Humboldt

The Magazine of Cal Poly Humboldt + Fall 2023

When the Klamath Dams Come Down

Students go to the Philippines to Teach, Learn, Serve Championship Year for Humboldt Athletics *Radium Girls* Production Sets the Van Duzer Aglow

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ON THE COVER: Environmental Science & Management Professor Alison O'Dowd conducts research just downstream of the Iron Gate Dam on the Klamath River near Hornbrook, California.

THIS SPREAD: A waterfall along Highway 96 in the Klamath National Forest between the Iron Gate Dam and Happy Camp, California.



Greetings from Humboldt!

It's an exciting time to be a Lumberjack! As we grow into our new polytechnic designation, we continue to be amazed and inspired by what our alumni are accomplishing in the world.

Generations of Humboldt students, faculty, and staff created the foundation for everything we do today.

We're increasingly having campus discussions about how we can create a model global community. While the details are still forming, this has to do with preparing students to thrive in an interconnected world. It also involves ensuring that everyone feels welcome to engage with us, that we embrace new and innovative ideas, and that we are willing to try new approaches that others can then build upon. I think of it as Cal Poly Humboldt becoming its very best self.

One area where we've made

great strides recently is with the International Service Learning program, which is featured in this magazine. At its most basic, we're expanding on the widely shared experience of many Humboldt alumni, who gained hands-on experiences through community service. We're just doing so in an international setting.

International programs are widely recognized for allowing students to fully immerse in new cultures and collaborate on real-world issues like sustainability.

However, a full semester abroad isn't practical or affordable for many students. So our new International Service Learning program, which launched in Cebu City, Philippines, features a different approach that we plan to replicate at other locations. Under this model, students spend months in class preparing and learning about the location they will be visiting and serving. Then they travel to that location as a group for one week filled with activities, service, and visits to cultural sites. For most students, it is their first time

> outside the United States, and it can be an eye-opening and even life-changing experience.

In Cebu City, Humboldt students engaged with more than 200 11th- and 12th-graders at Sudlon National High School. The students all shared their cultures with one another. Each Humboldt student facilitated an academic workshop.

An important factor was sharing ideas and learning from one another, and that's the inherent power of an international education—engaging with others, learning to adapt to unfamiliar situations, sharpening problem-solving skills, and challenging assumptions. In an international learning experience, students learn that

most people share a desire for better lives for themselves and others, and to protect the planet we inhabit.

Today's Humboldt students are inspired to create a more sustainable and just world, and we're working to provide them the education and tools to do just that. Our alumni are paving the way by modeling global citizenship in their own communities and careers.

Be kind.

Jour Jackson, Je.

Humboldt

The Magazine of Cal Poly Humbold

magazine.humboldt.edu

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> President Dr. Tom Jackson, Jr.

Vice President for University Advancement Frank Whitlatch

Director of Marketing: Kristen Gould

Editor: Aileen S. Yoo

Graphic Design: Hugh Dalton

Photography: Kellie Jo Brown

Writing: Aileen S. Yoo, Grant Scott-Goforth ('11), Melissa Hutsell ('11), Iridian Casarez ('18)

Web: Matt Hodgson, Jennifer Fitch

Alumni Relations

Stephanie Lane ('04, '16), Ash Hansen ('18, '22) forever.humboldt.edu • (707) 826-3132

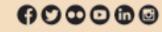
> SUBMIT CLASS NOTES humboldt.edu/classnotes email: forever@humboldt.edu

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email: magazine@humboldt.edu

mail: Humboldt Magazine Marketing & Communications 1 Harpst St., Arcata, CA 95521-8299

social.humboldt.edu





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Homecoming & Family Weekend

Monday, Oct. 16 - Sunday, Oct. 22

Join us for a week of festivities!

Celebrate the Lumberjack family of students and families, alumni, faculty, staff, and University supporters.

The week of fun includes a mixer for families and an alumni brunch. And join us for the Block Party, Saturday, Oct. 21, featuring Remi Wolf, Sage The Gemini and more!

Save the date and stay tuned for more event details at homecoming.humboldt.edu

\$10M for Healthcare Education Hub

SENATE MAJORITY LEADER Mike McGuire, along with Cal Poly Humboldt President Tom Jackson, Jr., College of the Redwoods President Keith Flamer, and local healthcare and elected leaders, announced in November 2022 a \$10 million investment in the creation of a Healthcare Education Hub that will become the epicenter of healthcare career training on the North Coast.

McGuire secured the \$10 million in last year's state budget. The funding will transform a 30,000-square-foot warehouse in Arcata into a state-of-the-art learning lab focused on the development of a healthcare workforce in Northern California. This historic investment will help grow healthcare career programs at both Cal Poly Humboldt and College of the Redwoods.

"We've made so much progress over the last four years thanks to this innovative partnership with the College of the Redwoods and Cal Poly Humboldt. We restarted Cal Poly Humboldt's Bachelor of Science in Nursing program, we expanded the College of the Redwoods nursing program, and now we're launching the Healthcare Education Hub, which will become the epicenter of healthcare career training for our region," McGuire says. "This \$10 million will help build out the most modern healthcare learning lab between the Golden Gate Bridge and the Oregon border and will train thousands of healthcare professionals, from multiple career tracks, in the years to come."

The Health Care Education Hub will be used to train health professionals such as nurses, psychiatric technicians, EMTs, scrub technicians, respiratory therapists, radiology technicians, and more.

"We are very aware that our future depends on a strong partnership between College of the Redwoods, Cal Poly Humboldt, Senator McGuire, and our community partners," Flamer says. "We clearly understand that we can better help all students on the North Coast by working together rather than separately. This Healthcare Education Hub is another example of what we can do if we dream and work together."

"We're grateful to Senator McGuire for his commitment to deliver on the healthcare needs of the North Coast," Jackson says. "We're looking forward to collaborating with College of the Redwoods to transform this building into a center where the next generation of health care professionals will be educated. This investment in CR is also an investment in our region—one that will help our entire healthcare system become more resilient while providing new opportunities for students and professionals."



(FRONT ROW) Senate Majority Leader Mike McGuire (CENTER) joins College of the Redwoods President Keith Flamer (RIGHT) and Cal Poly Humboldt President Tom Jackson, Jr. (LEFT) to celebrate the \$10 million investment to transform a warehouse on Samoa Boulevard in Arcata into a state-of-the-art learning lab.



10 Years of Award-Winning Coverage of Communities of Color

THIS SPRING, EL LEÑADOR, the student-run Spanish-English paper at Cal Poly Humboldt, celebrated a decade of award-winning coverage.

Students launched the inaugural issue in May 2013 as an insert in The Lumberjack newspaper, funded in part by grants from the College of Arts, Humanities & Social Sciences and alumni donations to the Humboldt Loyalty Fund. Since then, it has grown into a monthly publication and is a critical news source for the regional Latinx community.

Its inception was an effort between the Journalism & Mass Communication and the World Languages & Cultures departments to serve the increasingly diverse student body. In 2013, Humboldt became a Hispanic Serving Institution, a designation for universities whose undergraduate student body is at least 25% Hispanic, according to the U.S. Department of Education. Today, El Leñador not only serves the University's Spanish-speaking community-nearly one-third of the student body-but the region, as it is the only Spanish-English newspaper in the county.

"El Leñador is special among college newspapers in California," says Journalism Instructor and El Leñador Advisor Andrea Juarez. "It stands out not just because it is a bilingual newspaper, but also because the staff tell stories about people of color in a vast way."

"El Leñador is crucial to Humboldt County as it gives a voice to the marginalized. It represents the core values of empowerment through journalism," says Shareen McFall ('14, Journalism), cofounder and its first editor-in-chief.

While foundational for the local community, El Leñador is a beacon for university media in California, where 40% of undergraduate students in the California State University system are Hispanic.

So far, the publication has earned more than 70 awards.

Its staff are integral to the paper's success, explains Karina Ramos Villalobos ('23, Journalism), former editor-in-chief, reporter, and designer. "El Leñador's 10-year anniversary is a representation of generations of powerful and dedicated journalists that planted the seed, saw it grow, and are continuously working to expand the stories needed to be told off and on campus."





News in Brief

Fat-Burning Boost with Blueberries

NEW RESEARCH FROM CAL POLY HUMBOLDT found that wild blueberries help burn fat during exercise. The study was the first to examine wild blueberries' fat-burning effects during exercise in non-elite athletes. Results suggest the fruit accelerates fat oxidation—the process of burning fats for energy.

The study included 11 males who consumed wild blueberries daily for two weeks. Participants exercised on a bike for 40 minutes at Cal Poly Humboldt's Human Performance Lab. Researchers then collected urine and blood samples before, during, and after workouts.

Results showed participants burned notably more fat during moderate-intensity exercise after consuming wild blueberries. For example, fat oxidation rates rose by 19.7%, 43.2%, and 31.1% at 20, 30, and 40 minutes.

Blueberries seemingly accelerate fat burning while decreasing the use of carbohydrates. That is significant for athletes, explains Cal Poly Humboldt Kinesiology Professor Taylor Bloedon, the study's lead researcher.

"Increasing the use of fat can help performance, particularly in endurance activities as we have more fat stores to keep us going longer than we do carb stores," says Bloedon. "Saving stored carbs also helps when we need to increase our intensity, often towards the end of the race, or when challenged by an opponent."

"Typically, when people want to increase fat oxidation, they drastically decrease carb intake, forcing our body to adapt to use fat," Bloedon explains. But, as the research shows, cutting carbs may have negative health and performance outcomes.

Anthocyanins, which give fruits and vegetables their colors, may be responsible. Anthocyanin-containing foods also include blackberries and raspberries.

Research was conducted at Cal Poly Humboldt with Dave Baston, former director of Cal Poly Humboldt's Core Lab; Kari Pilolla at Cal Poly San Luis Obispo; and Boe Burrus at Gonzaga University, Graduate students from both Humboldt and San Luis Obispo—Jessie Armendariz, Tommy Morgan, and Karli McCarthy—also participated in the study

Campus Exhibition Showcases Art From the Prison Arts Collective's Humboldt Chapter

THE MILKY WAY PEEKED OUT from redwood canopies, a mermaid swam with schools of fish through a reef bustling with life, and the Northern Lights danced over a family of polar bears.

These serene depictions were all part of the "More Than A Number" exhibition by the Prison Arts Collective (PAC) Humboldt Chapter. The exhibit, displayed at Cal Poly Humboldt's Reese Bullen Gallery this Spring, featured paintings, papercraft, crochet, beadwork, drawings, and carvings by artists from Pelican Bay State Prison.

The gallery also hosted large prints of the murals inside the yard at the prison. Audiences had a chance to participate in artist talks with past and present members of the PAC Humboldt Chapter.

Since Spring of 2021, Department of Art + Film faculty and staff have developed and maintained the PAC Humboldt Chapter to offer arts instruction and material support for artmaking at the prison.

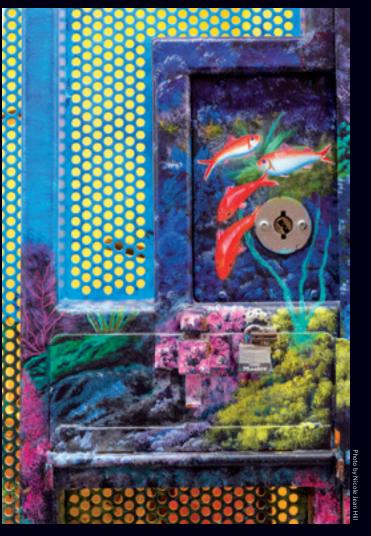
PAC is a statewide pairing of California State University art departments and state prisons, which began in 2013. It operates through a belief that art is an inalienable human right. The institutional partnerships are designed to foster creative self expression in the California Department of Corrections and Rehabilitation, providing those who are experiencing incarceration access to the transformative power of making and exhibiting art.

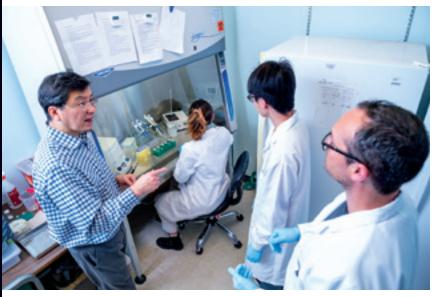
In a note that accompanies his acrylic painting, titled "Lady Bug a Balance of Life," artist Derron McLead thanks audiences and the PAC for the opportunity to share his art. "I spent years in Level IV prison yards which hardened my outlook on life," McLead says. "But in 2018 the Arts and Beautification Program started. The art program and art has had a major impact in my life, it has allowed me to shed [parts of myself to be one of the team of] men of art, who have one goal in mind, that is to turn these notorious walls of darkness and pain here at Pelican Bay into art of beauty and brightness."



Glimpses of artwork created by artists in Pelican Bay State Prison.







