valuable insights into the sustainable use of water in agriculture, industry and urban areas, aligning with Idaho's commitment to responsible management.

FUTURE DIRECTIONS

The institute continues to lead water resources research, education and outreach in the state by addressing emerging challenges, advancing technology and methodologies, and strengthening collaborations to ensure the responsible stewardship of Idaho's water resources. **I**

Photos: University of Idaho Special Collections and Archives
IWRRRI's historic records are housed at the University of Idaho Library



Nourishing Enterprise

U of I's Food Technology Center Boosts Idaho-Based Food Entrepreneurs

Story by John O'Connell
Photos by Melissa Hartley

Janine Zacca Zenner created a steady market for most of her father-in-law's garbanzo bean crop while simultaneously bringing her mother's family hummus recipe national fame thanks to a University of Idaho center focused on food entrepreneurs.

Her Zacca Hummus is now stocked nationwide in hundreds of stores and is the brand of choice for the Greek and Mediterranean restaurant chain Gyro Shack. The popular hummus brand, which exclusively sources garbanzo beans raised on the Palouse at Zenner Family Farms, is a success story of University of Idaho's Caldwell-based Food Technology Center (FTC).

The center provides training, a commercial kitchen, equipment and continued support to aspiring entrepreneurs who make, market and sell packaged food products. Its goal is for clients to eventually outgrow the university facility and expand production elsewhere, as Zacca Hummus has done.

"The Food Technology Center was instrumental in our success because of their knowledge and expertise in food production," said Zenner, of Boise. "We would not have had the opportunity to start a business like we have without access to that facility."



Janine Zacca Zenner and Chris Zenner

The center's commercial kitchen occupies about a third of a 7,000-square-foot plant, which was shuttered when the university acquired it in 2000. In addition to the FTC facility, the Caldwell Research and Extension Center includes office and warehouse spaces for center clients and other businesses to lease.

Supervisor Cini Baumhoff and Director Josh Bevan comprise a two-person staff running the financially self-supporting center. It's one of the few labs in the country certified to perform processing on behalf of agricultural chemical manufacturers needing pesticide residue studies to submit to the U.S. Environmental Protection Agency. Food manufacturers also contract with the center to test equipment and production methods.

Currently, the center serves more than 20 clients. New clients take a day-long, \$149 course covering the basics of food safety, production and packaging on a commercial scale. They also learn how to use equipment in the commercial kitchen and are granted access to produce their products in the facility at a subsidized rate of \$30 per hour. Baumhoff offers guidance and helps clients effectively scale up recipes.

"We want them to make a product they can sell, and prove they can sell, at a price point they can make money at and not lose money at," Baumhoff said. "There's not a lot of profit margin in food."

Some notable brands being produced at the center include Wagner Mustard, Oma and Popie's Seasoning Sauces and Spice Blends, House Made cocktail syrups and Hummuna Hummus. In 2018, Bevan calculated clients using the kitchen had a \$1 million economic impact nationally.

"People like to see products that come from their regional area and this facility allows people to manufacture products safely and efficiently with expertise and support," Bevan said.

The Zacca Hummus story began when Zenner's in-laws mailed boxes of their farm-raised garbanzo beans to her mother, Mimo, who used them to make hummus and was amazed by the creamy texture and nutty flavor. Zenner was inspired to start making her own hummus with her mother's recipe. It was a hit, and Zenner soon had visions of commercial production.

Though she began as a food-manufacturing neophyte, Zenner brought relevant business experience to the table. She holds bachelor's degrees in finance and international marketing from Florida International University and she's a certified professional accountant.

Zenner and her husband Chris, an Idaho farm boy, met in Florida while working for Miami's Arena Football League team. She was an accountant for the management company that owned the team while Chris was an intern in sports administration. They eventually moved to Idaho's Treasure Valley so Chris could take a job with the Boise Hawks Minor League Baseball team.

In 2011, at the urging of her sister-in-law, Chandra Zenner Ford, who is the center executive officer of U of I Boise, Zenner enrolled in the Food Technology Center's course. Her initial batches were a rough experience, leaving her covered from head to toe in hummus. Before long, however, Zacca Hummus was a staple at the Boise Farmers Market and soon found its way onto shelves at nine local Albertsons stores.

Zenner began producing hummus for Gyro Shack in 2017. The following year, she reached an agreement with Gyro Shack's supplier, Devanco Foods, based in Carol Stream, Illinois, to make and distribute her product. Through the partnership with Devanco, Zacca Hummus increased production to 6,000 pounds per week.

