UNIVERSITY OF WISCONSIN-LA CROSSE COLLEGE OF SCIENCE AND HEALTH NEWSLETTER

UWL Science & Health News

VOLUME 17, NUMBER 1, WINTER 2020-21

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Science & Health News

UNIVERSITY OF WISCONSIN-LA CROSSE
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CLASS NOTES POLICY
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ON THE COVER: The Exercise and Sport Science Department has worked with La Crosse area youth through the Adapted Physical Education Program and others for many years. Now, UWL has received a $1.25 million U.S. Department of Education grant to the Adapted P.E. and School Psychology graduate programs.

The Adapted Physical Education Program typically holds events on campus for children with disabilities, as this one in summer 2018.

$1.25 MILLION

Funds will make UWL's reputable adapted phy ed, school psych programs even better

The five-year U.S. Department of Education grant aims to better prepare state and nationally licensed adapted physical educators and school psychologists so they can enhance assistance and results for children with disabilities, ages 3-21.

Brock McMullen, director of UWL's Adapted Physical Education Teacher Preparation Program, says the grant will prepare students to work in an interdisciplinary special education environment — something necessary when they graduate and begin working in K-12 public schools.

"This grant will provide a unique interdisciplinary graduate experience through a variety of high-quality professional development and hands-on opportunities with students with disabilities," he explains.

McMullen says funding will help graduate students come together for regular

Continued on next page

interdisciplinary seminars to learn important information overlapping both disciplines. The seminars will bring in experts to present K-12 education issues, and allow those in the program to attend national conferences.

The grant will also help recruit high-quality graduate students by offering tuition assistance for those applying to the adapted physical education and school psychology programs. It will give students ample opportunities to take several classes together and collaborate.

McMullen says the La Crosse area will benefit from the grant. School districts will see more high-quality students in the two programs when they spend hundreds of hours in their buildings being mentored and trained. Also, students will collaborate in on-campus, community-based physical activity programs while interacting with local children with disabilities and their parents.

Rob Dixon, director of the UWL School Psychology Program, says the grant builds on the strong reputation of the two UWL programs. Through the grant process, he says that was evident when they easily gathered letters of support from state, regional and national groups.

"These letters spoke to the positive perception our programs have, as well as supporting our vision for what they could become through these interdisciplinary opportunities and support to the graduate students," Dixon says. "It is an exciting project that we are eager to get started on in order to bring our ideas into a reality."

McMullen further attributes the grant's strength to retired Adapted Physical Education Program Director Garth Tymeson who also contributed input in the application. Tymeson helped grow that program in his more than two decades on campus.

Rob Dixon, Director, UWL School Psychology Program

McMullen says administrators from school districts across the country regularly contact UWL for its graduates. The grant will only increase the number of high-quality students in both programs who will graduate and be employed in districts nationwide, expanding UWL's presence and impact throughout the U.S.

See more about the UW-La Crosse School Psychology Program

See more about the UW-La Crosse Adapted Physical Education Teaching Program

Brock McMullen, director of UWL's Adapted Physical Education Teacher Preparation Program, works with a La Crosse area youth during an on-campus adapted sports program in 2019. UWL has received a $1.25 million grant from the U.S. Department of Education that will empower the university's Adapted Physical Education and School Psychology programs, and benefit children with disabilities throughout the country.

Students in the Physical Education Teacher Education and Adapted Physical Education Programs no longer have the option of working directly with students in person like they did during in 2019. So within the Adapted Physical Education Program, students are creating instructional videos to send to the parents of children who typically participate in the Motor Development Program on campus.

A virtual workout

Taking physical education online

Teaching physical education online? It seems like an oxymoron.

COVID-19 has required the Physical Education Teacher Education and Adapted Physical Education Programs to transform teaching and preparing pre-service teachers to utilize technology for teaching and learning.

Within the adventure program, instructional videos are shared with students demonstrating proper belaying technique. A second video relays the instructor demonstrating errors while belaying and the students are asked to identify errors, explain how the skill was performed incorrectly, and how they would correct the error.

Within the Adapted Physical Education Program, students are creating instructional videos to send to the parents of children who typically participate in the Motor Development Program on campus. The program provides instruction in a variety of areas including health-related physical fitness, gross motor skill development, sport skills, and physical recreation skills to children and youth with disabilities, ages 3-21.

The instructional videos are created specifically for each child. The parents can view the videos and implement the activities to assist them in reaching Individualized Educational Program (IEP) Goals.

Lastly, several physical education teacher education courses have used video analysis software, such as Coaches Eye, to record movements, critique and assess them, and share with others.

The video analysis software allows students to record movements and review the movement using slow motion. Students are also able to use a telestrator to identify what they did well or what they need to improve upon.

ESS faculty have been very strategic in choosing and utilizing technology that pre-service teachers will be able to implement in their own classrooms.

"Although this has been challenging at times, we have had the opportunity to grow as educators," says ESS Assistant Professor Deb Sazama. "We will be better prepared to serve all students — in or out of the digital world."

Carl Foster, a UWL exercise and sport science professor, has been named to the U.S. Speed Skating Hall of Fame. Foster is being inducted as a contributor to the sport after spending three decades as an exercise physiologist for Team USA.

A Hall of Fame career

Carl Foster honored for scientific contributions to speed skating

Carl Foster and speed skating were an unlikely pair, but they couldn't have been a more perfect match.

A Texas native who wasn't exposed to the sport until after college, Foster was named to the U.S. Speed Skating Hall of Fame in spring 2020. He's being recognized as a key contributor to the sport — the culmination of many years of work as an exercise physiologist for Team USA.

While his involvement with Olympic competition has dwindled in recent years, Foster has remained active as an exercise and sport science professor at UWL, where he's worked since 1998.

"It was a pleasant surprise, because there aren't many non-skaters like me in that club," Foster says. "I did a lot of work in speed skating 10 or 20 years ago, but not so much lately, so I didn't know if I was seen as useful anymore. This is a nice pat on the back, and everyone likes a pat on the back."

Foster earned his doctorate from the University of Texas at Austin in 1976, under the tutelage of exercise physiologist and celebrated running coach Jack Daniels.