Biology Professor Jianmin Zhong's lab team includes undergraduate and graduate students whose research includes analyzing DNA from western black-legged ticks and mammals.

Researchers Investigate Potential Tick-Borne Pathogens

AS TICK-BORNE ILLNESSES continue to rise, Cal Poly Humboldt researchers are at the forefront of studying potential arachnid-transferred diseases.

Biology Professor Jianmin Zhong is working alongside graduate and undergraduate students in his research lab to learn more about a novel bacterium found in western black-legged ticks. "Our research aims to understand the bacteria so we can eventually help diagnose, treat, and prevent those tickborne pathogens," Zhong explains.

The National Institutes of Health awarded Zhong's lab a grant for \$590,000 for the study. The team is collaborating with the California Department of Public Health and the Centers for Disease Control and Prevention.

Ticks carry thousands of potential pathogens that are not fully understood. second only to mosquitos as vectors of human disease.

The lab's research is much needed and will benefit our communities from a public health perspective, explains Oh Kwon, Biological Sciences graduate student and researcher in the lab.

A Humboldt County local, Kwon is all too familiar with the arachnids' potential to cause illness, sometimes fatally. "My family frequently visited the redwoods and brought our dogs to walk through the natural foliage, but we always had to check for ticks," says Kwon.

Diagnoses of tick-borne diseases have increased by 60% in rural areas since 2016, according to FAIR Health, a nonprofit that tracks these illnesses.

Fellow Biological Sciences graduate student and lab researcher Nicholas Woronchuk says this research is important for rural communities. "Due to their proximity to tick habitats, these communities are more susceptible to tick-borne illness. They tend to lack widespread healthcare, which can result in undiagnosed tick-borne illness."

Ticks affect our daily life, says Zhong, who's studied ticks for more than 20 years. "It's so amazing that a small body can carry so many pathogens and parasites."



Here's to **Thousands of Ideas!**

WHAT BEGAN 10 YEARS AGO as a small idea turned into ideaFest, Cal Poly Humboldt's annual extravaganza, which showcases hundreds of research and creative projects by students, staff, and faculty from the past year.

ideaFest

"Learning is a powerfully transformative process, and the way our community celebrates ideaFest and shares the culmination of work inspires us to see great breadth and depth across disciplines and creativity," says Cyril Oberlander, University Library dean.

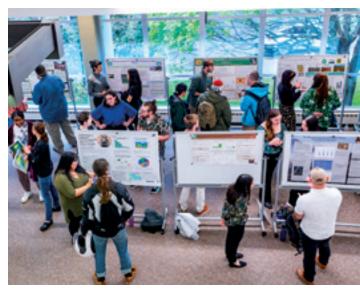
ideaFest originated from the University's 2013 centennial celebration, which included presentations of about 40 posters. The point? To showcase work across disciplines from all the three colleges—College of Arts, Humanities & Social Sciences, College of Natural Resources & Sciences, and College of Professional Studies.

ideaFest grew from those posters. The following year, the event was moved to the Library and incorporated not only research but also creative projects, live music, dance, and theater performances from students.

As the space for the event expanded, so did the number of presentations.

Topics included burnout among nurses, understanding critical race theory, and acculturation in sports nutrition. Art and performances included a guided sculpture walk, film screenings, dance, music, writing and more.

In addition to the event, University students, staff, and faculty are encouraged to submit to the annual, peer-reviewed ideaFest Journal, an outgrowth of the day-long event.



The Library bustles with hundreds of students, staff, and faculty who come together at the annual event to showcase their musical talent and dance performances, and academic research projects.

The Gift of Practical Plant Experience

CAL POLY HUMBOLDT'S Dennis K. Walker Greenhouse boasts one of California's largest teaching collections of living plants. Thanks to a generous gift from the facility's namesake, Botany Professor Emeritus Dennis K. Walker ('60, Botany), the iconic campus facility received an injection of TLC and hired a permanent assistant manager last year.

With Walker's \$1.5 million gift, the position is funded in perpetuity, backed by a permanent endowment, supporting Cal Poly Humboldt's continuing efforts to provide students year-round access to a comprehensive and unique collection of plant specimens.

"Instructors and students can access various vegetation types native to many habitats, such as deserts and tropical jungles. The greenhouse provides diverse growing conditions that make it possible to keep a teaching collection of plants available throughout the year to supplement the local vegetation," says Walker.

Day to day, the humidity and fertile greenhouse conditions are carefully cultivated by Manager Brianne Lee ('16, Environmental Science) and Andy Goldman ('07, Forestry), its newest assistant

manager. Together, they care for more than 1,000 species representing 187 plant families.

Botany students use the greenhouse's collection to study plant anatomy, evolution, taxonomy, physiology, entomology, genetics, microbiology, and mycology. Goldman helps keep the greenhouse open regularly, supports students with their experiments, and improves students' understanding of plants and plant communication.

Connecting Humboldt students with the plant world is nothing new to Walker-it was his mission over the 40 years he taught in Humboldt's Department of Biological Sciences.

Walker's courses were famous for their detail and rigor. He insisted on showing students living samples and driving 250 miles to the Bay Area to acquire ginkgo trees for class the next day. His teaching collection of ferns and conifers lives on in the greenhouse.

Following his retirement from the University in 2005, Walker started to generously fund student assistant positions in the greenhouse and teaching labs. He also established the Walker Award, which recognizes the most promising Botany graduate every year.



The iconic greenhouse has more than 11,000 square feet of botanical collections. It includes tropical, desert, temperate, aquatic, and fern rooms in addition to a subtropical dome

Shaping the Future by the Numbers

From gifts to grants, Cal Poly Humboldt has received millions in funding over the last year to support its programs. This support, which is in addition to state funding and tuition, enhances Humboldt's academic offerings and provides new opportunities to help students pursue their dreams.

Total Raised \$12,500,000

> **Total Donors** 5,037

Student Scholarships and Awards

705

New Grant Funding \$67,000,000

Active Projects

646 programs with \$147,000,000 in funding

Giving

Endowment Distribution for Scholarships and Program Support

\$1,690,000

Total Endowment

\$42,300,000



Grant-Supported **Student Employees**

390 paid \$1,400,000 in wages

Polytechnic Update



Construction, New Programs, Enrollment Growth, and Investments Highlight Polytechnic Transition

IN JANUARY 2022, Cal Poly Humboldt became the first polytechnic in Northern California and only the third in the state. Since that historic moment, the University continues to advance its polytechnic vision to foster leaders who will have a long and lasting impact on local communities, the region, and the world.

And signs of progress are everywhere.

Recent successes include new academic programs going online in Fall 2023, a new off-campus student housing project under construction, and growing enrollment.

Future efforts include increased faculty hires, information technology funding, expanded student recruitment and retention, and more.

The polytechnic transition is supported by \$458 million from the state (\$433 million in one-time funding and \$25 million in ongoing funds).



NEW ACADEMIC PROGRAMS

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New degree programs, with additional certificate programs, will begin this Fall, with eight more slated by 2029. These programs will add to the options students have to graduate as well-rounded individuals with both technical and interpersonal skills, making them better prepared for the job market.

The academic programs' interdisciplinary design expands the opportunities for complex and critical thinking, and passion and creativity enhance the University community and fuel careers of meaning.



DEGREE PROGRAMS INCLUDE:

- Applied Fire Science & Management B.S.
- Biochemistry B.S.
- Cannabis Studies B.A.
- Data Science B.S.
- Energy Systems Engineering B.S.
- Engineering & Community Practice M.A.
- Geospatial Science & Technology B.S.
- Individualized Degree Plan (Interdisciplinary Studies) B.A.
- Marine Biology B.S.
- Mechanical Engineering B.S.
- Software Engineering B.S.

ENROLLMENT & HIRING

Humboldt saw enrollment growth in Fall 2022 for the first time since Fall 2015, one of only three California State University campuses to see enrollment growth. It is expecting to see additional enrollment growth in Fall 2023.

To support the anticipated influx of students, the University is on pace to hire 27 new faculty with polytechnic funding, with 14 STEM hires completed in 2022 and 12 recruitments actively underway. In 2022, more than 55% of faculty hires were people of color.

The University has significantly invested in supporting the success of students by prioritizing working toward a student-toprofessional academic advisor ratio of 1:200 and providing every student with at least three academic advising touch points to support their success.



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STUDENT HOUSING PROJECT

In May, the University broke ground on its new 964-bed Student Housing Project at the former Craftsman Mall site, about half a mile north of campus.

The University anticipates the complex—its first student housing constructed in 13 years—will be ready for occupancy in 2025, increasing University-owned student housing by nearly 50%.

The \$200 million project is being built with the environment in mind, as part of the University's commitment to a sustainable world and our purpose to further social, environmental, and economic sustainability.

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FACILITIES

In addition to the Student Housing Project, Humboldt is taking a methodical approach to designing and implementing new facilities that will aid in providing an equitable, modern education.

The North Coast's natural surroundings provide a living lab for students—connecting their education to unique practical experiences— and carefully planned construction can amplify this experience.

Projects include a makerspace/3-D print lab, as well as improvements to labs and academic spaces for Chemistry, Physics, Geospatial Science, Applied Fire Science, and more.



Go to humboldt.edu/polytechnic for more details.

Campus Scene

Theatre Production Tells a Visually Stunning, Surreal Tale of Injustice

- Radium Girls, directed by James Peck, was put on by the Department of Dance, Music & Theatre in March.
- Students staged the production, which tells the visually stunning and dark tale of Grace Fryer, a radium watch dial painter, as she fights for herday in court.
- In the pivotal courtroom scenes, the stage is under a giant glowing clock, symbolizing how the watch industry monopolized the radium girls' time and lives, trying to postpone any justice until they died from the radiation poisoning.
- The production was literally aglow, as many special effects evoke the radioactivity that is invisible but omnipresent in the play. An unseen character, with no intention of its own, radioactivity is nevertheless altering every character's arc.
- Production designers used glowing paint, makeup, and backdrops to illustrate the story.





Wildlife students Ezra Alberts (LEFT) and Shea Daily (RIGHT) identify, research, and catalog thousands of specimens in the University's Vertebrate Museum. Some specimens are on display throughout campus and at the Natural History Museum in downtown Arcata.

Ambitious Project to Digitize and Georeference Vertebrate Museum

By Grant Scott-Goforth

IF YOU'VE WALKED AROUND the science buildings at Cal Poly Humboldt, there's a good chance you've seen the sperm whale skull that sits on the plaza in front of Science C.

But, unless you studied animal biology, there's a much smaller chance you've had reason to go into Science C. Down the unassuming corridors lies a vast, specialized collection of vertebrates: whales, snakes, bats, squirrels, and more. The specimens are carefully preserved, cataloged, and now, thanks to a National Science Foundation (NSF) grant, will be digitized and geolocated along with collections from dozens of other North American institutions.

Humboldt's Vertebrate Museum has around 16,000 unique specimens. While a collection this size is modest, its selection of small and aquatic mammals is impressive. "Humboldt has one of the best collections of Pacific Northwest small rodents," says Biological Sciences Professor Silvia Pavan, curator of the Vertebrate Museum. "We have had the contributions from really good collectors of small mammals, who added specimens to our collections along the years, and our marine mammals collections are also quite good, partially because of where we are, in proximity to the coast."

The collection is stored in crowded shelves, drawers, cabinets and tabletops throughout the building (the sperm whale skull is too large to fit inside). Pavan opens a drawer to flying squirrels—skin, fur, and bones—and turns off the overhead lights to demonstrate the recent discovery that these nocturnal rodents were found to reflect ultraviolet light.



It's an example of how the collection helps fuel research and inform the understanding of morphology, genetics, ecology, and more on a local and global scale. A large portion of the collection is research-grade, meaning researchers can collect DNA and other information, studying the anatomy of species in the collection hands-on, accessing information about the habitat and circumstances they were collected under.

This makes digitizing the collection important. Each specimen is hand-recorded in bound books, and a previous effort uploaded the records to an incomplete computer database. But with \$30,000 in funding to the project from the NSF, Pavan and her team are building a comprehensive, modern database that will be accessible online along with others along the West Coast of the U.S., Mexico, and Canada.

Tegan Alberts ('23, Wildlife) became fascinated with the Vertebrate Museum after taking a mammalogy class online.

"When I came physically to Humboldt, a friend told me about dissecting mice and I was intrigued," says Alberts. "I really fell in love with the museum activities. This is my career now."

Alberts and another student were hired in April with funding from the NSF grant. Alberts focuses largely on organizing and digitizing the database, while Wildlife student Shea Daly helps with museum activities, and inventorying the tissue collections.

The project is made up of three main phases. The first is digitizing and georeferencing the records, which requires refinement to include detailed notes on measurements, observations, and images. The georeferencing—precise information on where the specimen was taken or found can require some detective work. Much of the collection was built before digital georeferencing was easily accessible.