In 2022, Kroger Co. solicited applicants for a competition in which food entrepreneurs were invited to pitch their business ideas. From a field of more than 1,600 applicants, Zacca Hummus placed first in the Pacific Northwest and was among 15 products invited to Cincinnati for in-person presentations. After her husband offered a brief history of Zenner Family Farms, Zenner told the judges how the farm's dried garbanzo beans became the secret ingredient to improve upon an old family recipe.

Zacca Hummus finished among the competition's top five products, earning placement in an additional 400 Pacific Northwest Kroger stores. The brand continues to grow.

"We started at the Boise Farmers Market with the help of Cini Baumhoff and the U of I Food Technology Center," Zenner said. "Cini was very knowledgeable on labeling and what it took to get a packaged product out to the stores. Had she not been there to train me and lead me in the right direction, I would not have been able to do it on my own." 📌



People process and package Wagner Mustard at the Food Technology Center in Caldwell, another notable brand being produced at the facility.



SUSTAINABLESCIENCE

Four New Researchers Investigate Ways to Make Our World More Sustainable

Story by Leigh Cooper
Photos by Garrett Britton and Rio Spiering '22

Use LED lightbulbs. Buy reusable water bottles. Rely on public transportation or a bicycle. That's a classic list of go-to sustainability strategies. But many of these tactics rely on individual personal choices. University of Idaho thought bigger. The College of Science hired four new researchers to investigate aspects of sustainability that affect society as a whole — including questioning fundamental ways we use land and the impacts of tools we wield. They study everything from how we make important chemicals and use antibiotics to how plants use water and how effectively we diagnose disease.



MENG ZHAO Ecohydrologist

In one sentence, I study how trees use water. This is important because it dictates how much water is available for human beings, especially during hot and dry days. Under climate change, we're going to have more droughts and heat waves, and vegetation is a very large water user. We must understand the trees' behaviors now so we can better prepare for our future, especially for water and food security.

Many people think planting trees could be a good thing, but that will shift how water is used on the landscape. There could be the unintended consequence of losing water to the new forest. Using satellites, I can measure the amount of water on a landscape and track changes in water resources during reforestation projects.

By understanding past and current water use patterns of vegetation, I hope I'll be able to provide advice on future land use strategies as climate change becomes more and more influential.



RICHARD THOMPSON Organometallic Chemist

I'm what's known as a synthetic organometallic chemist, which is a complicated way of saying I use metals to manipulate other organic molecules. Creating something we want, like the form of phosphorus used in herbicides, pesticides and fire retardants, is a multistep process. To make these, you often must add one molecule to remove a different part of the chemical, heat it up, manipulate something else — it's very complex.

For several of our most useful chemicals, the process is incredibly wasteful. They can also be energy-intensive and create toxic intermediary chemicals and byproducts. Synthesizing most important phosphorus compounds involves going through white phosphorus, a chemical warfare agent, for example.

I want to find new avenues — safer and more energy-efficient avenues — for making the same chemicals that we already have. Along the way, we may even discover new, better materials like medications or ways to have more vivid colors on screens.



TIANTIAN YANG Statistician

I want to develop and implement advanced statistical and machine-learning models for use in the health care system. These models would enhance our ability to predict whether a person has a specific disease and the patient's survival chances. The models will be based on various risk factors — not just basic clinical factors like age, BMI or sex but also more multifaceted data.

Information from medical studies is complex and can include data such as gene expression and RNA sequencing. There is room for improving the accuracy of models used to predict diseases by incorporating these data with state-of-the-art artificial intelligence systems. Enhanced models could allow for improved prevention, better early disease detection, fewer unnecessary treatments and more targeted treatments — overall a more sustainable use of our health care resources.

In addition, if I can make the models easier to understand, I can enhance the trust the health care community has in the models, which should lead to faster implementation and have positive impacts on patient outcomes.



KLAS UDEKWU Microbiologist

I work on antibiotic resistance from the perspective of how the man-made environment affects its abundance.

Antibiotics used by humans and in animal husbandry can accumulate in soil and wastewater, and we suspect these chemical residues select for bacterial antibiotic resistance, reducing the sustainability of our antibiotics. In addition, we found that zinc, a common animal husbandry supplement, helped one species of common soil bacteria to become resistant to a frontline drug. Our studies could help us reduce the spread of metals or other chemical add-ons that appear to be innocuous — but are not — into the environment.