Though he wasn't a skilled runner himself, Foster shared Daniels' keen interest in the mechanics of the human body, as well as his goal of helping top athletes avoid injury and improve their technique.

Foster soon began his career at Sinai Samaritan Medical Center in Milwaukee, where his boss, Michael Pollock, encouraged him to apply his knowledge to speed skating.

"I never skated on ice until I was 30-something, and I had no intrinsic feel for the sport," he recalls. "I knew that, if I started asking questions, they'd inevitably be pretty dumb questions."

Absorbing everything he could, Foster grew increasingly familiar with the sport's ins and outs. He spent a lot of time at the oval in Milwaukee, where many top speed skaters trained.

As it turned out, he was actually ahead of the curve — back then, speed skating was relatively unexplored by scientists and researchers.

"There was almost no literature on the physiology of speed skating," Foster says. "It was a really important sport in the Netherlands and Norway, and a minor sport everywhere else. In the U.S., between the Olympics, it didn't really exist in the mind of the public."

Sharing his insight with Team USA, Foster left a small mark on the 1980 Winter Olympics in Lake Placid, where American speed skaters won five gold medals and eight medals overall — both more than any other country.

In the years that followed, Foster became a fixture of U.S. Speed Skating, using cutting-edge science to help the country's top skaters perfect their craft.

He went on to chair the Sports Medicine/Sports Science/Drug Testing committee for U.S. Speed Skating and received a research grant from the International Olympic Committee to conduct studies (along with fellow UWL professor John Porcari) at the 2002 Winter Olympics in Salt Lake.

By the time he scaled back his involvement in the mid-2000s, Foster had built a reputation as one of the sport's most influential scientific minds.

"He is one of those people who works tirelessly over a number of years with our athletes and coaches but is really in the trenches," Bonnie Blair Cruikshank, a five-time Olympic gold medalist, told TeamUSA.org. "Those that worked with him know his dedication, long hours (and his commitment to) giving the athletes and coaches the best tools for success. He gave so much to our sport."

While Foster is best known for his work with speed skaters, his two-plus decades at UWL may represent an even grander accomplishment.

As a professor and director of the Human Performance Laboratory at UWL, Foster has mentored hundreds of students who have gone on to successful careers in exercise and sport science.

He has written more than 300 scientific papers and contributed chapters to roughly 20 books.

And he has helped build, in his estimation, an outstanding exercise and sport science program.

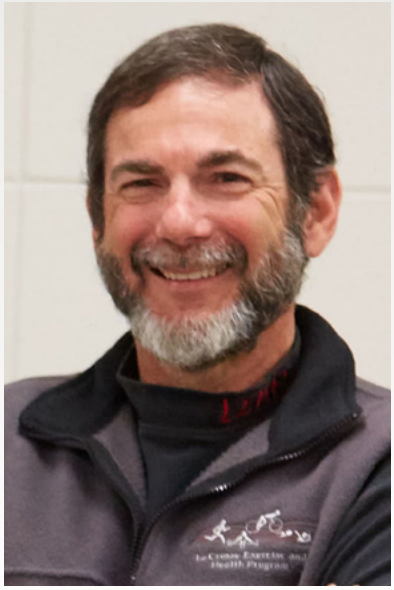
"I guess I'm biased, but I think we have the best program in the world," Foster says. "If you look at how many papers we've published, how many people have been president of a major professional society, how many students are doing great work once they graduate, UWL is in a class by itself."

Another study, another national magazine

Over his 30-plus years on campus, Exercise and Sport Science Professor John Porcari and his colleagues have headed up many research projects landing in national publications. They can now add the Fall 2020 issue of Sports Illustrated to their list.

Porcari was quoted in a story, "Sweat Safely," about the impact of wearing a face mask during a workout.

Porcari says some masks can trap extra carbon dioxide that could reduce airflow and cause dizziness or headaches. Masks also have a psychological impact — a discomfort that can serve as a hurdle for most, he notes.



John Porcari

Taking flight

Adventure program for first-year students find success

Transitioning from high school to college is difficult. Most students find a lack of connection with others and worry about the unknown.

But a new UWL program called "First Flight" is helping incoming first-year students transition into college.

The program uses adventure education — acquaintance, communication, trust and high element activities — along with outdoor pursuit overnight trips, such as rock climbing, backpacking, canoeing and kayaking.

Outdoor orientation programs like this help students become familiar with the university and facilitate friendship opportunities, says ESS Assistant Professor Jenna Starck.

However, with COVID-19, students last fall engaged in activities on and near campus, such as hiking Hixon Forest, canoeing Pettibone Lagoon, navigating the UWL ropes course, and more.

Although not the traditional program, students still self-reported feelings of belonging and developing friendships across the five days.

One student, Macy, says "it was the perfect way to help me adjust to college life away from home. I made new friends doing things outdoors and I have continued doing activities with the friends I made."

Another, Joey, says his stress was reduced. "Participating made my transition to college more efficient and helped me have less stress," he explains. "I got to be on campus and transition into the housing situation…knowing my way around campus reduced my worries."

Rebecca and Andre also benefitted. "I didn't know where anything or who anyone was…by the time the week was over, I was able to direct others and introduce new people to a group of first flight friends," one says.

"I overcame many obstacles quite literally, which prepared me for overcoming obstacles when it came to assignments or tests, or even the frustrations of being a college student in a worldwide pandemic," adds the other.

Following the program, most students enrolled in a First Flight course. First Flight will be offered again in fall 2021.

First Flight was programmed by: T.J. Mickschl, senior administrative specialist for Strength Center, is the Adventure Program Coordinator. Rachel Getzinger, ESS graduate students, is the Adventure Program Graduate Assistant while ESS Assistant Professor Jenna Starck is the Adventure Program Director.

Exercise and Sport Science Assistant Professor Jenna Starck takes part in a physical education conference on campus in 2018. Starck is the Adventure Program Director for the university's "First Flight" program to help incoming first-year students transition into college life.

HE'S PUT TO THE TEST

Alum helps spearhead COVID testing at Minneapolis hospital

One of Khadel King's favorite parts about working in medicine is the opportunity to learn new things.