A specimen might have been recorded from an 1892 trip on the Eel River. Alberts will have to look at travel logs and other information to determine where the specimen was taken in minute detail—if it came from the right or

"There's so much diversity in our teaching collections. This offers our students an amazing opportunity to learn about mammals from around the world, and about our local mammals."

Biological Sciences Professor Silvia Pavan

Professor Pavan, curator of the Vertebrate Museum (LEFT), shows the collection's skin and skeletal materials from mammals, birds, reptile, and amphibians.

left side of the river, for example. Distances of just several hundred feet might have important implications about a species, which can be used to look at broader ecological and evolutionary topics.

"It's ambitious," Pavan says. "It's a lot of data."

The second phase is making all information available online for any institution to use and find, building a greater body of knowledge for researchers and instructors to draw from.

The third phase will extend the data on the collection, adding CT scans for example, so that users of the database can see layered images of bones, muscles, and organs.

While the Vertebrate Museum plays a vital role in research, it's also an important teaching tool. Students learn to curate and prepare specimens utilizing the colony of dermestid beetles that eats away the flesh of animals, leaving only bones (when preparing specimens, curators usually remove the skin to taxidermy separately before using the beetles). And they learn to use and manage resources like the museum database.

In the mammalogy classroom, Pavan has dozens of specimens out on tables and desks for students to examine. In the back of the classroom are skins and skulls of a variety of small rodents. Students are challenged to match the skulls—sometimes smaller than a pinky nail—to their skins, using techniques learned in the classroom. And while the museum's strengths are Pacific Northwest mammals and cetaceans, the collection has specimens—including echidna, platypus, pangolin, narwhal tusks and giraffe legs—from all over the world. It gives students a physical understanding of these species and their evolution, a sense of the scale of the living creature.

Pavan says excitedly that when she was hired at Humboldt about one year ago, she was shocked. "There's so much diversity in our teaching collections. This offers our students an amazing opportunity to learn about mammals from around the world, and about our local mammals." \blacklozenge



Magical Year for Lumberjacks

Two Athletics programs. Two national championships.

By Aileen S. Yoo

IT WAS A REMARKABLE YEAR for Cal Poly Humboldt Women's Rowing and Men's Rugby as both teams brought home national titles in 2022-23.

For Rowing, the achievement marks its third national NCAA title following wins in 2012 and 2014, while Rugby earned its first-ever national championship.

Rowing ended their season at the championship regatta in May with a perfect score. The Jacks swept both grand final events—the Fours and Eights—in New Jersey, dominating opponents including University of Central Oklahoma, Western Washington, and Seattle Pacific.

"This was a special group of student athletes that were self-motivated and determined from the first day of practice in August to their last stroke in May," says Rowing Head Coach Matt Weise, who was named Collegiate Rowing Coaches Association National Coach of the Year.

"The national title is a celebration of all the hard work we put in during every practice this season. Our coaches pushed us every day to believe in ourselves as much as they believed in us, that we are champions," says student-athlete Molly Urtz ('23, Social Work).

Fresh off their national title victory, the team celebrated in style with a visit to the White House for College Athlete Day, which honored the NCAA's national champions across all divisions and sports. Vice President Kamala Harris, Second Gentleman Doug Emhoff, and President of the NCAA Charlie Baker presided over the ceremony. "The national title is a celebration of all the hard work we put in during every practice this season. Our coaches pushed us every day to believe in ourselves as much as they believed in us, that we are champions."

Molly Urtz ('23, Social Work)



Members of the Rowing team hit the water as the sun rose on a calm morning on Humboldt Bay.



"The championship game was hardfought but the trust I had in the team to help secure the win never faltered. Trusting in our own capabilities, our coaching, and phase play is why I love this team so much and will forever cherish Humboldt Rugby."

Jason Atalifo Uipi ('23, Business Administration)

The Rugby team's season also ended on a high note. Humboldt went into the 2022 National Collegiate Rugby organization (NCR) Small College National Championship undefeated. The Wayne State College Wildcats of Wayne, Nebraska had the same record as the Jacks, who were relatively unknown and considered underdogs.

The Rugby team made history by earning its first-ever national championship.

"The Rugby coaches, alumni, and family are truly proud of these student athletes and their commitment to excellence, which they have proven over the last few years on this championship journey. What a great honor to represent Cal Poly Humboldt on the national stage," says Rugby Head Coach Greg Pargee.

"The championship game was hard-fought but the trust I had in the team to help secure the win never faltered. Trusting in our own capabilities, our coaching, and phase play is why I love this team so much and will forever cherish Humboldt Rugby," says Jason Atalifo Uipi ('23, Business Administration), who was named Tournament MVP of the Men's Small College Rugby Championship.

These titles are a testament to a half-century of excellence for both programs.

Rowing began as a club sport in 1974. Twenty years later the team joined the ranks of NCAA DII teams under legendary coach Robin Meiggs, who is recognized as one of the University's most successful coaches. She served as the program's head coach for over 25 years until her retirement in 2019.

Her legacy continues through the Robin A. Meiggs Scholarship Fund. Established with a \$250,000 gift from Meiggs and her husband Scott Heller, the fund awards scholarships to selected Women's Rowing athletes. Alumni, boosters, and community members have given an additional \$5,000 to the fund.

About one year before Rowing launched, Rugby was born. The team played in Division I in the USA Rugby Organization for more than 25 years and was among the top teams in the nation. The team now a club sport later

top teams in the nation. The team, now a club sport, later switched to Division II of USA Rugby and played in the national championship game in 2005. Today it competes

(TOP) The Rugby team defeated Wayne State College in the championship game with a final score of 20-15. (BOTTOM) Humboldt claims possession of the ball during the team's national championship match against Wayne State College.

OPPOSITE PAGE: (TOP LEFT) In the final sprint of the Fours Grand Final, the Jacks pulled ahead to take a near six-second victory, finishing with a time of 8:06.762. (TOP RIGHT) Fresh off their national title victory, the Women's Rowing team celebrated with a visit to the White House in Washington D.C. on Monday, June 12 as part of College Athlete Day, which celebrates the NCAA's national champions across all divisions and sports. (BOTTOM) Humboldt cruised to victory in the Eights Grand Final, finishing with a time of 7:15.143. in the NCR organization, which encompasses more than 600 colleges and over 15,000 players.

Humboldt Rugby is more than a team. It's a tight-knit community. Last summer, Assistant Coach Vincent Celotto and rugby alumni and friends raised more than \$30,000 to establish the Cal Poly Humboldt Men's Rugby Scholarship Fund. That fund created the University's first scholarships for a recreational sport.

Two months after they brought home the Cohen Cup, Senator Mike McGuire invited the team to be recognized



on the California Senate floor, where they were joined by coaches and University President Tom Jackson, Jr.

"This amazing team is the pride of California. We couldn't have been more excited to host the national champs in the Senate today and give them the recognition they deserve," said McGuire. "This pack of fierce underdogs battled every step of the way to an undefeated season and proved every pundit wrong. This is truly a historic achievement—we're all Lumberjacks today!"

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Teach, Learn, Serve

Students Spend Spring Break in the Philippines

by Melissa Hutsell

Before their service days, Humboldt students visited landmarks including the Cebu Taoist Temple, built in 1972 by the island's Chinese community.

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JUST OUTSIDE THE BUSTLING CENTER of Cebu City lies a village called Sudlon, an agricultural region embedded with farms and ranches. Here, 11 students from Humboldt and 250 students from Sudlon National High School came together during the Spring semester to exchange cultures and learn new skills from each other as part of the University's newest International Service Learning program.

International Service Learning programs are a subset of Service Learning programs, which are collaborations between students, community partners, and faculty. The programs connect coursework with service to address community-defined needs for course credit, according to the University's Center for Community Based Learning.

International Service Learning programs offer the opportunity to do that abroad while learning how to be better global citizens. Programs span disciplines ranging from translation services to art education. Some majors—including Child Development, Sociology, and Criminology & Justice Studies—require students to take a Service Learning course.

Throughout the 2022-23 school year alone, 317 Humboldt students from 21 Service Learning courses conducted 6,855 hours of service, according to the Center. The longest-running programs are through the University's Youth Educational Services (Y.E.S.). Past International Service Learning programs have occurred in Mexico and the Dominican Republic. Future programs include Oaxaca, Mexico, and León, Spain.

While there are eight core elements that define these opportunities, reciprocity and reflection are at their heart. For example, both students and community members find value in these experiences, and grow from them.

Stacy Becker, the Center's community partner organizer, says these experiences are where academic learning hits reality. "Students are able to make connections between curriculum and real-world practices; they can test the waters to see if professions are their true career paths; they network with community organizational players and build foundations for resume building and next steps after college."

For faculty, "Service Learning pedagogy adds depth, excitement, and effectiveness to course learning objectives and the all-around educational experience," she says. "For community partners, these are important ways to build future employees and stakeholders."

In an effort to provide hands-on experience while also enhancing cultural awareness, civic engagement, and interdisciplinary learning, students and faculty took these Service Learning objectives abroad to Cebu. To prepare for the trip, students enrolled in a course where they developed workshops on topics of interest to Sudlon National High School students and staff. They also learned about the culture and history of Cebu.

During the one-week trip, students conducted workshops and participated in cultural excursions to historical landmarks, markets, and factories. The trip is especially valuable to students who may not otherwise be able to afford longer programs. "A day in Cebu is a rich and immersive experience offering plenty of opportunities for learning and growth. It was a beautiful experience that I think everyone should have while they're here at Cal Poly Humboldt."

Jason Arcilla, Kinesiology major

Once in Cebu, students delivered two workshops eachone cultural exchange and one focused on academic or personal growth. The latter focused on skill development through topics including photography, public speaking, and goal-setting. Cultural exchanges, like the culinary workshop, presented aspects of both American and Filipino culture, explains Matthew Dean, World Languages & Cultures department chair and faculty lead on the trip. Other topics included: sustainability and environment, music and dance, and pop culture through comics. In addition to these workshops, Humboldt students also participated in cultural excursions. Those included visits to Basilica del Santo Niño, Magellan's Cross, Mactan Shrine, Cebu Taoist Temple, Yap-San Diego Ancestral House, and Heritage of Cebu Monument.



Students from the nearby elementary school greet Humboldt guests using a traditional "mano" gesture as a sign of honor and respect.

"The nature of Service Learning programs allows students and communities to work together as part of an academic curriculum. Throughout the program, students learned about Filipino culture, but also about themselves through individual and group reflection."

Matthew Dean, World Languages & Cultures department chair

The trip, partially funded by Associated Students, was student Matthew Gerber's first outside the United States.

Gerber, a Recreation Administration major, says the program allowed him to exercise skills developed in his coursework: leadership, public speaking, environmental education, arts, culture, and social work. It also gave him the opportunity to channel his passions and academic backgrounds.

As a photographer and foodie, his workshops focused on photography and cuisine. The culinary exchange workshop highlighted similarities between American food (particularly Humboldt County agriculture) and Filipino food. Sudlon students developed recipes that showcased their favorite homestyle Filipino foods, or blended Filipino and American cuisine. A favorite of his was "Kinilaw," a Filipino ceviche made with Chinook salmon.

During the photography workshops, Sudlon students took more than 1,500 photos, and exchanged new techniques with Humboldt students.

Jazea Smith, a Fisheries Biology major, helped create a climate-focused workshop where students shared their personal experience with worsening climate events. For example, Super Typhoon Odette hit the Philippines in December 2021. Millions were affected and displaced, according to the United Nations. The category five storm killed hundreds, and destroyed the homes and crops of many students in the workshops—many are still rebuilding.

Their resiliency inspired her. "My biggest takeaway from this workshop was how passionate, vulnerable, and outspoken many of the students were in talking about becoming climate activists, and also truly how similar we all were in often feeling hopeless and afraid about the state of the world," she says.

Smith says she has never had such a period of accelerated learning in her life. "Every day prompted new and insightful conversations."

The experience also left students feeling "a greater appreciation for the beauty that can be found in our differences," according to one Sudlon student. "From the moment you arrived, we could feel your energy and enthusiasm," another Sudlon student explains in a handwritten letter. "Your eagerness to explore and discover everything this place had to offer was contagious. We watched as you embraced us with open arms, soaking up the sights, sounds, and sensations of this beautiful place."

Throughout the visit, the high schoolers treated Humboldt guests to several performances of cultural songs and dances, including "Tinikling" and "Maglalatik". Some played traditional schoolyard games with Sudlon students, including "Patintero," while others faced off at the neighborhood basketball court.

The closing ceremony, which featured traditional dance performances from Filipino students—and an impromptu performance from Humboldt students—was one of the most memorable parts of the trip for Dean. "There were probably a thousand people or more there," he reflects. "The ceremony was a celebration of our newly established connection and the impact of our student's work."

It's difficult to describe the truly magical connection that was created during the service days, says Dean. "Humboldt students demonstrated cultural awareness, understood Service Learning principles, and learned about social responsibility through personal and collective shared reflection."