We are also studying the effects of antibiotics on the proper function of microbial communities. For instance, the makeup of the microbial community in the human digestive system needs to be balanced to function properly. If one microbe becomes resistant, it can out-compete other species, unbalancing these communities. This dynamic can also play out in soil bacterial communities, which we will soon study. Such studies are crucial for plant growth, health and resistance to fungal infections, thus affecting agricultural sustainability. 🌱



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\$500 MILLION CAMPAIGN FOR A THRIVING IDAHO

In partnership with thousands of Vandals, we are raising \$500 million to elevate families, communities and industries throughout Idaho.

EVERY GIFT IMPACTS IDAHO

Idaho Center for Agriculture, Food and the Environment (CAFE)

Advancing Idaho's \$3.5 billion dairy industry.

McCall Field Campus / McCall Outdoor Science School (MOSS)

Place-based STEM education for more than 60,000 K-12 youth since 2001.

Extension for Community Health Outcomes (ECHO) Idaho

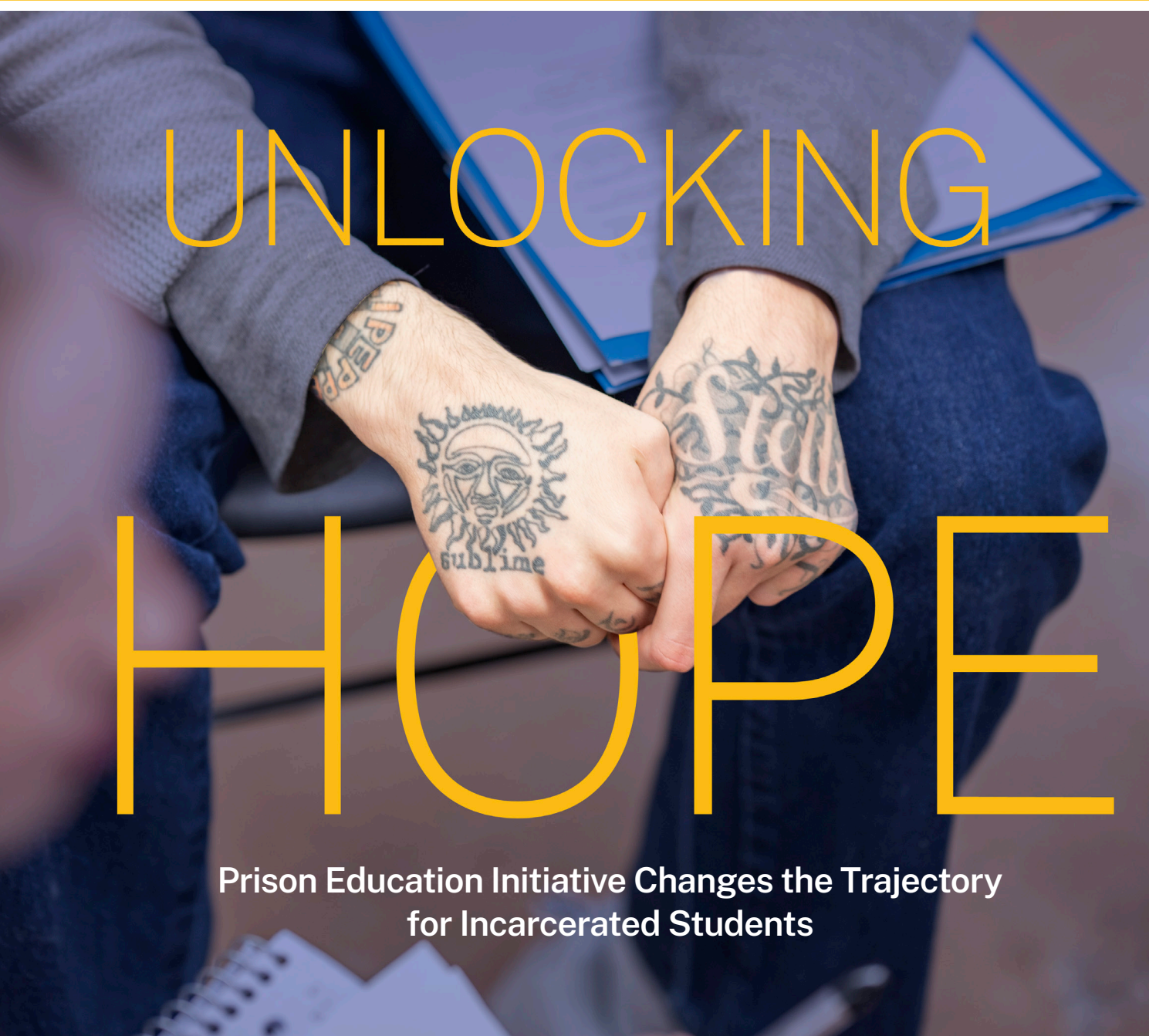
Delivering free, online continuing education to more than 5,000 Idaho health care workers since 2018.