And never has that opportunity been greater than during COVID-19.

King, '19, was originally a medical technologist in the toxicology department at Hennepin Healthcare, a system of clinics based in the Twin Cities. But when the pandemic set in, King was pressed into service in the molecular department, where he is responsible for running various types of COVID-19 tests.

"I was there from the beginning, helping out with troubleshooting and coming up with a plan of action when we saw that the number of specimens would be rising exponentially," he explains. "It was slow at first, but then it really took off. We've gotten several new (testing) instruments, and I've learned to operate all of them. We've had to build everything from the ground up, because this is a novel virus."

King had a hand in developing the health system's standard operating procedures related to COVID-19. He also helped validate the first piece of PCR processing equipment, the Abbott m2000rt, which is used to extract the virus from samples.

In addition to the gold-standard PCR test, Hennepin Healthcare now offers a less invasive saliva test.

King says the health system is doing everything in its power to process tests efficiently and accurately.

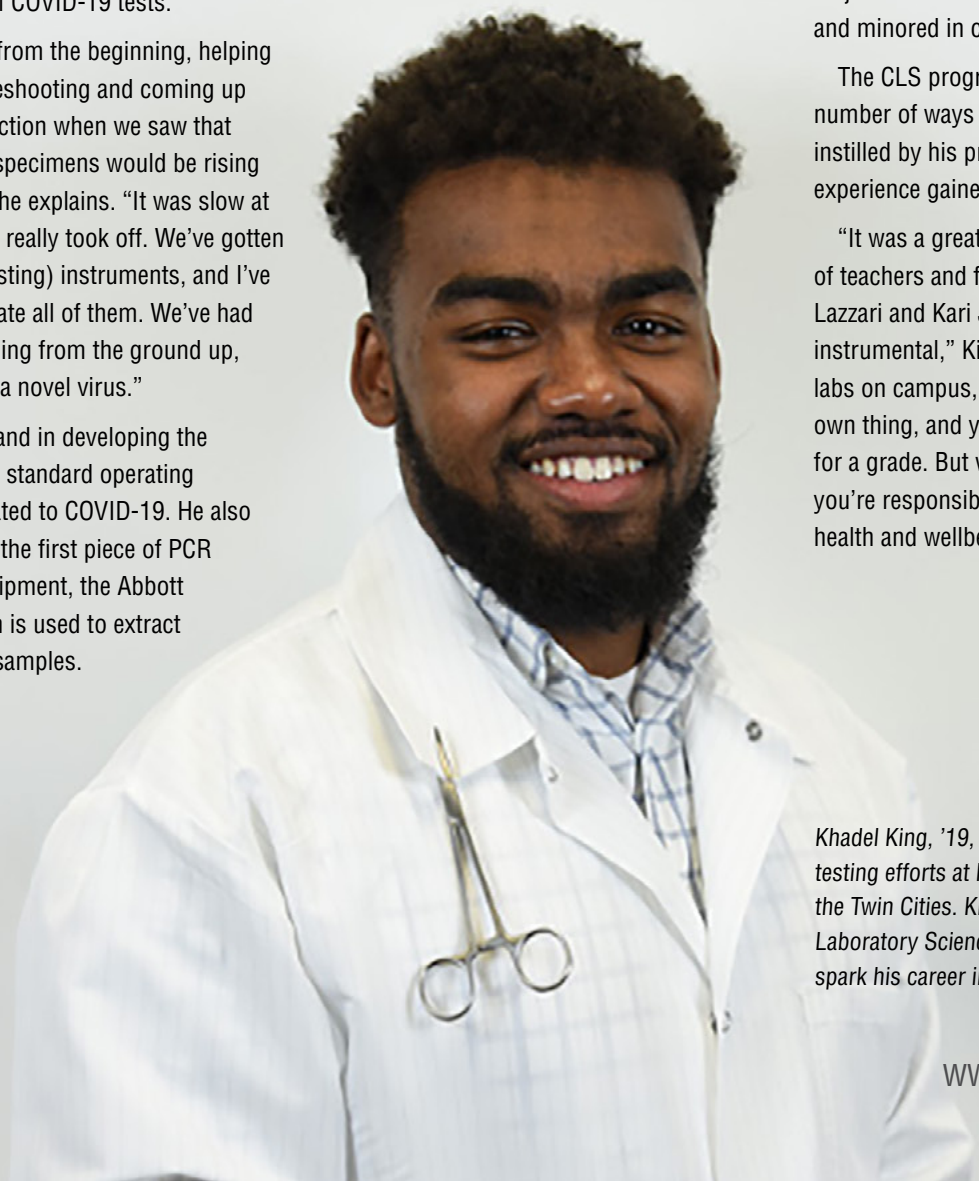
Sometimes, though, the machines require maintenance and the unprocessed tests begin to pile up. At a given time, he says, there are roughly 1,500 samples on deck.

"It's been extremely stressful just because of the influx of inpatient and outpatient samples," he notes. "Then when you have difficulties with equipment not working for whatever reason, things get backed up and it adds to the stress. But we have a good group of people, and we've been able to remain composed and push forward."

King, a native of Toronto, is applying to medical schools and hoping to progress in his career. His interest in medicine blossomed at UWL, where he majored in clinical laboratory science and minored in chemistry.

The CLS program shaped King in a number of ways — from the knowledge instilled by his professors to the real-world experience gained from clinical lab work.

"It was a great major, and in terms of teachers and faculty, Dr. (Michael) Lazzari and Kari Johnson were really instrumental," King says. "In your basic labs on campus, you're kind of doing your own thing, and you're only responsible for a grade. But when you're a lab scientist, you're responsible for someone else's health and wellbeing."



Khadel King, '19, is helping lead COVID-19 testing efforts at Hennepin Healthcare in the Twin Cities. King credits UWL's Clinical Laboratory Science program for helping spark his career in medicine.

No.1 Nationally

Physics Department is tops in awarding degrees

Professor Taviare L. Hawkins, Physics Department chair, works with students in a physics lab. Hands-on experience and specialized classroom attention are among the reasons UWL issued an average of 35 degrees annually in 2015-17, making it No. 1 in the nation among bachelor's degree-granting institutions.