"The nature of Service Learning programs allows students and communities to work together as part of an academic curriculum. Throughout the program, students learned about Filipino culture, but also about themselves through individual and group reflection," says Dean.

The reciprocal nature of Service Learning programs was evident for Jason Arcilla, a Kinesiology major.

"My classmates and I learned so much from the students at Sudlon High School," Arcilla says. In his goal-setting workshop, students enhanced their clarity and focus skills by setting specific, measurable, achievable, relevant, and time-bound (SMART) goals. In return, he developed skills in adaptability and resilience as he navigated new environments and cultural norms.

Arcilla was drawn to the program for the hands-on experience and the ability to serve local communities while also learning about his own heritage. "I'm Filipino and I miss Filipino cuisine and recipes that I don't find here in Humboldt," he says. "This trip provided me with an opportunity to learn more about Filipino culture and history, while also developing communication, leadership, and problem-solving skills."

"A day in Cebu is a rich and immersive experience offering plenty of opportunities for learning and growth," Arcilla says.

While it was his first experience with International Service Learning, he says it won't be his last. "It was a beautiful experience that I think everyone should have while they're here at Cal Poly Humboldt." ◆







(TOP LEFT) Humboldt students—pictured here at El Fuerte de San Pedro (Fort San Pedro)—learned about Cebu's culture, formed from the influence of Spain, Japan, the U.S., and Indigenous practices. (TOP RIGHT) Filipino students performed cultural songs and dances, including "Tinikling" and "Maglalatik." (MIDDLE LEFT) Some students played traditional schoolyard games with Sudlon students, including "Patintero," (MIDDLE RIGHT) The cultural exchange workshops focused on similarities between American and Filipino culture, while academic/personal growth workshops focused on developing and practicing a skill. (BOTTOM RIGHT) Humboldt and Sudion students connected with and learned from each other, and built memories to last a lifetime.

When the Dams Come Down

Cal Poly Humboldt researchers are studying the Klamath River as one of history's largest dam removals begins

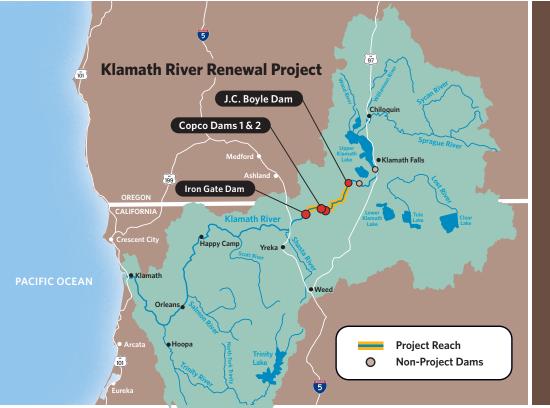
by Grant Scott-Goforth

Four longstanding dams on the Klamath River, built to create electricity over the last century, and increasingly controversial for their outsized impacts on the river's health, will fall over the next year.

CAL POLY HUMBOLDT researchers are working hard on projects up and down the river to gather baseline data now in order to understand what happens once the dams are removed.

The massive deconstruction project will see thousands of tons of materials hauled away to dismantle the four lowest dams on the Klamath–J.C. Boyle Dam, Copco No. 1 Dam, Copco No. 2 Dam, and Iron Gate Dam-along with their associated powerhouses and other facilities. It's the culmination of decades of activism, legislation, hard work, and dedication from Native Tribes, environmentalists, fish advocacy organizations, and many others.

Completed in 1962, the Iron Gate Dam is the furthest downstream dam. It is one of four slated for removal as part of a multi-million dollar deconstruction effort.



Iron Gate Dam: Built in 1962. Iron Gate Dam is made from earthfill and stands 173 feet tall and 740 feet wide. Preparation to take down the dam, which includes reservoir drawdowns and removing facilities, will begin in 2024.

Copco 1&2: Built in 1918 and 1925, respectively, both concrete dams are scheduled to be removed by the end of 2024. Deconstruction efforts for Copco 2, the smallest of the four dams, began in June, and are slated to be complete in September 2023. Copco 1 constitutes the largest reservoir by area of the hydroelectric dams, at a maximum of 1,000 acres.

J.C. Boyle: Built in 1958, J.C. Boyle is made from earthfill and stands 68 feet tall and 693 feet wide. The dam will be removed by the end of 2024.

THE KLAMATH RIVER is the centerpiece of a sprawling watershed covering nearly 16,000 square miles of Oregon and California. Winding more than 250 miles from the Oregon desert near Klamath Falls, through two mountain ranges, and emptying into the Pacific Ocean in Del Norte County, it's the second largest river in California after the Sacramento.

The Klamath is a vastly important watershed ecologically, culturally and economically, home for millennia to salmon and trout, migratory birds, a wide diversity of plants, Native people, and, more recently, large scale agriculture, including farms and ranches.

Which has also made it the subject of fierce devotion and dispute.

When the first European settlers descended on the Klamath, they brought with them the ugliest trappings of manifest destiny, violence, subjugation, and an extractive resource ideology.

Perhaps the biggest impact on the river has been the six dams that make up the Klamath Hydroelectric Project, the first of which was built in 1903. The construction of these dams has drastically changed the Klamath River, effectively cutting off some fish runs and wetlands, and affecting water quality that threatens humans, fish, and wildlife.

Low water flow, nutrient run-off, and changing temperatures resulted in toxic algae blooms and fish kills. In 2002, tens of thousands of adult Chinook salmon died along the lower Klamath River. The devastation has profoundly affected Native Tribes and other residents economically and culturally.

Native Tribes, the fishing industry, scientists, and environmentalists have sought the removal of the dams for decades, arguing that they have damaged the health of the river, a crucial cultural and ecological resource.

But the dams' removals are contentious-though the hydroelectric dams being removed are outdated, some see their removal as a threat to the Link River and Keno dams in the upper Klamath region, which farms in the area depend on for water.

This year, more than 20 years after the devastating fish kill, work begins to remove the lower four of the Klamath Dams. The dams being removed are largely seen as inefficient, outdated hydroelectricity producers and are slated to be gone by the fall of 2024. The scale of the removal is massive and the changes to the watershed are expected to be wide-reaching.

The removal also spells hope for the Klamath River watershed, the ecology, and the cultures whose livelihoods and very existence are inextricably linked to the river's health.

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The Klamath River is a complex, living ecosystem in which everything is interconnected, says Alison O'Dowd, an Environmental Science & Management professor whose work revolves around streams, rivers, and wetlands.

O'Dowd is one of several researchers from Cal Poly Humboldt who are involved in research related to restoration efforts on the Klamath.



River just downstream of the Iron Gate Dam.

Winding more than 250 miles
from the Oregon desert, through
two mountain ranges, and
emptying into the Pacific Ocean
in Del Norte County, the
Klamath River is the second
largest river in California after
the Sacramento.

O'Dowd, with professor William Trush, is a co-director of the Cal Poly Humboldt River Institute, which was formed in 2012 with a mission to conserve and restore river ecosystems locally, nationally, and internationally through multidisciplinary research, education, policy reform, improved management practices, and creative restoration strategies.

Cal Poly Humboldt is also home to "Klamath Connection," a place-based learning community for first-year students that consists of courses and activities that focus on the Klamath. The river, which is culturally, environmentally, and economically critical to the North Coast, offers students a unique way to learn about a system through the perspective of different disciplines. O'Dowd also teaches a two-week upper division field course on the Klamath River each summer.

O'Dowd is also one of the scientists involved in the Klamath Basin Monitoring Program, a collective of researchers and organizations that are monitoring the watershed from a variety of topics and angles. The program has been operating since 2006 and consists of dozens of partner agencies and individuals, who can use it as a stockpile of information, a sharing resource, and a planning organization.

The program also compiles data from nearly 1,000 monitoring stations in the watershed, which offer live water quality data and other relevant information, allowing researchers to get a snapshot of the river without having to travel.

That travel can be a burden. The Klamath watershed is huge, and much of the river is in rugged, remote wilderness that is difficult to access.

But the Klamath River draws so much attention because it's important, and it's in bad shape.

"There are water quality issues," O'Dowd says. "The water in the reservoirs gets warm and stagnant, which leads to algal blooms and cyanobacteria. It builds up in high levels, especially in drought years and hot weather, and is worst in late summer when a lot of Tribes have ceremonies that involve contact with the river water."

"One big impetus for dam removal was the 2002 fish kill," she says. "In the lower part of the river, crowded conditions, lower water, warmer water, and disease killed a whole generation of fish—approximately 70,000."

O'Dowd's research will examine the impacts of dam removal on aquatic organisms downstream of the dams. During dam removal, high sediment loads will likely reduce visibility and water quality in the Klamath River and potentially impact access to salmon's primary food invertebrates. Partnering with scientists at the Karuk Tribe and UC Davis, O'Dowd's project will sample aquatic invertebrates and juvenile salmonids at Klamath River sites paired with nearby tributary sites to see if salmonids adjust their feeding behavior during dam removal in response to these high sediment loads. Her work will compare these factors over five years; before, during, and after dam removal.



Professor O'Dowd holds an adult salmonfly (*Pteronarcys californica*) near one of her sampling sites at Iron Gate Dam.

Ryan Matilton always thought of himself as an "owl guy." Graduating from Cal Poly Humboldt with a degree in Wildlife in 2021, he considered eventually going to graduate school. But prior to the end of his undergraduate career came a unique opportunity that he couldn't pass up: a years-long study of bat species along the middle and lower Klamath River while earning his master's degree in Natural Resources at Humboldt.

Matilton, a Hoopa Valley Tribal member with Yurok ancestry, was made aware of the opportunity to work on the Klamath bat project through Lonyx Landry, the coordinator for Humboldt's Indian Natural Resources, Science & Engineering Program (INRSEP) + Diversity in STEM. The program provides academic and research support services to historically underrepresented students in science majors.

With Landry's help, Matilton began graduate school with Wildlife Professor Barbara Clucas to work on the Klamath bat project. The project is a collaboration with Trever Super and Bronwyn Hogan from the U.S. Fish and Wildlife Service, Scott Demers from the Yurok Tribe Wildlife Department, and bat biologists Ted Weller from the U.S. Forest Service, and Joe Szewczak with the Cal Poly Humboldt's Biological Sciences Department.

Since Fall 2021, Matilton has worked with the group to monitor bat activity and diversity with ultrasonic recorders at seven locations from Iron Gate Dam to the mouth of the Klamath river. The recorders operate from dusk until dawn, recording a variety of bat calls (and occasionally other noises, which have to be filtered out of the data).

The research is helping to create a baseline of bat diversity and activity prior to dam removal. Bats are a bioindicator species, gauging broad ecosystem health as they are susceptible to stressors and bioaccumulation. The Klamath River is an important food source for bats, which eat insects whose life cycles depend on water. As water flows increase, Matilton expects more natural pools will form, reviving historical "My Tribes believe that we are part of the ecosystem. Some people think if we left nature alone, it would be better off. But we're stewards, we belong to the Earth and it is our duty and privilege to take care of it for the countless generations to come."

> **Ryan Matilton** ('21, Wildlife), Natural Resources graduate student

wetlands, potentially bringing increased insect populations. Monitoring the presence and activity of bat species in the area can also give an indication of river health.

Matilton collects an average of 10,000 recordings each month—currently, he is in the process of vetting a total of four terabytes of data. "Data management is the limiting factor of my research," he says, requiring him to spend large amounts of time sorting and analyzing data with the help of software that can identify bat species by the recorded calls.

Matilton sees himself as a "bat guy" now, despite the fact that they don't get as much scientific attention and many people find them less charismatic than owls, salmon, steelhead, and other "glamorous" species in the watershed. They're also difficult to study, given they are small, nocturnal, and make calls mostly in ultrasonic ranges that people can't hear.

"They're viewed with malice, a lot of people view them as pests," he says. "But they have a lot to teach us."



While this research opportunity just happened to be in the lead-up to dam removal, Matilton is excited to join the vast network of researchers looking at the Klamath River.

Matilton has a special connection with the Klamath, growing up in the watershed and committing his work and study to the animals the Hoopa and Yurok Tribes share it with.

"My Tribes believe that we are part of the ecosystem," he says. "Some people think if we left nature alone, it would be better off. But we're stewards, we belong to the Earth and it is our duty and privilege to take care of it for the countless generations to come."

#

Natural Resources master's degree student James Whelan is looking at Chinook salmon survival rates on the far upper reaches of the Klamath around the Keno and Link River dams—two dams that will remain.

Both of those dams have fish ladders, allowing migratory fish, such as salmonids, to navigate upstream beyond the dams. While there's a lot of study regarding adult fish swimming upstream, there's not much research about Upper Klamath basin juvenile fish passing downstream on their way to the ocean.

To measure this, they surgically implanted about 200 fish with radio tags and set up seven stationary receivers throughout a stretch of river. They also conduct mobile tracking on boats, where they can traverse the river system, looking for signals that indicate where the fish are. Whelan continues to collect data for the current 2023 field season as well.