UI Extension 4-H Youth Development

Enriching experiences for more than 75,000 Idaho youth each year.

Scholarships

\$30 million awarded annually. 3,768 students received donor-funded scholarships last year. 439 new donor-funded scholarship endowments created since 2015.



Prison Education Initiative Changes the Trajectory for Incarcerated Students

GOAL
\$500 MILLION

RAISED \$425 MILLION TO DATE

\$131 Million Scholarships, Student Success	\$203 Million Research, Academics, Faculty	\$91 Million Campus, Facilities, Outreach, Other
-------------------------------------------------------------	------------------------------------------------------------	------------------------------------------------------------------

How Alumni Drive a Thriving Idaho:

- 18,900** have contributed
- 83,700** gifts made
- 2,300** university areas supported

(2015 to the present)

WE ARE 85% OF THE WAY TO OUR GOAL.

Help close the gap by considering a gift of \$100 or more to what matters most to you. Visit go.uidaho.edu/give24 to explore the many ways you can be an unstoppable force for good.

For Students. For Idaho. For the World.



The United States has only 5% of the world's population but 25% of the world's prisoners.

And, of all the states, Idaho is at or near the top in terms of incarceration rates. Most years, Idaho ranks in the top three in the country for prison admissions and prison populations. More than 10,000 Idahoans are currently residing in state prisons, mostly for victimless crimes.

"We are a mass incarceration state in a mass incarceration country," said Omi Hodwitz, a University of Idaho professor of criminology. "But the strategy of mass incarceration doesn't work to reform those who are convicted."

In fact, upwards of half of those released from prison will engage in crime again within the first year.

But there is a proven way to help people exit the reincarceration cycle — education. Hodwitz and the College of Letters, Arts and Social Sciences (CLASS) started the U of I Prison Education Initiative to present a different future for incarcerated students — a program that also provides educational opportunities for on-campus students.

Hodwitz gathered comments for this story from incarcerated students, but their names are not used to protect their anonymity.

"The steps I have taken on this journey toward a higher education have left me with an incredible sense of accomplishment and a feeling of self-worth never before present in my life," said one incarcerated student in the program. "As I begin to recognize my potential, there is finally a light at the end of the tunnel, giving me hope for a better future."

The Silver Bullet

According to the U.S. Department of Justice and the Vera Institute of Justice, offering education in prison can cut reoffending rates nearly in half, and the more advanced the education, the lower these rates get. The same applies to victimization rates and government spending.

"It's a win-win on all fronts," Hodwitz said. "Offering education to incarcerated communities facilitates a successful transition back into the community. They're better socialized to integrate and they have knowledge and skills that will help them find good employment."

Unfortunately, in the 1990s, the federal government canceled all Pell Grant funding for incarcerated students. Pell Grants are federal grants available to low-income students across the nation. When they were revoked for incarcerated students, it reduced prison college programs by 99% within three years.

Now, three decades later, the federal government is selectively reintroducing prison-based Pell Grants as part of a national experiment. Recognizing the importance of education in prison, U of I applied to be part of the experiment.

In 2021, the federal government granted U of I access to Pell funding for two prisons in Idaho — the Idaho Correctional Institution-Orofino, a men's prison, and the Pocatello Women's Correctional Center. This was the start of U of I's Prison Education Initiative (PEI), a program that provides educational opportunities to incarcerated communities.



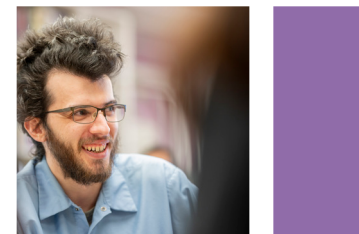
"This program is an important outreach opportunity. It corresponds with our land-grant mission which uniquely positions U of I to serve all our citizens and provide them with greater educational opportunity," said Sean Quinlan, dean of CLASS and one of the initiative's biggest supporters.



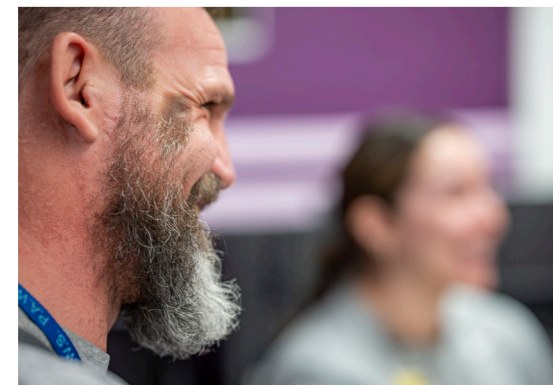
Welcoming All Students

In the fall of 2022, PEI welcomed the first cohort of incarcerated students. Pell students in the PEI program can earn one of three fully online degrees: organizational sciences, communication and general studies.