Once again, UWL is No. 1 in awarding physics bachelor's degrees across the country, according to the latest data from the American Physical Society.

UWL awarded an average 35 degrees annually between 2015-17, making it No. 1 among all bachelor's degree-granting institutions on the American Physical Society list.

The UWL Physics Department stands out in its emphasis on teaching and undergraduate research, says Professor Taviare L. Hawkins, chair of the Physics Department. Students typically work with faculty on research projects in their specialty area, giving them unique learning opportunities different from the classroom.

"Our students get a hands-on experience, along with specialized classroom attention," says Hawkins. "This department is really doing something special."

One of the special things that has been going on for 20 years: the department annually invites a Nobel Prize-winning physicist to campus. The laureates meet and interact with students, faculty and staff, along with giving a public lecture and physics seminar related to their unique discovery.

"Where else can you have an opportunity to sit down and have lunch with a Nobel Laureate?" notes Hawkins.

The large number of graduates earning physics degrees comes when the nation continues to see demand for Science, Technology, Engineering and Mathematics (STEM) graduates. UWL's Physics program is diverse, offering specialty tracks in applied physics, astronomy, computational physics, optics, physics education, and biomedical and business concentrations. It also has dual degree programs in physics/engineering and physics/physical therapy.

UWL has consistently placed among the top five nationally for graduating physics majors. It was No. 1 previously for 2011-13.

In 2013, the program was awarded the American Physical Society Award for Excellence in Undergraduate Physics Education, which recognizes physics programs that support best practices in education at the undergraduate level.

The top 5 undergraduate physics degree-granting institutions 2015-17

1. **University of Wisconsin-La Crosse — 35**
2. California Polytechnic State University-San Luis Obispo — 34
3. SUNY College at Geneseo — 29
4. Rowan University — 27
5. (tie) California State Polytechnic University-Pomona and U.S. Naval Academy — 26

Source: American Physical Society

Shelly Lesher named national Fellow

A physics professor has been recognized by American Physical Society peers

The society has elected Shelly Lesher a 2020 Fellow. Her national colleagues are recognizing her for "advocating on behalf of the essential role of physics in society, and for demonstrating the importance of physics education for all students."

"It's a great feeling knowing that my peers think I'm impacting physics through the work I'm doing at UWL," says Lesher, who has taught here for 10 years.

Along with teaching core physics to science majors, Lesher says it's important to promote how physics not only impacts science, but also the world in general. She was selected as a Yale University Presidential Fellow in 2019-20 for establishing a unique course on the impact nuclear science has had on society and her nuclear physics research.

"It's important to bring that human side back to science," she explains.

Lesher is energized by the combined teaching and research opportunities UWL offers. She appreciates personal interaction with students, especially conducting research with undergraduates — something normally saved for graduate work.

And she likes teaching courses with freshmen who may have not taken a physics class before.

"You can have a direct impact on a student's life," she notes. "That's what is special about UWL."

Professor Taviare Hawkins, Physics Department Chair, says she is privileged to have Lesher in the department.

"It is quite prestigious for our department to have a member named as an APS Fellow and an even rarer distinction for a physicist at a primarily teaching institution to receive this honor," says Hawkins. "Dr. Lesher's hard work to educate the community on all aspects of nuclear physics has finally paid off! It is my honor to have her as a colleague."

The APS Fellowship recognizes members who have made exceptional contributions to physics research, important applications of physics, leadership in or service to physics, or significant contributions to physics education.

Each year, no more than one half of one percent of Society membership is recognized. This year, 163 Fellows were selected.

Lesher is the first Physics Department member named to the list and is the first from a UW System comprehensive, outside of UW-Madison and UW-Milwaukee, to receive the honor. **View the complete list of the 2020 APS Fellows.**

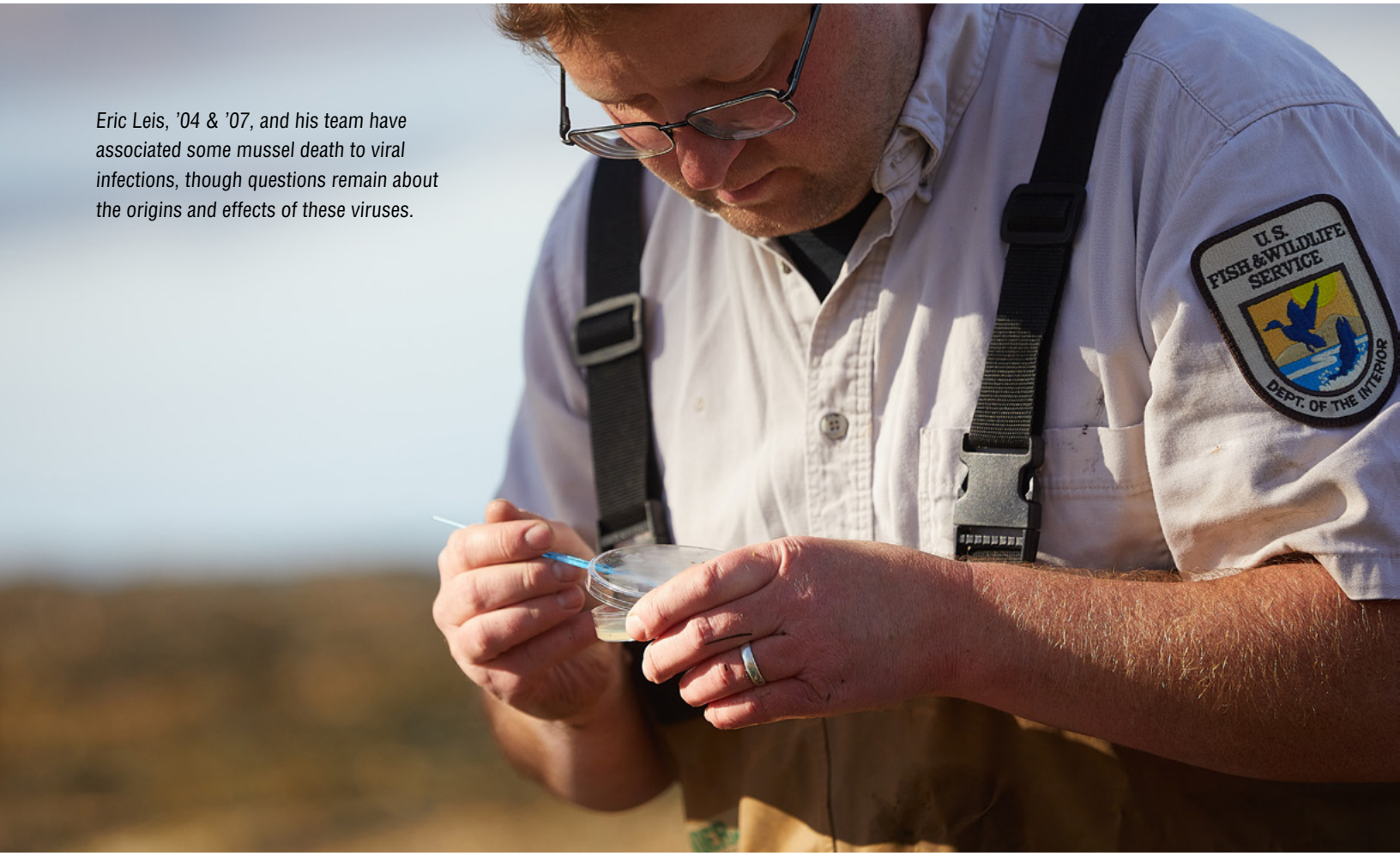
Physics Professor Shelly Lesher has been named an American Physical Society 2020 Fellow. National colleagues are recognizing her for "advocating on behalf of the essential role of physics in society, and for demonstrating the importance of physics education for all students."