"So far so good," Whelan says. "We've seen some really good results—the Keno and Link River dams don't seem to have much of an effect on fish moving downstream, and there were high survival rates from above to below the dam. It was really great to see."

Whelan grew up in the Rogue Valley near the upper Klamath, so he's closely familiar with the river and the complicated water politics of the agricultural region, as well as the discussions about dam removal that have pervaded the area in recent decades. As kids, he and his friends would share urban legends about swimming in the algae-choked river.

"We always knew the water quality was awful," says Whelan. When he had an opportunity to conduct graduate research on the river, he jumped at the chance.

(LEFT) Ryan Matilton monitors bat species using acoustic mini bat ultrasonic recorders in seven different locations along the Klamath River Basin immediately downstream of the Iron Gate Dam to the mouth of the Klamath River in Ter-wer.



Natural Resources graduate student James Whelan uses a hand-held antenna to mobility track and locate signals from radio tags implanted on fish.

Whelan praised the agencies involved for their collaboration with a broad array of people on the contentious topic, and has developed his own diplomacy for people who are against dam removal: "Wouldn't it be cool to catch salmon on the Upper Klamath?"

Researchers will continue to examine the Klamath River, and there's excitement and hope for the river's health, despite the years of damage. Some salmon runs are on the brink of extinction, and it's unclear if their populations may rebound.

But the downstream impacts of dam removal will be diverse, and may hold surprises.

"We don't have specific predictions about what is going to happen," says Clucas. "We might see no change at all in a year, it might take ten years to see changes in the ecosystem."

The research taking place has implications for climate, marine mammals, marine and migrating birds, redwood tree health, endangered wildlife, native plants, and a multitude of human health, social, and cultural impacts. It sets the stage for greater understanding of the region and similarly affected watersheds worldwide.

Future research projects can use the data that current Cal Poly Humboldt researchers are collecting to measure possible impacts of the dam removal process, and long-term impacts of the river restoration, giving insight into best practices for watershed restoration around the world. \blacklozenge

The Future of **Earthquake Detection**

by Grant Scott-Goforth



One of nearly 50 seismometers or nodes that Geology students like Kari Stockdale (ABOVE) installed in Arcata along fiber optic cables.

UNDERGROUND FIBER OPTIC CABLES have been installed across Humboldt County. A community of federal and state scientists, including Cal Poly Humboldt researchers, believe the county's newest fiber optic cables may provide valuable feedback about earthquakes. These cables may enhance the early warning system and detect faults that may produce future earthquakes.

The fiber optic cable project is just one of a number of global research efforts underway by Cal Poly Humboldt faculty, students, and alumni to better understand, prepare for, and respond to earthquakes.

Fiber optic cable is the backbone of the internet. Currently, the world's longest fiber optic line is being built between Humboldt County and Singapore to improve worldwide connectivity and local broadband service.

Along with installation of this long trans-Pacific cable, there is an effort to expand internet accessibility to rural regions of Humboldt County by installing shorter fiber optic cables along regional highways. One such cable exists between Arcata and Eureka.

Fiber optic cables can detect changes in the earth during earthquakes. "The ground's movement slightly disrupts the light traveling through the cable, creating a distinct signal," according to a 2023 WIRED article. Researchers are investigating just how the optic parameters of the cable react when shaken by an earthquake.

If fiber optic cables prove to provide valuable insights into ground movements, the underground cables could be used to better understand and monitor earthquakes and other geologic hazards.

With the cooperation of the county, City of Arcata, PG&E, and local landowners, researchers installed about 50 seismometers, small instruments that respond to ground noises and movement, along the new line beginning last summer. They are conducting a multi-month evaluation of the line, detecting even the smallest earthquakes that occur on a daily basis in the region, which is the most seismically active area of the continental United States. Cal Poly Humboldt Geology students have been part of the seismometer installation, battery replacement, and data recovery. They will also participate in the future analysis of the data.

"You can't understand an earthquake unless you record the wide range of frequencies that it puts out," says Kari Stockdale, a Geology student who was involved in the installation and will continue to research the data. "Seismometers are the controls that really help us understand what's going on in the earth. The project has successfully recorded dozens of earthquakes in its first two months."

This is a collaboration between Cal Poly Humboldt, the U.S. Geological Survey, UC Berkeley, University of Washington, Cal Tech, Vero Communications, OptaSense Inc., and city and county governments, including the Arcata Police Department who allowed the project to house some equipment in their storage facilities. ♦

> Video: Learn more about how fiber optic cables can detect earthquakes at link.humboldt.edu/seismometers.



Seismic Studies

Cal Poly Humboldt students, faculty, and alumni are conducting seismic research around the world, contributing to our knowledge of earthquakes, as well as how to prepare and respond to them. Here are a few of the ongoing projects:

Paleoseismology of Active Faults

Being able to detect earthquakes accurately and quickly is critical to public safety. But knowing where local earthquake faults are, how frequently they rupture, and the magnitude of those ruptures is also critical to our ability to design and build a safe and sustainable community. Geology Professor Melanie Michalak, research associate Harvey Kelsey, retired professor Mark Hemphill-Haley, and students have been collaborating with the California Geological Survey, the U.S. Geological Survey (USGS), and local geotechnical professionals to locate and study active faults. Most recently, they have been advancing their understanding of the locations, ages, and rupture frequency of active faults in the Eel River Valley.

Earthquake-Related Tsunami Hazards

Tsunamis are one of the most dangerous hazards facing residents of the North Coast. Authorities need to detect them and notify the public as soon as possible following earthquakes or landslides. But, just like paleoseismology studies, researchers also need to know where tsunamis have occurred in the past, how often they've occurred, and how much damage to expect from the next tsunami. Geology Professor Emerita Lori Dengler, instructor Amanda Admire, research associates Eileen Hemphill-Haley and Harvey Kelsey, and students with the Redwood Coast Tsunami Working Group (RCTWG) have been studying tsunami activity on the North Coast for decades. Most recently, the RCTWG has been working with the Humboldt ports to advance the ability to detect and monitor tsunami currents in Humboldt Bay.

Newly Discovered Fault

Geology Professor Brandon Browne and alumnus Jay Patton have a proposal to conduct a paleoseismic investigation of a newly



discovered fault in the area of Shively, about two miles northwest of Redcrest in southern Humboldt County. Patton works with the California Geological Survey, where he provides a strong outreach presence in earthquake hazards including extensive presentations on the Turkey earthquakes of 2023.

Turkey Earthquakes

Richard Koehler ('99, Environmental Systems [Geology]), a professor at University of Nevada, Reno, was one of the Geotechnical Extreme Events Reconnaissance (GEER) investigators for the 2023 earthquakes in Turkey. GEER, a volunteer organization of researchers and organizations, conducts detailed reconnaissance of extreme geotechnical events to advance research and engineering practices.

Mendocino Triple Junction

Alumna Jessie Vermeer ('13, Geology; '16 Environmental Systems [Geology]), an earthquake geologist at the USGS, along with her research group, is conducting investigations in the Lost Coast and King Range area. They are using a variety of techniques including basin average erosion rates, uplifted marine and river terraces, fault mapping, and paleoseismology to understand the tectonic processes and earthquake hazards of the Mendocino Triple Junction. This work extends upon a series of studies conducted by several Humboldt alumni.

Tectonic Deformation

Geology Professor Melanie Michalak supervised a recent thesis by graduate student Sam Bold in the area of Hydesville, about 30 miles south of Arcata, examining tectonic deformation of uplifted marine and stream terraces.

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Recognizing the achievements and contributions of the Lumberjack community

2022 Distinguished Alumni 2023 Distinguished Alumni



Cassandra Hesseltine ('96, **Psychology)** is a trailblazer in the world of film as the current Humboldt-Del Norte County Film Commissioner. Since 2010, she has been instrumental in attracting productions to the North Coast,

facilitating the creation of captivating regional films, TV shows, commercials, and more, which boosts the local economy.



Michael Lynch ('11, Business Administration) is a social entrepreneur and certified professional fundraiser. He is the co-founder and chief executive officer of Improve Your Tomorrow, Inc., an

education nonprofit that works to close the college opportunity gap and improve the life outcomes for thousands of young men of color across Northern California.



Jack McGurk ('66, Biology) spent 30 years working in the

California Department of Health Services. He served as chief of the Environmental Management Branch and oversaw eight environmental health programs,

including medical waste management. He is a Cal Poly Humboldt Foundation vice chair.

See full alumni bios at: forever.humboldt.edu/distinguished-alumni



Philip Anton ('98, Music) worked across many technology industries culminating in his role as a Group Development Manager at Intuit, where he contributed to the success of TurboTax and OuickBooks. He is on the Board of the Cal Poly Humboldt Foundation and

serves as a vice chair of the Boldly Rising Campaign.



Alexandra "Xan" Bernav ('97, **Journalism)** is an esteemed lawyer at Robbins Geller Rudman & Dowd LLP, specializing in antitrust and unfair competition class-action litigation. She has been recognized by legal media company Lawdragon, which

honored her as a 2019 and 2023 Leading Plaintiff Financial Lawyer, and *Super Lawyers Magazine* named her a Super Lawyer in 2023.



Peter A. Underhill ('70, **Oceanography)** is a renowned geneticist and researcher known for his groundbreaking work in molecular analysis of DNA sequence variation in human populations. Underhill's work has helped

reconstruct the story of human history, providing the laboratory equivalent of a time machine.



Kent Willis ('69, Biology), a retired middle school science and math teacher from Fortuna, has left an indelible mark on education on the North Coast. Throughout his career, he received notable recognition, including being named Humboldt County Teacher of

the Year in 1977, receiving the Excellence in Teaching Award from the Humboldt County Office of Education in 1989, and receiving the Certificate of Recognition from the Humboldt County Superintendent of Education in 1990.

2023 President's Distinguished Service Awards

Cal Poly Humboldt President Tom Jackson, Jr. recognized the accomplishments of three honorees for their meritorious contributions to the University and community.



College of the Redwoods President Keith Flamer has nearly 25 years of leadership experience at higher education institutions. Since 2017, he has remained committed to building inclusive environments at CR. He is a critical partner

in educating students of the North Coast, helping to create seamless pathways to a four-year degree at Cal Poly Humboldt.



After a 40-year career working in healthcare and global clinical research, Robin Smith ('78, Nursing) now advances the vision and goals of the University as board chair of the Cal Poly Humboldt Foundation. Smith

created separate endowment funds to support the new RN to BSN nursing program, Lumberjack Athletics, and Recreational Sports. She helped plan and implement the University's first capital campaign, Boldly Rising, and serves as a Campaign Cabinet vice chair.



Executive Director of Initiatives at Cal Poly Humboldt, Connie Stewart ('88, Speech Communication) oversees advocacy and economic and community development efforts for the University. She's the former

mayor of Arcata and is celebrated for her longtime commitment to the region. She was named one of the Notable Women of Humboldt County, a project of the Clarke Historical Museum in honor of the 100th anniversary of the 19th Amendment.

Full bios of awardees: link.humboldt.edu/2023-DistService and link.humboldt.edu/2023-DistFaculty

2023 Distinguished Faculty

Excellence in Teaching Award — Lecturer



Religious Studies Instructor Sara Hart's deep interests in service learning, career curriculum, and game-based teaching significantly enhance the experiences and opportunities she offers to students.

Scholar of the Year Awards



Botany Professor **Erik Jules** has an exemplary record of research about native plant communities of the western U.S. He's published at least 60 peer-reviewed articles and has more than 3,500 citations of his papers.



Politics Professor John Meyer's colleagues recognize him as a well-rounded and inexhaustible interdisciplinary scholar who's made long-lasting and meaningful impacts in multiple intersecting academic fields.

Outstanding Service



Music Professor Cindy Moyer has served as a University senator for more than 20 years, as coach for the Sequoia Chamber Music Worship, and as a volunteer with Friends of the Arcata Marsh and Redwood Region Audubon Society.

Excellence in Teaching—Tenure Line Faculty



Politics Professor Noah Zerbe is known for teaching with care, thoughtfulness, responsiveness to feedback, and for encouraging his students to become agents of change and upstanding global citizens.

2023 Outstanding Students of the Year



Steffi Puerto ('23, Journalism and Critical Race, Gender & Sexuality Studies) began her career at Humboldt in the Creando Raíces Place-Based Learning Community in 2019. From the outset, it was clear Puerto wanted to connect her

passions for student journalism, community organizing, and culture work with her scholarship in both Ethnic Studies and Journalism. As a staff member and PR manager for *El Leñador*, the bilingual student-run newspaper on campus, and author and editor of *CouRaGeouS Cuentos Journal of Counternarratives*, she helped create and guide coverage of communities of color on and off campus. A key member of El Centro Académico Cultural de Humboldt, and social media coordinator for the DHSI: Education project, Puerto showed up for other students of color and student organizers.