"This is the single greatest thing that happened to me," one incarcerated student said. "My life has forever changed for the better and I now have hope for my future."



Professor Omi Hodwitz leads a discussion between incarcerated and Moscow-campus students at the Idaho Correctional Institution-Orofino as part of the Inside Out class.



According to Hodwitz, the students are excelling at their coursework and the program grows every semester. She estimates there are roughly three dozen active PEI students across the two facilities.

“I have seen more people go from hopeless to hopeful because of this program than any other program I have been a part of,” an incarcerated student said.

In July 2024, the federal government will extend Pell funding to any partnership between educational and correctional institutions that meets the criteria. Including incarcerated students in the Pell Grant program does not reduce the number of grants available because all who are eligible for Pell Grants receive them.

“The U of I’s Prison Education Initiative has greatly affected participating students in a positive way. The benefit is an opportunity for the residents to earn a degree and, upon reentry, obtain a job earning a living wage,” said Kent Shriver, the deputy warden of operations at Orofino. “This opportunity is not only changing the lives of the residents, but their families as well. I believe this will have a generational impact helping to break the criminal cycle.”

In Fall 2024, the U of I program will expand to the Idaho State Correctional Center in Boise, the largest prison in Idaho, allowing more incarcerated Idahoans to take advantage of the opportunity the PEI offers.

For Idaho, the benefits could be greater than simply keeping individuals from returning to prison.

“Recidivism damages community cohesion and community safety,” said Hodwitz, on the need for PEI in Idaho. “The pattern of cyclical reincarceration is damaging not just for the individuals who are caught in that cycle, but also for the community and the state. Our program improves community health and success.”

Unlikely Student Partners

PEI doesn’t only affect incarcerated students. It provides opportunities for U of I on-campus students.

Amara Bailey, a third-year criminology and sociology student, works as a PEI intern. Their main job is to plan the second annual Beyond the Wire art show, which features art by the incarcerated community and helps provide funds to incarcerated students for items like transcripts and textbooks.

The Moscow native connected with the PEI program through Inside Out, a class that brings on-campus students and incarcerated students together at the prison.

Through Inside Out, “outside” students work on extracurricular academic projects with their “inside” incarcerated peers. These unlikely sets of students have published books and articles together and collaborated on research projects.

As an “outside” student, Bailey worked with an “inside” student on a research project that found that the physical recreation needs of the prisoners were not being met. The duo’s work was presented at an international criminology conference.

“It’s incredible to know that I’m working alongside and learning from people who society has deemed irredeemable and unforgivable — but they are acknowledged by the university,” Bailey said. “U of I wants to expand access to education to everybody, regardless of their life circumstance and making good on that is really exciting. I feel super privileged to be a part of it.”



THE ART OF HEALING

Student Fuses Beauty and Function to Create Award-Winning Chair



Students in the Inside Out class discuss the week’s reading assignment.

Story by David Jackson '93
Photos provided by Ainsley Bauer '23

While visiting her aunt in a hospital room as a 15-year-old, Ainsley Bauer '23 didn't immediately think she would someday study interior architecture. She thought about how she could help her aunt get better.

She realized the hospital room’s generic surroundings were not conducive to healing. Remembering that scene helped her become an award-winning furniture designer.

“I knew it was not a good environment for recovery,” said Bauer, who completed her bachelor’s degree in interior architecture and design in 2023 before enrolling in University of Idaho’s master’s in architecture program. “There is a psychology to healing. If you feel safe and comfortable, you’re going to heal faster.”

The Spokane native brought her dream of designing furniture for medical facilities to U of I, specifically to the College of

Art and Architecture's (CAA) Furniture Design and Construction class, which offers students the opportunity to design and build furniture.

"This class exposes students to every step of the creative process — from concept design to model making to building their own full-size furniture," said Miranda Anderson, director of the Interior Architecture and Design program.

From Forest to Furniture

For her class project, Bauer wanted to create something that was the opposite of today's disposable, big box store furniture — a chair that showcased the beauty of natural building materials and was as emotionally appealing as it was functional.

Her Sabi Sling Chair — Sabi is Japanese for "things whose beauty stems from age" — was built with a solid Baltic birch frame and leather sling, which were connected with maple dowels pushed through leather loops. The leatherwork was challenging, but Bauer's persistence paid off.