Lesher's recent accomplishments

- Promoted to full professor, 2020
- Yale Presidential Fellow at Yale University, 2019-20 academic year
- National Science Foundation Grant recipient – "RUI: Nuclear physics research with undergraduate students," June 2020.
- National Science Foundation Grant recipient – "MRI: Acquisition of Si(Li) detectors and two BGO shields for the development of the La Crosse fIREBAll," September 2019
- National Science Foundation Grant recipient – "Conference Participation Support Proposal – The Nuclear Physics Conference Experience for Undergraduates," July, 2020

‘A REAL-LIFE GAME OF CLUE’

Alum investigates what’s killing freshwater mussels



Eric Leis, ’04 & ’07, and his team have associated some mussel death to viral infections, though questions remain about the origins and effects of these viruses.

Eric Leis is slowly but surely unraveling a mystery.

The parasitologist and fish biologist at the La Crosse Fish Health Center is part of a small team investigating disturbingly high mortality rates among freshwater mussels in the rivers of North America and beyond.

The team has associated some of these deaths with viral infections, but questions remain about these novel viruses and why exactly they are correlated with the dying mussels.

“Mussels are extremely important to the ecosystem — they’re like nature’s Brita filter,” explains Leis, ’04 & ’07. “They filter and purify the water, stabilize riverbeds and indicate a healthy ecosystem overall. So if they’re dying in mass numbers, and they are, it’s something we should be talking about.”

Leis divides his time evenly among field work, lab work and writing papers related to the declining mussel populations.

He and the rest of the team have established themselves as leading authorities on the subject. They’ve received questions and samples from all over the world — from Oregon to Virginia to Spain. Earlier this year, Leis lent his expertise to a New York Times story.

According to Leis, one virus in particular was statistically linked to moribund mussels. More work is needed to determine if this virus is pathogenic, as well as whether there are environmental conditions that influence viral expression and, ultimately, disease progression. In addition to the virus, there may be other culprits.

Right: Eric Leis, '04 & '07, a parasitologist and fish biologist at the La Crosse Fish Health Center, collects mussel samples from Lake Onalaska. Leis and his team are investigating high mortality rates among freshwater mussels locally and around the world.

Below: A batch of live mussels pulled from Lake Onalaska and later returned to the water.

"I love my job in that it's like a real-life game of Clue," Leis says. "But instead of Col. Mustard with a lead pipe, you have things like viruses, bacteria and changing environmental conditions. We're starting to get some answers, but there's a lot we don't know."

Leis, who was raised near Cashton, about 30 miles east of La Crosse, has always had a passion for science and an eye for granular details.

He remembers one Christmas, growing up, when his parents got him a microscope. That seemingly magical device revealed a whole new world.

"It opened my eyes," he says. "It showed me how cool things are at a microscopic level."

At UWL, Leis originally planned to major in education, in hopes of becoming a science teacher. Then he took a biology class and fell in love with the subject, switching his major.

Late biology professor Dan Sutherland was particularly impactful in Leis' development as a young scientist, he says. After taking Sutherland's aquatic animal health class,

Leis was so inspired that he jumped at the chance to take a student job at the La Crosse Fish Health Center — the foundation for the work he does now.

"Once I got into upper-level classes in biology and chemistry, I had the opportunity to interact with professors much more," he notes. "One thing that struck me is how much the professors cared, and how they always had time to help you and discuss things. If you were interested in something, they were interested in helping you achieve it."

UWL Occupational Therapy graduate students provided tele-health services to complete their fieldwork studies during the pandemic. They were able to support their volunteer's mental health and wellness related to the impacts of COVID-19 on occupation and participation.

ALTERNATIVE THERAPY

Occupational Therapy Program provides virtual telehealth fieldwork experience

Polly Berra, Clinical Assistant Professor and Academic Fieldwork Coordinator

The pandemic has changed how some UWL graduate students are completing their fieldwork.

Occupational therapy (OT) students must complete five different fieldwork experiences during their time in the program. That exposes them to multiple practice settings across the life span and provides experiential learning in context.

When one of these field experiences was unexpectedly cancelled last spring due to COVID-19, faculty worked quickly and creatively to develop an alternative experience. The alternative allowed collaboration with community members and application of the OT process in a safe, physically distanced environment.