Molly Jane Urtz ('23, Social Work)

is a student-athlete on the Humboldt Crew team and active volunteer with Youth Education Services (Y.E.S.). From the very start, she was passionate about getting involved in the local

community and exposing young learners to the natural world through environmental activities. As a Y.E.S. volunteer and student leader for six semesters, Urtz has contributed more than 380 hours to community-based volunteer programs and community-engaged learning. As the assistant director for the Environmental Education program, Urtz is responsible for recruiting, training, and supporting University volunteers. Outside of Y.E.S., she was a counseling intern at Trinidad Elementary, completing 400 hours at the school over the course of her senior year.

2023 Staff Recognition



Gillian Black Academic Advisor Academic & Career Advising Center



Shannon Collart Advancement Events Coordinator



Kim Coughlin-Lamphear Accessibility Advisor Student Disability Resource Center



Kelly Fortner Student Support Coordinator Center for Community-Based Learning



Brec Ronis Administrative Support Coordinator Department of Art + Film



Kali Rothrock CARE Services Case Manager Office of the Dean of Students





Rene Smith

Department Coordinator Departments of Anthropology; Geography, Environment & Spatial Analysis; World Languages & Cultures; Center for Translation & Interpretation

Peggy Stewart

Administrative Support Assistant Departments of Environmental Studies; Environment & Community M.A.; History; International Studies; Politics; Religious Studies





"Everything that I do, I prioritize the families of kids with special needs because we don't have it easy," says Jorge Matias (LEFT), seen with Cal Poly Humboldt President Tom Jackson, Jr.

Community Healthcare Advocate Receives Honorary Doctorate

ADVOCATE AND HEALTH WORKER **Jorge Matias** was granted an Honorary Doctorate of Humane Letters at this year's Spring Commencement. He's one of only 14 individuals in the University's history to receive the honor.

For more than 20 years, Matias improved the wellbeing of Hispanic community members, and children with intellectual and developmental disabilities (IDD).

Matias credits his coworkers and family for the recognition. "They motivate me every single day to get up and have hope," he says.

As a community health worker, he operates the Paso a Paso program—which offers bilingual information on childbirth, parenting, and breastfeeding—and the Paso a Paso Fatherhood Picnic to encourage increased paternal participation. He delivers hot meals to homebound patients, and partners with Redwood Conecta, Latino Net, and the Redwood Coast Regional Center to create inclusive activities. These include support groups for Spanish speakers, art walks, zoo visits, and walk/runs. Matias also serves as a coach to the Six Rivers Running Club.

As a father of three, and a parent of a child with IDD, Matias struggled to find bilingual support. That motivated him to create resources for Spanish speakers, and reduce the stigma associated with seeking help.

"Families of kids with IDD have to fight every single day to prove that our kids are not less than anyone else," Matias says.

"Matias creates awareness and collaboration so that people with IDD and their families not only feel safe and included in our community, but also have the support and resources they need," says Darian Harris, chief executive of Providence St. Joseph Hospital.

"Matias is a cornerstone of our community who represents all that is good about Humboldt County," writes colleague Caterina Kein. "He puts everyone first and asks for nothing in return. I had never met a true hero before I met Jorge Matias."

ClassNotes

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1960s

Wildlife Refuge Romance.

Sanford "Sandy" Wilbur, 1963, **Wildlife,** columnist for *The Lumberjack* from 1960-1962, is at work on a new novel, tentatively titled Vic and Greg: a

Rick M. Gardner, 1965, Psychology,

met the woman of his dreams in graduate school. They were married in 1967. Their happy marriage lasted 50 years until her death in 2017. Rick has two children, a boy and a girl.

Robert Lackey, 1967, Fisheries

Biology, is a professor at Oregon State University, In 2008, he retired after 27 years with the Environmental Protection Agency's 350-person national research laboratory in Corvallis, Oregon. He served as deputy director, associate director for science, and in other senior science leadership positions. His current "gig" is part-time and involves teaching ecological policy and advising a few graduate students. He and his wife, Lana Apparius Lackey (who also attended Humboldt), live in Corvallis, Oregon.

1970s

David Clark, 1971, History, migrated to Australia in 1972 and taught high school until retirement in 2007.

Theodore "Ted" Smith, 1972,

Geology, retired as supervising geologist with the California Geological Survey in 2001 following a 30-year career. Since then he earned a Ph.D. in Education (specialization: teaching & training online), and for 18 years has taught courses online, mostly with

Baker College (located in Michigan). In 2019, Ted moved to Whidbey Island, Washington and recently was appointed to the Board of Directors of Geology in the Public Interest, a nonprofit that focuses on use of geology for the public good in sustainable ways.

Christopher Rush, 1974, Natural

Resources, completed hiking the Pacific Crest Trail Mexico-to-Canada in 2016 after hiking it in sections post-retirement. After working the first half of his career with USDA & USDI (USFS-Willamette NF & BLM-California Desert), he spent the last half with the Environmental Office at Edwards Air Force Base, where he retired as chief of the conservation branch in 2005. He is married to Carol (Kohlenberger) Rush, a 1974 Humboldt grad.

Richard T. Sayre, 1974, Biological Sciences, was elected to the National Academy of Inventors.

Bob Freeman, 1976, Biological

Sciences, is retired from Imperial County as a public health lab director, He is also supporting his laboratory information system while writing more sci-fi novels: H2LiftShips Vol 1-3 Beyond Luna H2LiftShips Vol 4 A Back Story And Vol 5 is a slow slog forward. The stories take place in the desert, Humboldt, Yosemite, Phobos, the Asteroid Belt, and beyond with solar sail ships and a few rockets thrown in for good measure.

Emily Kratzer, 1976, Journalism, has been a featured freelancer for Autumn Years magazine, a Bergen County, New Jersey publication celebrating the lives of people ages 60 and older, since 2018. She volunteers with public-access

WCTV.us and C.E.R.T. Active Unitarian-Universalist.

Lester B. Garrison, 1978, Chemistry, retired after a successful career in clinical chemistry where he developed tests for

inborn errors of metabolism in newborn infants. His training in chemical oceanography was a good basis for his subsequent work in clinical chemistry. Driven by a passion for applying enzymology to solving clinical chemistry diagnostic issues, he was pleased to develop a method to diagnose galactosemia by measuring the lack of activity of the enzyme Galactose 1 Phosphate Uridyltransferase. This changed the accuracy of the previous galactosemia test from 60-70% reliable to 99%+ reliable, a great step forward in screening.

Barbara Scaroni, 1978, Forestry &

Wildland Resources, has managed to stay a dirt forester over the many years. Scaroni is still out marking and cruising timber, administering timber sales, running property lines, and writing environmental assessments, timber sale contracts, and researching the land use history of timber sale areas. During college, Scaroni worked summers for the BLM in Ukiah, Missoula, Montana, Rawlins, Wyoming, and Susanville. Scaroni worked USFS in Cave Junction, Oregon and Willows. Scaroni had permanent jobs after graduation with the Confederated Tribes of Warm Springs 1980-1990; Malheur National Forest, Burns, Oregon, 1990-1993; Coeur d'Alene Tribe, 1993-present.

Neil L. Aaland, 1979, Sociology,

recently retired after 16 years as a sole proprietor environmental/natural resources planner and 25 years in



Ashley Bailey Locke: Journey to Telling Impactful Stories

As a senior producer for NPR and WBUR Boston's "Here and Now," a news magazine program, Ashley Bailey Locke ('10, Journalism) is living her dream of telling impactful stories. Catching the journalism bug early, she wrote inspirational stories about girls in male-dominated auto body shop classes and teachers who survived cancer for her high school newspaper.

At Cal Poly Humboldt, Bailey Locke honed her storytelling skills at the student newspaper, *The Lumberjack* and later, student-run radio station KRFH.

In a radio news production class, Bailey Locke learned to transform long news articles into succinct segments on the radio and learned to edit audio-skills she took with her to public radio internships in Los Angeles and to her current job at NPR's "Here and Now."

"I walked away from Humboldt with dozens of news clips in my portfolio to show. Humboldt is a community-minded space

where everyone wants to help each other succeed," Bailey Locke says. "My time at Humboldt was an experience that I probably wouldn't have had at a bigger institution."

Today, Bailey Locke records and edits audio used on air, writes scripts for hosts, and vets, finds, and books guests for the program. She's responsible for ensuring the host has all the information they need to tell meaningful stories.

She produces dynamic stories that shine a light on childcare and education issues, prioritizing points of view from women and underrepresented groups. Bailey Locke hopes her work as a producer creates more equity in the news stories people listen to, which informs the decisions they make in their lives.

"Young people are always watching and listening. When they see women and women of color treated with respect and consulted as experts in the news, it shows that their voices and the issues impacting their lives are urgent. They matter."



Dave Ebert: 'Lost Shark Guy' Explores the World for Mysterious Sharks

A cup of coffee with a professor from the Telonicher Marine Lab changed everything for Dave Ebert ('81, Zoology). The soon-to-be graduate from Cal Poly Humboldt knew he wanted to travel the world and study sharks since grade school.

During coffee, Professor Emeritus of Zoology John DeMartini, who mentored Ebert during his undergraduate degree, advised him to pursue a master's degree if he wanted to study sharks while traveling. Ebert took DeMartini's words to heart and pursued a master's in Marine Biology at Moss Landing Marine Laboratories on the Monterey Bay and earned a Ph.D. from Rhodes University.

Ebert is now known as the "Lost Shark Guy" for his work discovering and documenting little-known or unknown sharks. like the enigmatic ninja lantern shark and the giant megamouth shark. He has visited six continents and more than 35 countries. He has discovered and named more than 50 new shark species.

He's a regular on the Discovery Channel's Shark Week series "Alien Sharks," the BBC, and the National Geographic channel. He has authored 30 books and over 500 publications, including Sharks of the World, and hosts "Beyond Jaws," an informative "all things shark-related" podcast.

Ebert has made a career out of researching overlooked shark species in the order Chondrichthyes.

"You have all these species that are being fished in many parts of the world," he says. "One species hasn't been seen since 1934 and was declared extinct upon being formally named. I never look for new species; I find what's there."

Along with his ongoing research, Ebert is the Director of the Pacific Shark Research Center, which is part of the Moss Landing Marine Laboratories at San Jose State University. He is currently a scientific advisor for the Food and Agriculture Organization of the United Nations, among other titles.

Ebert remembers that cup of coffee with Professor DeMartini and the guidance and support he received as an event that changed the trajectory of his life.

"Humboldt was my launching point for the rest of my career. I tell students interested in the natural world: it's a great place to start."

local and state government service in Washington state. After obtaining his B.A. from Humboldt, he spent a year in Ohio at Bowling Green State University where he received an M.A. in Geography. He has fond memories of his time at Humboldt and intends to visit in retirement.

Mary Christine Rohn Hartman

(Cris), 1979, Natural Resources, lives in Northern California. She worked as a law enforcement ranger for 30 years after initially working for a private consultant in range/wilderness impact issues directly after graduation. She is still using her college degree while working as an expedition leader for a travel company that markets to alumni associations, leading tours and teaching guests about natural and cultural resources and the history of the areas she travels to. She says it is the perfect retirement job.

1980s

Cindy Purnell Frakes, 1981,

Biological Sciences, retired from her most recent position of 13 years as senior director of Information Development at Oracle after 33 years in the high-tech industry. Her career journey prior to that included stints at Borland, PeopleSoft, Computer Associates, and the Paradigm Group. She's now happily retired, living in Ferndale, Washington, and has picked up her binoculars to pursue bird #485 and beyond to add to her life list.

Rex Morgan, 1982, Journalism, has worked as a middle manager, assistedliving staffer, public school teacher, and nurse since graduating from Humboldt. Morgan earned M.Ed and ASN degrees. They credit any academic or career success to the details-and-deadlines ethos instilled by their teachers and peers in the Humboldt Journalism school. Most recently, Morgan had served as a vaccinator with the Missouri Medical Reserve Corps.

Rich Torquemada, 1982, Fisheries Biology, recently stepped down after four years as a board director of the Montana Grape and Winery Association, serving as president for three years. Torquemada continues to own and operate Luna Llena Vineyards, producing cold-climate hybrid wine grapes to several local wineries and cideries in western Montana, Prior to establishing Luna Llena, he enjoyed a 34-year career as a fisheries biologist and field supervisor with the Forest Service, U.S. Fish and Wildlife Service, and the Bureau of Land Management, working throughout the western U.S.

Brian D. Wiesner, 1982, History, is

Stars Soccer Club.

David J. Fisher, 1983, Biological Sciences, received his DVM from Washington State University after graduating from Humboldt, and practiced at a small-animal clinic prior to his residency in clinical pathology at the University of California, Davis, Following board certification, he was a clinical pathology instructor at the University of Wisconsin. In 1995, he started working for IDEXX at the company's reference laboratory in West Sacramento. Dave was recently awarded the American Society of Veterinary Clinical Pathology's Lifetime Achievement Award for his outstanding contributions to the profession.