"Working with leather is not easy and Ainsley knew that," said Hani El Hajj, one of the class instructors. "Her leather loops became a very unique and avant-garde detail for her chair and made her chair stand out."

After three weeks of construction and an estimated 200 hours in the wood shop — "You better be able to produce what you design," Ainsley said with a laugh — the chair came to life. She created a chair that helps people feel good.

"It's a chair that hugs you — you feel safe in it," she said.

Showtime

Bauer displayed her chair in April 2022 at the Chair Affair, a regional furniture design competition in Boise. The Sabi Sling Chair received many accolades, especially for the leather joinery technology, and Bauer walked away with the award for Best Undergraduate Student Design.

Based on her performance in Boise, both El Hajj and David Schmidt, the U of I tech shop director at the time, encouraged her to enter the national Fresh Wood student furniture competition at the Association of Woodworking and Furnishing Suppliers Expo in Las Vegas last July, where she won first place for Design for Production.

"U of I has had a long tradition in competing in this competition, but it's been several years since we've had a first-place finish," said CAA Dean Shauna Corry. "The CAA family is incredibly proud of Ainsley, Hani and David."

Bauer's results were even more impressive considering this was the first time she designed and constructed a chair, used a computer numerical control machine to shape materials and used leather material in a design.

"Being involved in this program has opened my eyes to how much fun it is to design and construct furniture," she said. "I started thinking about interior architecture and design when I was in high school and now I know I can make a career out of it." **I**

Ainsley Bauer '23



Hani El Hajj,
David Schmidt and
Ainsley Bauer



CLASS NOTES

U of I congratulates these Vandals on their achievements.

1970s

Jan Hoffbuhr Williams '75 was awarded the Idaho Head Start Hero of the Year for 2022.

1980s

Richard Cofer '82 was promoted to interim provost and vice president for Academic Affairs at Northeastern Illinois University.

Scott McGregor '82 was appointed to a four-year term on the South Dakota State Board of Elections. He previously served on the board from 1991-99.

Sheryl Woods '82 received the Ultimate CEO Award from the South Florida Business Journal in November 2023 in recognition of nearly 30 years of leadership in the organization.

Michael Engberg '83 retired in August 2023 after a 37-year career with Marion County, Oregon, in the tax collector's office.

Jim Knecht '83 retired as county executive director of the Latah County Farm Service Agency in July 2023.

Keven Prather's '85 collaborative book, "The Keys to Authenticity," was named an Amazon Best Seller.

Mick Zeller '88 retired in June 2023 after 35 years of teaching and coaching 12 years at Emmett High School and 23 years at Post Falls High School. His career included a state baseball championship in 1998.

1990s

Tracy Vanairsdale '94 was named president of Alaska's Bettisworth North Architects and Planners.

Ben Carr '95 was recognized as the 2023 Wyoming Secondary Principal of the Year in his role as principal of Mountain View High School.

Steve Beukelman '99 accepted the position of director of safety for the spring water corporation, Crystal Geysers Roxane, in 2022.

2000s

Joshua P. Berning '03 was awarded full professor at Colorado State University in the Department of Agricultural and Resource Economics. His areas of research include food marketing, consumer demand and consumer health outcomes.

Kelsey Jae's '03 law practice earned the status of Certified B Corporation.

Sara (Newkirk) Baker '04 joined ICF International Inc. as a project manager.

J. Blake Johnson '07 received the Distinguished Servant of Public Education award from the Michigan Education Association honoring individuals who positively promote public education at any level through union activity, political action and/or community advocacy.

Sean Waite '08 was hired as an assistant United States attorney for the Western District of Washington in Seattle.

Marianne (Miller) Sletteland '09, '13, '16, '19 was selected as the new principal of J. Russell Elementary School in Moscow.

Markita Williams '09 was recognized as Realtor of the Year by the 2023 Four Rivers Association of Realtors.

2010s

Kim Button '11 was promoted to senior manager of Innovation: Core Products at the J.R. Simplot Company.

Michael Joseph '11, '13 was named principal architect at The Architects Office in Boise, with a focus on multi-family design.

Skyler Twidt '12 was hired as the chief financial officer at Bonner General Health in Sandpoint.

Jonathon Ahlers '15, '18 was hired by the Institute for Defense Analyses as a research staff member.

Calla Chapin '16 joined the Eat Smart Idaho team as the Southern District program manager.

Marie (Hale) Dillon '16 was promoted to vice president of communications and marketing at Idaho College of Osteopathic Medicine.