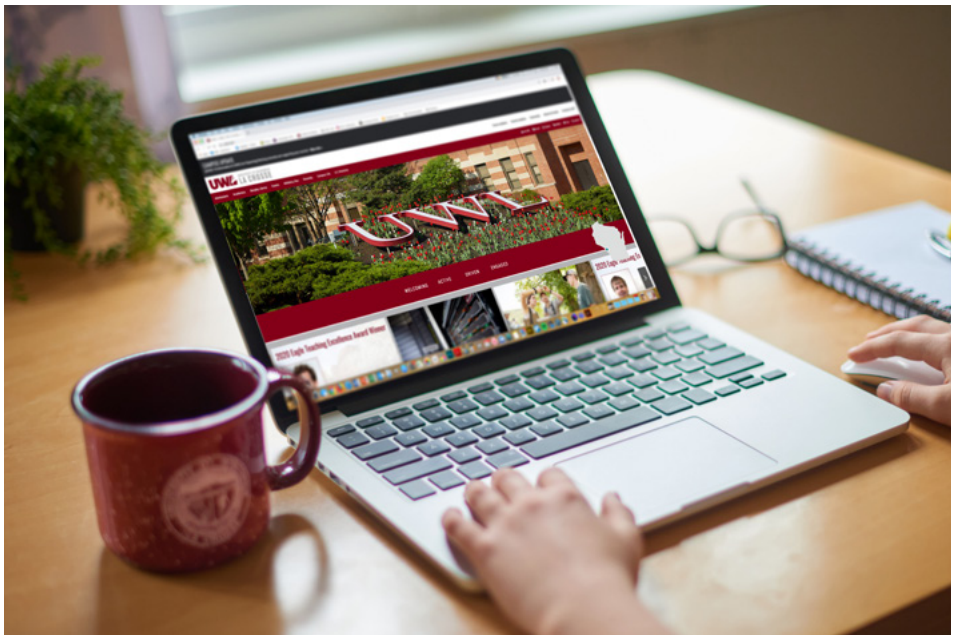
Each spring semester, the OT program typically sends small groups of students to Mosher Veteran's home in La Crescent, Minnesota, to practice assessments and run group therapy sessions with resident volunteers. The level I fieldwork experience is coordinated with didactic coursework related to mental health, wellness and group dynamics.

Last spring, 11 of 26 OT students were unable to participate in this traditional community experience when classes moved virtual. The 11 OT students were the first cohort to complete a newly designed, alternative telehealth fieldwork experience.

Designed and supervised by Assistant Professor Polly Berra and Adjunct Faculty Member Michelle Goldsmith, students were assigned a volunteer impacted by the COVID-19 pandemic. Students provided telehealth services to support their volunteer's mental health and wellness related to the impacts of COVID-19 on occupation and participation.

Because more health professionals are providing services virtually during the current pandemic, the OT program also used this alternative fieldwork experience as an opportunity to introduce students to OT's role in telehealth. After choosing a virtual platform that worked best for their volunteer, students carried out three sessions remotely: evaluation, implementation of treatment strategies, and evaluation of outcomes.

Berra says the OT program will continue to include telehealth education as a vital curricular component and a viable service delivery mode beyond the pandemic.



Technology has become the key tool to providing telehealth during COVID-19.

Confronting THE Coronavirus

Students investigate virus' proteins in capstone lab project

Students and faculty in the Chemistry and Biochemistry Department didn't just work around the coronavirus last spring. They worked with it.

Professors Todd Weaver, Kelly Gorres, Daniel Grilley and John May asked students in their capstone lab course to create mock grant proposals aimed at better understanding the virus' chemical structure and replication process.

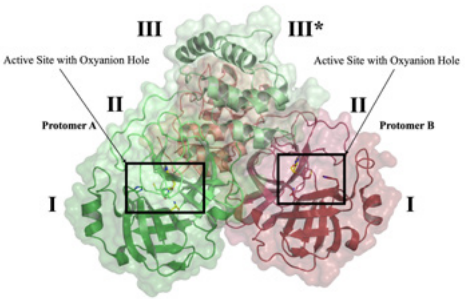
The result, they say, was a project that kept students engaged in remote learning and that challenged them to face the current health crisis head-on.

"It's not just about knowing the facts — it's about taking what you know and applying it to the unknown," Gorres says. "Even though it's in the news every day, there's a lot we don't know about the coronavirus."

Working in small groups, the students pitched a variety of research projects focused on a specific coronavirus protein essential for viral replication and that is often targeted by pharmaceutical companies.

This was not merely theoretical. The students used 3D models and the latest scientific data to explore questions the world's top researchers are currently pursuing.

"Considering the impact the novel coronavirus is having on our world, getting the opportunity to study one of the primary proteins which assist the virus was really exciting," says Colin Griffin, a senior majoring in biochemistry and biology. "This meant we would be able to learn more about the virus in general and even develop some ideas on how to go about treating the COVID-19 disease."



An example of the type of image UWL biochemistry students used to illustrate their mock grant proposals.

The work students did over the spring semester was more than a crash course on the coronavirus. It was also good preparation for their careers, which will doubtlessly require communication and teamwork, sometimes from remote settings.

"It's not easy doing a group presentation when you're not in the same room, the same city, maybe even the same state," Grilley explains. "Despite the fact that they couldn't see each other, I was really proud of how they transitioned into a professional way of working and interacting with each other."

Faculty also faced pressure to adapt.

"Once COVID hit, we moved quickly to think of something different," says Weaver, the chair of the department. "It's remarkable that we were able to come up with a unique experience that was also timely, in only a matter of days."

If student engagement is any indication, the project was a clear success.

"They really jumped into this new project and turned it into their own," Grilley says. "From knowing next to nothing about this at the start of the semester, it was really amazing to see."

Chemistry and Biochemistry Professor Kelly Gorres talks with students in this 2018 file photo.

Driven to serve

Jack Osness helps staff COVID facility near Milwaukee

When COVID-19 swept the world and touched Wisconsin, Jack Osness followed the call to service.

Osness, a radiation therapy July 2020 graduate, was part of a team of Wisconsin National Guard members supporting virus response efforts at the state's alternate care facility near Milwaukee in early 2020.