Vince Smith, 1984, Environment & **Community,** recently retired after 36 years working for a private nonprofit organization caring for and assisting individuals with intellectual disabilities. He and his wife, Deb, left Northern California in 1984 and settled in New Mexico. He credits Humboldt's professors with steering him on a life journey of compassion and care for others.

Frank Scherf, 1985, Wildlife, has retired at long last after 35 years in Snohomish County, Washington as a biologist, senior planner, and shoreline planner. He worked for the USFS in Challis, Idaho before that. Scherf is now in the Rogue River Valley in Oregon and loving it.

currently the president of the Claremont

Brian Woodland, 1986, Liberal

Studies Elementary Education, has retired from teaching eighth grade history after 34 years. He taught for three years in Sacramento County, then taught at the same junior high in Placer County for 31 years. Woodland also taught various subjects including English, journalism, video production, and psychology. Although teaching eighth graders can be quite challenging, that age can also be the most rewarding to teach. His years at Humboldt were very influential to his career and life, and he can't imagine attending any other college because of the small, family-like atmosphere. More cycling, travel, and genealogy research are planned for his retirement.

Meg Godlewski, 1988, Journalism,

has accepted a new position as senior writer for Flying Magazine.

Eugene Charles Justus (Charlie),

1989, Wildlife, has retired after a 30-year career as a conservation officer with the Idaho Department of Fish and Game. He retired at the rank of regional conservation officer (enforcement manager/lieutenant). Justus received his B.S. in wildlife management in 1989. The broad educational experiences gained at Humboldt was a perfect fit for a career as a conservation officer/game warden. Justus is filling his retirement time by working part-time as a marine deputy for the Canyon County Sheriff, a small group leader at the local Celebrate Recovery, and documenting herps on iNaturalist and his YouTube channel.

1990s

Louis A. Richards, 1990, Theatre,

retired and is living the good life in Marina. After a career in the U.S. Navy, service in the Peace Corps, and years in other vocations, it's now his time to enjoy a life of relaxation.

Mohsin Aziz, 1992, Business, has worked in IT since graduating from Humboldt. In 1997 he started his own

IT services company, NYLEX.Net, which is now the most prominent IT services company in Humboldt County. The company has hired numerous Humboldt graduates as IT support technicians and engineers as it continues its growth.

Jon Dohlin, 1992, Biological Sciences,

After 25 years with the Wildlife Conservation Society, including 12 as the director of the New York Aquarium, Dohlin accepted a new position as CEO of the Fresno Chaffee Zoo.

Erik Kramer-Webb, 1992, Natural

Resources, taught environmental education at schools, summer camps, Outward Bound, and NOLS after graduating from Humboldt. He eventually settled down in Joshua Tree where he and his wife Theresa had a son and built a straw bale house. Together, they also started California Climbing School in 2017 to lead adventures in Joshua Tree and the San Jacinto Range and to promote diversity in the outdoors.

Richard Moore, 1992, Environmental Resources Engineering, has been

working steadily as a civil engineer since he left Humboldt. He worked a variety of positions in consulting, and local and federal government. He also ran a small consulting business full and part-time since 1998; worked a few years for the Indian Health Service; worked three years doing fish habitat improvement projects for Washington conservation districts; and, for the last year, has been a staff civil engineer with the Economic Development Administration in Seattle. It's a great job: everyone loves you when you have loads of money to give away. Well, almost everyone.

Jade Bristol, 1993, English, was

named chief development officer of Giving Docs, a revolutionary online platform that is democratizing the estate planning process and making it easier for individuals who want to make an impact by leaving a gift to charity in their will. Bristol is a 2001 graduate of Georgetown University Law Center and has spent the last decade helping nonprofits fund their missions through planned giving.

G Shellye Horowitz, 1995 and 1998, Psychology, was named

associate director of education of the Hemophilia Federation of America. Shellye Horowitz recently coordinated a national webinar addressing outdated scientific nomenclature of "dominant" and "recessive" in reference to x-linked diseases. This terminology is a barrier to diagnosis and treatment for women who are heterozygous carriers and manifest x-linked diseases. Patients, healthcare providers, and advocates will continue the conversation on a national level to reduce health disparities and increase access to appropriate care for female carriers of x-linked diseases.

Kevin Morris, 1996, Biological

Sciences, was leader of a team that recently developed the first-ever virus-specific targeted therapy for treating COVID-19. The work is now being developed into a phase 1 trial in Australia and works as a therapy for all beta coronaviruses.

Nikki Jardin, 1999, Environmental

Studies, recently launched an online and print publication created for people experiencing dementia-related illness, brain trauma, or other cognitive impairment. Mirador Magazine is the first leisure-oriented magazine created specifically for this community. Jardin was inspired to create Mirador when she couldn't find accessible, magazine-type reading materials for her aunt who had been diagnosed with early onset Alzheimer's Disease. You can learn more atmiradormagazine.com.

Mark A. Rayner, 1999, Kinesiology & Recreation Administration, moved on to his final career as Parks and Recreation exhibit designer/builder in a city of one million people six years ago after spending 15 years as a park ranger. Rayner's responsibilities include designing creative park features, including graphic design and engineering, signage, restoring historical features, and theming entire amusement park rides. This career continues to challenge both his creative and administrative education and backgrounds all while affording his family a life living in the beautiful redwoods of the Santa Cruz Mountains.

Samuel Yudin, 1999, German, is

currently a California Army National Guard Command Sergeant Major of the 340th Brigade Support Battalion in Seaside. Yudin is also the U.S. Army Europe Federated Intelligence Program mission coordinator in Los Alamitos. Yudin was recently selected as an adjunct scholar/fellow for the Modern War Institute at the United States Military Academy West Point for the 2021-2022 academic year.

2000s

Jane Bardolf, 2001, Wildlife, who after 35 years of public service including U.S. Peace Corps, National Park Service, Bureau of Land Management, U.S. Forest Service, and U.S. Fish and Wildlife Service, retired after working six years at Ruby Lake National Wildlife Refuge.

Kristina Elizabeth Ryan, 2003, Politics,

married James Catlin (2002, Political Science and Economics) after meeting in Humboldt some 20 years ago. They have been married since 2010 and have two children. Catlin is the chief macroeconomist at Value Investors Edge where he specializes in research and analysis of maritime trade. Ryan works for the State of California at the Department of Social Services. They currently reside in Southern California. They both share fond memories of their days as Humboldt students. Catlin misses surfing alongside redwood-lined cliffs, and Smug's Pizza. Ryan misses all the amazing natural scenery. They can't wait to have their children visit Humboldt when they are older.

Tim Kellison, 2005, Biological

Sciences, began working for the U.S. Forest Service after a brief stint with the National Park Service,. He had spent the last 15 years working as a botanist on the Lassen and Humboldt-Toiyabe National Forests. The past five years he has lived in Carson City, Nevada, working as the Sierra Zone botanist for the



Eddie Pate: Amplifying the Importance of Diversity, Equity, and Inclusion

When a small pebble is dropped into a still body of water, it creates a small ripple. When another pebble is dropped, it creates another small ripple. However, when these small pebbles are constantly thrown into the same still body of water, they create waves, movement, and stronger currents, eventually changing the water's flow.

For Eddie Pate ('88, Wildlife, '93, M.A. Sociology), dropping a continuous pebble of intentional inclusion, diversity, and equitable (IDE) actions gradually changes the flow of systemic inequalities for a more inclusive environment for underrepresented people.

"Diversity happens sustainably over time by dropping a pebble," Pate says. "It's the aggregation of all those little pebbles—or little systemic wins—that leads to systemic change, and that's how you sustainably drive diversity efforts."

Pate worked with companies like Microsoft, Starbucks, and Amazon to drive their inclusion, diversity, and equity efforts.

Pate's journey toward IDE work was very personal. As a biracial man, Pate says he had this gnawing feeling about how social and racial inequities played a role in his family's life.

"I always had this feeling of having a dilemma that the world wasn't fair, the world had barriers and obstacles and created disadvantages for groups," Pate says, adding that it was vital for him and his family to understand who they are culturally.

This "gnawing feeling" came to Pate at a time in his life when he wanted to continue his education and acquire a master's degree. With the support and encouragement of Cal Poly Humboldt Sociology Professor Emerita Betsy Watson, Pate studied comparative race and ethnic relations at Cal Poly Humboldt's Sociology department, where he readied for the University of Washington's doctoral program.

"I felt very prepared to move on to graduate school and a Ph.D. program and have the dialogues, interactions, and understandings at those programs because of the diverse writings and strong faculty members at Cal Poly Humboldt like Betsy Watson pushing us like crazy," Pate says.

Now partly retired, Pate is an inclusion and diversity consultant and executive coach, teaching people how to achieve inclusive, equitable, and diverse cultures as leaders in the workplace.



Felix Quintana: The Picture of Success

The quiet feel of Cal Poly Humboldt, along with its nearby redwood forests and rugged coastline, was a sharp contrast to the fast-paced Southern California streets where Felix Quintana ('14, Art) grew up.

Those streets, including some in his hometown of Lynwood, are prominent elements in Quintana's photography, which have gained significant attention from the Los Angeles Times, NPR, and KCET, Los Angeles' PBS station.

Street-front businesses, heavy traffic, and the occasional pedestrian dominate the cyanotype images. There is not a redwood tree or a hint of coastline to be found. Yet, Quintana, 32, says Humboldt greatly influenced his artistic development and was an important part of his life experience.

"I fell in love with Humboldt. It was a reflective space where I could work on figuring out my identity," says Quintana.

Quintana's art transformed when he was introduced to an artist who used Google Street View photographs. Exploring his Lynwood neighborhood digitally, Quintana stumbled upon an image featuring his father driving his truck, instantly captivating him.

His altered images translate the street-view photographs into cyanotype, accenting them with scratched white pencil-thin lines, often giving the pieces a feel of rotoscope animation.

Quintana uses a photographic technique of painting with light, a process he learned at Humboldt. He enhances his images using Photoshop and incorporates various elements from abstract shapes to imaginative compositions, creating visuals that transport viewers to alternate realms.

The Oakland Museum of California recently acquired two of his pieces, while one of his light-painting images is included in the Altamed Foundation art collection in Southern California. Ouintana's light painting "Three Figures in Motion" received the President's Purchase Prize at the 2014 Graduate Arts Exhibition and is now part of the Cal Poly Humboldt Permanent Collection.

"Humboldt prepared me well," he says. "I came out of the program ready for the next phase. When I came back to L.A., I was able to appreciate it more, how beautiful and complex it is. It gave me a new perspective."

Humboldt-Toiyabe managing rare plants, native plant community and pollinator habitat, and native plant materials program development on the Bridgeport and Carson Ranger Districts.

Leigh-Ann King, 2005, Biological

Sciences, transferred after 2003 to Fresno State and majored in Natural Science with a teaching credential obtained from Fresno State. She is now teaching Biology, Honors Biology, and AP Biology at her old high school in the Central Valley of California.

Jason Storlie, 2007, Wildlife,

began a new position with the U.S. Fish and Wildlife Service as deputy project leader of Humboldt Bay National Wildlife Refuge in January 2021. Previous positions with the U.S. Fish and Wildlife Service include wildlife biologist with the Hopper Mountain National Wildlife Refuge Complex and manager of Bitter Creek and Blue Ridge National Wildlife Refuges.

Chad Kaufman, 2008, World

Languages & Cultures, moved down to Cholula, Mexico to pursue a Master's degree after graduating from Humboldt in 2008 and working in a bilingual school for a bit. In 2011, he graduated with an M.A. in Applied Linguistics from La Universidad de las Americas Puebla, Mexico, After graduating, he moved back to Minnesota with his amazing spouse to be close to family. Kaufman is going on eight years working as a full-time Spanish interpreter at Children's Minnesota: a fantastic system of pediatric clinics and hospitals.

Joni McAtee, MD, 2008, Chemistry,

attended UC Davis School of Medicine after Humboldt. McAtee did her residency in Family Medicine in Duluth, Minnesota. McAtee returned to Humboldt County to work in a broad spectrum family medicine with obstetrics. McAtee opened a business in Fortuna, Ikigai Physician Group, with a clinic. McAtee continues working as a hospitalist in Fortuna and Eureka and working with Hospice of Humboldt.

Gloria Miranda, 2008, Art, is now a graduate of Claremont Graduate University Masters of Science in Information Systems Technology in Data Science as well as a Masters of Business for the Arts through Sotheby's Institute of Art at Claremont Graduate University.

Aydee Zielke, 2008, Environmental

Science & Management, recently obtained her dream job, joining the San Dieguito River Park JPA, taking on the role as the park's environmental planner. Her work includes habitat conservation, preservation, planning, permitting, and mitigation for trails and parkland. She is also using her cartography skills to create map exhibits, and maintain and update GIS data. She had worked for various private consulting firms and earned a Master of Urban and Regional Planning from the University of Hawaii (2015). She met her husband while studying at Humboldt and they have more recently taken on the role of parents, raising their two outgoing toddlers in Coastal North County San Diego.