Laura Richmond's '19 debut novel, "The Mermaid's Tale," was published by Enclave Publishing.

IN MEMORIAM

U of I extends its condolences to the family and friends of our departed Vandals.

Helen (Morfitt) Durham '46, Boise, Sept. 11, 2023

Elizabeth "Becky" (Barline) Boyington '51, Spokane, WA, July 6, 2023

George W. Gust Jr. '51, Bellingham, WA, March 6, 2022

Norma L. (Howell) Gust '51, Bellingham, WA, Oct. 6, 2022

Edna Rae (Reid) Schiller '52, Boise, July 17, 2023

Diana Billman '54, Las Cruces, NM, July 18, 2023

Darlaine (Bagley) Blackburn '55, Reno, NV, Oct. 19, 2023

William Conroy '55, Northridge, CA, June 7, 2023

Carl Crisp '55, Fort Collins, CO, March 21, 2023

David Lowell '56, Mount Dora, FL, Nov. 2, 2023

Tommy Waddoups '57, Eagle, May 9, 2023

Michael D. Brannan '59, Sunriver, OR, Jan. 9, 2023

Verne Blalack '61, Cataldo, June 17, 2023

David Ross '61, South Jordan, UT, Oct. 30, 2023

George Thorson '61, Kalispell, MT, Nov. 18, 2022

George Washburn '61, Columbia, MO, April 7, 2023

John Travis '62, Boise, Aug. 31, 2023

Everett F. Miller '64, Concordia, KS, Oct. 5, 2023

Floyd Lukecart '65, Redmond, WA, Oct. 25, 2023

Steven Granger '68, Olympia, WA, March 14, 2023

Sandi Gates Clark '69, Meridian, Oct. 18, 2023

Ronald Waters '70, Lopez Island, WA, Nov. 17, 2023

Jeri Lee Engelking '71, Brandon, SD, Nov. 25, 2023

Randolph Welch '71, Redmond, WA, June 24, 2022

Kleal Hill '73, Arco, Aug. 24, 2022

Bradley R. Janss '73, Frederick, MD, June 24, 2021

Robert Bonnett '75, Mill Creek, WA, Nov. 9, 2021

Vytautas "Vyto" Simaitis '76, Coeur d'Alene, July 20, 2023

Julie Ann Springer '81, Everett, WA, July 12, 2023

James Baumgartner '83, Juneau, AK, Sept. 19, 2023

Nicholas Valison '92, Ravensdale, WA, Sept. 21, 2023

Adam Nest '03, Seattle, WA, Jan. 6, 2024

FACULTY/STAFF/FRIENDS

Robert W. Bartlett, El Dorado Hills, CA, June 18, 2023

Donald Hanley '83, Kirkland, WA, Sept. 2, 2023

Charles R. Hatch, Moscow, Oct. 10, 2023

Ronald Force, Moscow, Oct. 30, 2023

Ruprecht Machleidt, Moscow, Dec. 14, 2023

Bonnie J. Janssen, Fremont, CA, Jan. 5, 2024

CORRECTION

Ardith Eakin '69 is alive and well. We deeply regret the reporting error in the Fall 2023 issue.

MARRIAGES

University of Idaho wishes these Vandal newlyweds lots of love and happiness.

Alice Pence '13 to Dan Knapp '13, October 2022

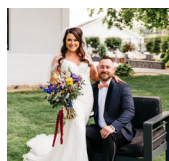
Heather Boni '11 to Brian Lemmons, May 2023

Jen Smith '14, '20 to Stephen Goodwin '14, '17, July 2023

Harley Cope to **Evan Jameson '21**, August 2023

Megan Whetzel '17 to Michael Clark '16, October 2023

Olivia Shan '18 to Phineas Lampman, August 2023



FUTURE VANDALS



1. Annie Becker, daughter of **Sophie (Kopp) '10, '14** and **Ryer Becker '17, '22**

2. Morgan (left) and Amara (right) Bennett, twin daughters of **Kayla Bennett '09**

3. Hazel Mae Bolen, daughter of **Samantha '17** and **Marshall Bolen '17**

4. Bradley Clyde Button, son of **Kimberly (Russell) '11** and **Nicholas Button '09**

5. Rhett (left), Scotlynn (center) and Karsten (right) Carnine, children of Randy and **Brooke (Rust) Carnine '08**

6. Reese Valerie Chapin, daughter of **Calla '16** and **Mark Chapin '14**

7. Juliette Mae Davis (left) and Lilianna Jean Davis (right), daughters of **Zackary Davis '15** (center)

8. Jameson Lee Thompson Dockrey, son of **Megan Thompson '06** and **Christopher Dockrey '05**

9. Kayleigh Louisa Ellington, daughter of Alex and **Katie Ellington '17**, granddaughter of **Richard Urquidi '90**

10. Rylee Elizabeth Hoxie (center), daughter of **Aubrey Hoxie '08**

11. Clayton Konrad Krastins, son of **Erica Krastins '12**

12. Ezio Kurnia Lie, son of **Anna (Matteucci) '18** and **Stephen Lie '18**

13. Parker McMillen, son of **Tyfini '11** and **Travis McMillen '12**, great-grandson of **Lee Clausen '58** and **Mary Gilderoy Clausen '59**