Osness and others also started a testing mission, after extensive training in nursing and specimen swabbing and collection.

"For me, the most fulfilling part is being able to serve my own state of Wisconsin," says Osness, a native of Merrill. "This is a rare opportunity to directly impact the citizens of Wisconsin, and I do not take it for granted."

Members of the Wisconsin National Guard were assigned throughout the state, tasked with helping civilian health departments ramp up COVID-19 testing and treatment.

Osness helped staff the alternate care facility at Wisconsin State Fair Park in West Allis, which acted as an overflow center.

"Being in the radiation therapy program (at UWL) and 10 months into my internship, it was an easy transition to work with people who need care or testing in Wisconsin," Osness explains. "A lot of what we trained for is proper infection control and safety, which we take very seriously in our radiation therapy program."

Melissa Weege, director of UWL's radiation therapy program, says Osness has always shown an interest in helping others.

"What sticks out to me is his sense of purpose and duty to serve other people," Weege says. "This was something he really wanted to do, and I'm so proud that he's been able to provide patient care and use this time so well."

The hardest part, according to Osness, was keeping up with coursework while training for the testing mission. Luckily, he says, instructors Amanda Carpenter, Amy Heath and Weege were "extremely helpful and understanding of my situation."

Short term, Osness hopes to pass his radiation therapy certification exam.

Long term, he'd like to find an RT job while serving in the National Guard.

Engineering solutions to COVID-19

Alum says dual degree program 'opens many doors'

Zach Heinkel, '18, a composite materials engineer with the Carderock Division of the Naval Surface Warfare Center in Bethesda, Maryland, is part of a four-person team using 3D printers to produce masks, visors and hands-free door openers for employees at various naval facilities.

An alum has found an effective tool for fighting COVID-19: 3D printers.

Zach Heinkel, a composite materials engineer with the Carderock Division of the Naval Surface Warfare Center in Bethesda, Maryland, is part of a four-person team using 3D printers to produce masks, visors and hands-free door openers for employees at various naval facilities.

The onset of the pandemic, he says, presented "a great opportunity to use our rapid response capabilities to help create a safer workspace."

"The COVID response project has been an unusual project for me and my coworkers," explains Heinkel, '18, who has dual degrees in physics (UWL) and composite materials engineering (Winona State University). "One of the biggest challenges during this pandemic is protecting yourself, and it's made harder since you can't effectively buy the supplies needed anymore. We looked to answer the COVID needs very quickly and determined what we thought to be the most efficient way to help out."

Heinkel's primary responsibility was creating the molds for each item, which made production more efficient and repeatable. His expertise as an engineer also came in handy when selecting materials — "which is, in many cases, just as important as mechanical design," he notes.

The team has printed hundreds of masks and visors for Carderock and Naval Sea Systems Command, along with helping assemble travel kits with PPE and other essentials for employees who must travel.

The success of the project, he says, illustrates the usefulness and versatility of 3D printers, especially when they're operated by someone with the right skills.

"We live in a time when anyone can have a 3D printer in their home, and they can also use it to make a tangible difference," he notes. "The ability to design and produce specialty parts in the comfort of your own home is extremely beneficial."

Heinkel's original career plans had nothing to do with physics or engineering. When he started at UWL, he was an astronomy major.

"But once I found out about the dual degree program … it seemed like a no-brainer," he says.

The program allows students to receive both a bachelor's degree in physics from UWL and a bachelor's degree in engineering from UW-Madison, UW-Milwaukee, UW-Platteville, UW-Stout, the University of Minnesota Duluth or Winona State University.

Students taking the track can earn degrees within five years, three years at UWL and two at the partner institution.

A commitment to care

Grad says working in health care is about giving back

There was never much doubt Taylor Hackel would work in medicine.

As a preschooler, her most prized possession was a toy doctor bag equipped with a stethoscope and blood pressure meter. She used to give her family make-believe checkups.

Two decades later, her desire to work in health care is stronger than ever — and much closer to becoming a reality.

Hackel graduated in May 2020 with a bachelor's degree in chemistry and will soon begin a prestigious fellowship through the National Institute of Health. She'll be working alongside Susan Buchanan of the University of Illinois at Chicago, studying proteins instrumental to the function of mitochondria, the "powerhouse" of the cell.

"I applied for this position because it is an amazing opportunity to conduct biomedical research with leading investigators," Hackel says. "I believe I will grow exponentially in both scientific proficiency, as well as my knowledge and passion for addressing public health issues."

The Wausau native has a long list of academic honors.

Hackel came to campus with an Eagle Apprentice Research Award and was later named a Dean's Distinguished Fellow.

This year, she received one of two Murphy Awards for Academic Excellence, which recognize the university's top graduating scholars.

Taylor Hackel

Even after a jam-packed undergraduate career, Hackel is not pausing to take a breather or reflect on her achievements.

After working as a certified nursing assistant in the past, she plans to continue caring for patients as a primary care worker this summer — during a pandemic, no less.

"I love the intensity of a busy hospital environment, hearing patients' stories, and being able to improve patients' quality of life," she explains.

That love of human-to-human connections also motivated her to volunteer.

On top of her studies, Hackel volunteered with the UWL Food Recovery Network, which collects excess food from the Whitney Center and donates it to the Hunger Task Force.

She also has served as a prayer partner for the Franciscan Sisters of Perpetual Adoration, taking prayer shifts in the Adoration Chapel in La Crosse.

But that's not all.

Hackel served meals at the Salvation Army, lent a hand at the Catholic Charities Warming Center, and became pen pals with people who were incarcerated.

"My highlights from these experiences are when people that you serve begin to trust you enough to tell you their story," she says. "I have listened to accounts of domestic violence, prostitution and struggles with addiction. This experience is never comfortable, but to be a true advocate, you need to be able to support others and love them where they are."

Hackel plans to attend medical school and earn a joint medical doctor and master of public health degree.

She hasn't decided what her final emphasis will be — she's considering family medicine, prison psychiatry, and obstetrics and gynecology. But she promises to bring the same compassion and the same desire to help people that has motivated her in so many other causes.