Jeff Hernandez, 2009, Social Work,

celebrated his 12th anniversary serving in the U.S. Army. He was promoted to Warrant Officer II (Chief) at the Fort Riley Criminal Investigation Command (CID). Jeff's current job in the army is a team chief to investigate felony level crimes with military subjects. He is able to use the knowledge gained from obtaining a degree in Social Work to help assist victims in their time of need, direct them to appropriate services, and enable them to have a voice to speak out against wrongdoings.

Monica Topping, 2009, Journalism,

was named City of Eureka's 2020 Artist of the Year.

2010s

Rae Miller, 2010, Business, and her husband quit their jobs and hit the road to travel in an RV full-time. They started a blog (getawaycouple.com)

and began sharing everything we've learned about RVing there. Along the way, they've made incredible friends that live the same lifestyle and they created a business with them called RV Masterclass. This is an online education platform for new RVers who wanted to learn how they too can live life full-time on the road. They recently sold their first business, RV Masterclass. She gives credit to her Business degree for helping her live this exciting lifestyle.

Jessie Perez, 2010, Biological

Sciences, recently founded a company to help provide clean air during the global pandemic, spreading the word about a new technology that can keep people safe in the spaces they work, learn, and live.

Garrett Rains, 2010, Politics, is

working as an AI developer for Samsung Electronics in Seoul, South Korea. He is creating colloquial English speech for Samsung's voice assistant, Bixby.

James Caton, 2011, History, The

flexibility of Humboldt's B.A. in History afforded Caton the opportunity to chart a path for the future by exploring topics that interested him. Upon completing his degree, he began studying economic theory. He completed an M.A. in Economics from San Jose State University in 2013 where he studied monetary theory and history. He completed a Ph.D. in Economics from George Mason University in 2017 where he focused on non-equilibrium, agent-based models of systems of exchange. As of fall 2017, he is an Assistant Professor in the Department of Agribusiness and Applied Economics at North Dakota State University, where he teaches macroeconomics. entrepreneurship, economic computation, and economic development.

Brittany Britton, 2012, Art, received her Master of Fine Arts in Craft from the Oregon College of Art and Craft in 2015. Britton moved back home to Humboldt County and worked as an art history lecturer at the College of the Redwoods at the Klamath-Trinity Instructional Site in Hoopa. From 2018 to 2020 Britton was the

curator/registrar of the Native American Collection at the Clarke Historical Museum, In June 2020, Britton became the gallery director of the Reese Bullen Gallery and Goudi'ni Native American Arts Gallery at Cal Poly Humboldt.

Salina Cuddy, 2012, English, was

recently awarded a Ph.D. in Linguistics from the University of York. Her research focuses on language, gender, and sexuality. She will be starting a position as a lecturer in Sociolinguistics at Queen Mary University London.

Joseph Estens, 2013, Kinesiology & Recreation Administration, has been working in the legal cannabis industry and has moved up to the buyer level at a company. Estens' recreation degree aided in having the leadership skills needed for such an important position.

Shannon Barger, 2014, Kinesiology & Recreation Administration, After six

years working at NASA's Jet Propulsion Laboratory, Barger has gone back to get a Master's in Education from the University of Washington in addition to a graduate certificate in Education for the Environment and Community at Islandwood on Bainbridge Island, Washington.

Eddie Shin, 2014, Psychology, just started working as a marriage and family therapist with children and adolescents who have gone through trauma of various levels, as well as working with their families. Shin explains that it's been a really rewarding job so far and that the impact respect and hope have in helping a child or teenager is incredible. Shin finds it has been challenging, but well worth it.

Rae Slason, 2015, Environmental

Studies, met their sweetie, moved to Portland and is experiencing the greatest authenticity yet. The ENST program taught them how incredibly interconnected all of their interests are and how to take an interdisciplinary approach to problem analysis. Slason became passionate about improving access to healing and joy in all types of

environments that we exist in, including our homes, schools, and communities, as well as our natural surroundings. They are currently earning a Master's of Science in Recreational Therapy and are super excited to increase inclusion, accessibility, and diversity acceptance in their community.

Kimiko Nishitsuji, 2016, Critical Race, Gender & Sexuality Studies, spent three years as a county eligibility worker at the County of Humboldt after graduation. Prior to that, she served as the patient benefits coordinator at Mad River Community Hospital. She recently relocated back to Los Angeles County and is the Medi-Cal **Enrollment Specialist for WelbeHealth** PACE, providing case management for medically complex at-risk elders. She lives with her partner Patrick Notthoff (2012) and her cat Mr. Mochi.

Rosie Slentz, 2016, Anthropology,

earned a 2020 Ed.D from University of New England in Transformational Leadership.

Clayton Kelley, 2017, Recreation Administration, has worked for Alpine County as the building and grounds supervisor. He oversees all buildings, parks, and open spaces in Alpine County. He is also a captain with Alpine County Fire and spent this summer on the Tamarack and condors.

Holly Lemyre, 2017, Critical Race, Gender & Sexuality Studies, has had the unique pleasure of applying the toolkit gained in her CRGS degree to a field she'd never heard of before graduation: pelvic health. She's spent the last two and a half years working at Origin, a femtech startup committed to changing the future of health for individuals with a vaginal pelvic floor.

Alexis Puerto-Holmes, 2017, Kinesiology & Recreation

Administration, is now a full-time recreation park programs assistant with Sonoma County Regional Parks. She has led a variety of programs for Sonoma County Parks. Alexis thinks she has the

best job—she gets paid to take people kayaking, surfing, and hiking, present about inequity in the outdoors, lead outreach, and so much more. She is forever grateful to those at Humboldt who supported her (shout out to Professor Gen Marchand).

Ryan Ward, 2017, History, obtained a teaching credential from San Jose State University and was hired as a government and economics teacher at Westmont High School. After teaching two classes for the 2020-21 academic year, he was hired to a full-time position for the 2021-22 school year.

Nicholas Fassl, 2019, Kinesiology &

Recreation Administration, is currently an afloat recreation specialist aka "fun boss" on an aircraft carrier for the U.S. Navy. He organizes daily activities, large events, and schedules trips/tours for 5,500 Navy sailors and personnel in San Diego and foreign ports.

Liam Hazelton, 2019, Environmental

Studies, searched for jobs after graduation in the Bay Area but did not have any luck for a year and a half. In December 2020, he received help from a local professional who sent him information about an internship that dealt with restoring and mitigating damage done in riparian areas by humans. He was selected to join the program in February of 2021 and also has a future job in the pipeline.

Casey Tran, 2018, Computer Science,

finds pleasure in taking on any difficult intellectual activity. It has kept him open minded when he approaches difficult subjects. Taking Philosophy 420 with Professor Goodman gave Tran the language to talk about his own foundations of knowledge, metaphysical theories, science, and epistemology, which are tools he uses every day in tackling his professional and social relationships. Tran fondly remembers taking classes in modern philosophy with Professor Heise and having his world turned upside down everyday, as well as his first A on a Hegel paper with Lecturer Cannon. He is now

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CAL POLY HUMBOLDT Alumni Relations

1 Harpst St., Arcata, CA 95521-8299

Name (w/Middle Initial)

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a compass for life.

2020s

Zoology, has received a job at the local wildlife rehabilitation center in her hometown of San Diego. She gets to use all the information and skills she learned while getting her degree. While she didn't have any hands-on experience with wildlife before getting hired, her organization saw that she was a Humboldt alumna and picked her for the role. She later learned that two of her coworkers are also Humboldt alumni, so the organization must view Humboldt favorably. She is thankful to Humboldt for helping her become the person she is today, and for giving her the skills needed to get a career in her field. Arcata will always be her home away from home.

began working for California Assemblymember Cristina Garica (AD 58) as a legislative aide. For the previous six months, Garrett worked for Assemblymember Tasha Boerner Horvath (AD 76).

Administration, accepted a full-time permanent position with the Air Force in San Pedro. As a recreation specialist, she will be planning and leading outdoor recreation programs for military members and their families, including backpacking,

publishing papers in Ph.D. Computer Science with a relentless thirst for knowledge. The Philosophy degree is

Ashley Michelle Armas, 2020,

Trent Garrett, 2020, Politics,

Kacie Hallahan, 2020, **Kinesiology & Recreation**

rafting, skydiving, deep sea fishing, and more. She thanks the REC fam.

Timothy Rupiper, 2020, Liberal Studies Elementary Education,

received a job as an outreach advisor for Academic Talent Search at Sonoma State University. Rupiper is responsible for providing consistent, accurate, academic advising services to first-generation, low-income, college-bound 6th-to-12th-grade students. Advising includes exploring academic requirements of a specific program or major and assisting students in exploring careers, evaluating academic abilities, and setting goals.

Danielle Dornan, 2021, English,

is heading into an online master's program through Syracuse University for Marriage and Family Therapy. She just moved to Santa Cruz, and is working as a barista/hostess and as a cheesemonger.

Lauren Werner, 2021,

International Studies, is enjoying a position as an AmeriCorps VISTA outreach specialist, and community harm reduction and youth educator with the Sacramento County Opioid Coalition. Werner also recently accepted a position with the Peace Corps as a community educator in Mongolia. Werner is extremely thankful for the multitude of absolutely fantastic opportunities delivered to her after graduation from Humboldt, despite the many fluctuations that have recently taken place. International Studies has proven to be the most flexible major option, providing freedom in all of her professional pursuits and educational explorations.

Submit a Class Note

humboldt.edu/classnotes forever@humboldt.edu





things

Snow Days A rare occurrence for Cal Poly Humboldt last February. It snowed—and it stuck!













Meet Humboldt

VICTOR DIAZ'S PASSION for helping small businesses and underserved "I think I'm a very normal guy. If I can do it, anyone can do it. You just communities is what drew him to the field of computer science. Before enrolling at Cal Poly Humboldt, he built websites and applications for have to sit down and do it. Instead of looking up to people, I always try small farms and family restaurants. His skills brought these businesses to see them as my equal and ask myself, 'how do I get there?' more employees and customers, and helped generate more revenue. Currently, in the REU program, I'm sitting down with doctors and having His work also ignited a passion to help small businesses and others great talks with them about their experiences. When people think about who can't keep up with the tech world. Now, Diaz, a first-generation college, they often focus solely on finishing a bachelor's degree. However, college student and Cal Poly Humboldt hackathon champion who is also being in the REU and Cal Poly Humboldt programs has shown me that I part of the University's first McNair Scholars Program cohort—which have a lot to learn. These programs have given me this perspective, but prepares students for doctoral studies—is on his way to earning his they also provide the resources to pursue this career." Ph.D. In the meantime, he's in the process of publishing two research Small Classes, Big Impact papers on artificial intelligence, and participating in the National Science Foundation's summer Research Experience Program for Undergraduates "Here, you have professors who know you. Because I'm able to talk to at The University of Texas at Dallas. my professors and ask them questions, I've grown so much. There's no other way I think I would have achieved everything I have so far."

If you Build it, They Will Come

"The first website I built was for a farm in my little town in Mexicali, Baja California. The business had no employees, so I built a website to put it on the map. After I built the website, the owners received over 150 applications for work in one weekend. That's when I decided to pursue Computer Science. I'm studying software engineering to be able to build something that can help people and small businesses thrive."

Helping 'the Little Guy'

"When people think about computer science, they think about big tech companies. I want to help everybody else; I hope to build people up. And at Cal Poly Humboldt, I've found friends who just love building stuff. The community I've built just loves to take on any project that we can and support each other."



Victor Diaz ('24, Computer Science)

Learning the Ropes

Building Software and Community

"The most impactful part of my educational experience at Humboldt is working in teams. I've coded alone for a long time; even though it took me hours, I figured it out. But here, I have a group of friends where everyone has their own specialization in computer science so I don't have to do things alone. Having this support network encourages me to succeed, and fuels my passion.

I've entered into a space where I can talk to and learn from likeminded people. It's rewarding to be part of a community where if you tell someone 'I'm going to build a game in 24 hours for the hackathon,' instead of saying 'That's crazy,' they say 'How can we help?'"



BOLDLY RISING

The Campaign for Cal Poly Humboldt

Investing in Cal Poly Humboldt's Future!

Join the thinkers and doers, inventors and innovators, leaders and restorers who are paving the way for a brighter future through Boldy Rising: The Campaign for Cal Poly Humboldt.

Cal Poly Humboldt is working to meet the pressing challenges of today and tomorrow, driven by our most powerful resource: our people. The Boldly Rising Campaign is supporting this work, and will make a lasting impact.

The Campaign's ambitious goal of at least \$50 million will set California's newest polytechnic on a bold path. It is focused on the student experience and will provide greater access through scholarships and paid internships, enhance academic programs, expand hands-on learning, foster equitable communities, and create new opportunities.

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