14. Margaret "Maggie" Olympia Meyer, daughter of **Laurel (Eschen) '19** and **Karl Meyer '20**, granddaughter of **Sue (Watts) '78, '85** and **Dave Eschen '78, '87** and, great-granddaughter of **Arlene (Deobald) '43** and **Joseph Watts '40**

15. Wallace James Sonderquist, son of **Chloe Stenkamp-Strahm '13**

16. Syllis Todd, son of **MacKenzie Connelly '16** and **Adam Todd '19**

17. Emmie Manuela Tolmie, daughter of **Andrea Jordan '13** and **Zach Tolmie '12**, granddaughter of **Robyn '86** and **Dirk Tolmie '85**

18. Billie Wideen, daughter of **Garrett Wideen '18**

NO PHOTO:

Oakley Hope Bennett was born to **Cheyne** and **Tessa Bennett '08**

Caroline James Van Herk, daughter of **Reuben** and **Tessa Schaecher Van Herk '12**

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EDUCATION GRADUATE OPENS DOORS WORLDWIDE FOR STUDENT TEACHERS

By David Jackson '93
Photos by Garrett Britton

When applying for her student teaching assignment, Christina Petrie '23 submitted several safe choices before throwing in her dream location just to see what would happen.

Shortly thereafter, she was contacted by Rebekka Boysen-Taylor, director of field placement for the Curriculum and Instruction Department within the College of Education, Health and Human Sciences (CEHHS). Boysen-Taylor told Petrie that if she was serious about her dream pick, CEHHS would advocate for her with university administration to see if they could make it happen.

As a result, Petrie became the first University of Idaho student in several years to spend an entire semester student teaching outside the United States, helping CEHHS and the International Programs Office (IPO) create a blueprint for future student teachers wishing to follow suit.

"We thought she was the perfect candidate and both CEHHS and U of I were willing to try this as a test case," Boysen-Taylor said. "We think this will spark the conversation about international student teaching and how it can enhance their experience, even if they want to come back to teach in Idaho."

Home Field Advantage

Several factors weighed in Petrie's favor when she applied to teach in Germany. She was born and raised there, moving to Moscow before her junior year of high school. Additionally, she holds dual citizenship in both countries and speaks German fluently.

But the desire to return there to teach was more than an opportunity to go home again.

"As a social studies teacher, multicultural education is incredibly important to me, especially as U.S. classrooms are getting more diverse culturally," she said. "I can't think of a better way to learn about different approaches to multicultural education than to be in this setting."

Petrie was also willing to do a lot of extra work required to secure the placement. She acquired proper documentation, passed background checks and took the lead in finding somewhere to teach.

She located the Bonn International School (BIS), where there was an opening for a student teacher in social studies. An advantage for Americans wishing to teach at BIS is that English is the instructional language used by all faculty.

Petrie's performance at BIS bodes well for U of I's interest in building an international student teaching program, according to Kate Wray Chettri, director for Education Abroad at IPO.

"All international student experiences are based on relationships U of I has within those countries," she said. "We don't really have those in place for student teaching right now but based on this successful placement, we're excited to explore long-term planning."

Foreign Relations

Petrie returned to Moscow in December and will start U of I's Master of Curriculum and Instruction online program this summer. She is substitute teaching while searching for a full-time position in the region. Ultimately, her goal is to explore careers in curriculum design.

Petrie also hopes to help CEHHS with building out the international student teaching program. Her experiences living and working in a foreign country could be invaluable to students interested in following in her footsteps.

Boysen-Taylor and Chettri are excited to expand the program. Chettri noted that Petrie was not only the perfect candidate for the first overseas placement in recent years but that it came at the perfect time.

"This is our moment," she said. "International travel is almost back to pre-COVID levels. IPO and CEHHS are working on expanding international opportunities for students interested in teaching abroad. We think this can be a huge opportunity for all U of I students." I





University of Idaho

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*A view of Hello Walk.
Photo by Garrett Britton*

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