"As a future physician I want to bridge the connection between health care and policy through public health advocacy," she says. "I think that our healthcare system often acts as a band aid, prescribing pills for symptoms, while failing to address root causes."

Hackel received one of the Murphy Awards for Academic Excellence in May. See more ▸

PHONING IT IN

Alum finds impactful new way to use smartphones: destroy them

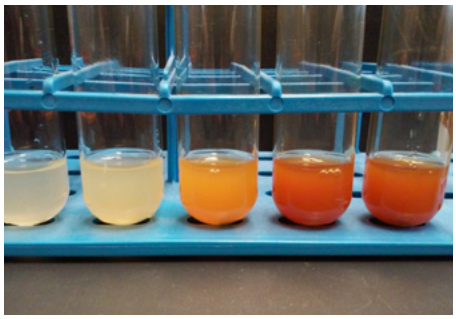
People value smartphones for various reasons.

They hold a library's worth of information but fit comfortably in the palm of your hand. They come with an array of apps for seemingly every purpose imaginable. And they help people connect and communicate at a moment's notice, whether they live a few houses away or thousands of miles apart.

Elizabeth Skovran values smartphones not for what they're capable of, but for what they're made of.

Skovran, '96, is a professor researching methylotrophic bacteria at San Jose State University. She's interested in smartphones, she says, because they contain rare earth elements that can be stored and recycled by methylotrophic bacteria — a fact that has major implications in the spheres of health care, manufacturing and sustainability.

"I enjoy solving metabolic puzzles in bacteria, then using that information to bioengineer bacteria for an application that will benefit society," Skovran explains. "In my lab, we are actively bioengineering an environmentally friendly bacterial platform that can recycle rare earth elements from post-consumer electronics like discarded hard disc drives and cell phones. These elements have important uses in green energy technologies and medical diagnostics, but mining for them is costly and environmentally destructive."



Methylotrophic bacteria can break down rare earth elements such as those found in smartphones. As you increase the amount of rare earth elements in the bacterial growth media, the media changes to an orange rust color due to the release of iron.

Instead of destroying the Earth to obtain these precious elements, Skovran and her team of student researchers pulverize used smartphones. To be precise, they throw them in a blender and hit the "on" switch.

The goal, she says, is to change the DNA of these bacteria so they can store even greater amounts of rare earth elements.

Such a breakthrough would provide a major boost to businesses that rely on these elements, such as pharmaceutical companies that use gadolinium as an MRI contrast agent and technology manufacturers that produce magnets containing neodymium.

The process of experimentation and discovery is also deeply impactful to the student researchers who are getting their start in Skovran's lab.

"I love working with students and introducing them to the fields of study that I find so fascinating," she says. "I enjoy breaking down concepts one on one with students and watching their faces light up when they finally understand a process they have been struggling with. While I help direct the research, the research experiments themselves are all carried out by students."

Skovran's passion for microbiology was ignited 25 years ago, when she was a student herself.

San Jose State University professor Elizabeth Skovran, '96, is studying how methylotrophic bacteria can be used to recycle rare earth elements found in smartphones. The work has major implications for sustainable technology and manufacturing.

During her first two years at UWL, Skovran struggled to find the right career path. She bounced from pre-physical therapy to therapeutic recreation to pre-med to pre-vet. Nothing seemed to stick — until she took a bacterial genetics course with professor emeritus Marc Rott.

While taking that class, "I decided that I wanted to 'be' Marc Rott. I wanted to use genetics to make discoveries in bacteria and teach bacterial genetics to undergraduates," she says. "My mind was blown when Marc held up a flask and said, 'There are more bacteria in this small flask than people on the planet.' I was amazed by how a simple bacteria cell — which isn't so simple — sensed and responded to its environment and carried out processes in such a smart way."

Skovran went on to earn her doctorate at UW-Madison and perform postdoctoral research at the University of Washington in Seattle. She's taught at San Jose State for the past eight years.

At every stop, she says, she gained a greater appreciation for UWL's Microbiology Department — and for her decision to change majors one last time. "I was very fortunate to be a student at UWL with so many great and dedicated professors," she notes. "At the time, I did not appreciate how much work they put into their job. It's difficult to get across to people just how many hours a week are spent working as a professor. But the job is extremely rewarding, and there is the opportunity to really make a difference in people's lives."

FINDING FRESHWATER

What does drought mean for endangered California salmon? UWL biology prof has answers

UWL Assistant Professor of Biology Ross Vander Vorste, center, is pictured here with students in the La Crosse River Marsh in fall 2019. Vander Vorste and researchers from UC Berkeley and California Sea Grant have discovered that pools serving as drought refuges could make the difference between life and death for salmon in California.

Increased frequency and severity of droughts are threatening California's endangered salmon population. But UWL assistant professor of Biology Ross Vander Vorste, with researchers from UC Berkeley and California Sea Grant, have discovered that pools serving as drought refuges could make the difference between life and death for the vulnerable fish. The research could help resource managers strategically protect and restore salmon habitat.

The study, published in the journal Global Change Biology, tracked nearly 20,000 tagged fish in Sonoma County streams over a seven-year period from 2011-17. The Russian River watershed is home to a highly endangered population of coho salmon, which nearly collapsed in the early 2000s, but has been recovering since then through a conservation hatchery program and other efforts.

"We were able to measure survival during this historic drought, which will help us understand how future droughts will impact this population of salmon," says Vander Vorste, who conducted the analysis for the study as a UC Berkeley postdoctoral researcher in collaboration with California Sea Grant's Russian River Salmon and Steelhead Monitoring Program.

Climate change is projected to lead to more frequent and severe droughts in California. In the Russian River watershed, and elsewhere in coastal California, salmon spend much of their lives in small streams. These streams often dry up in places during hot, dry conditions, leaving pools of water that become disconnected or completely dry. A major question has been to what extent habitat fragmentation caused by more severe drought threatens salmon survival, and just how much water is needed to support the salmon population through the dry summer months.

Previous research by the team has shown that even a trickle of water through salmon rearing pools can keep salmon alive. With a larger data set spanning an extreme drought, the new study provides insight into what habitats can serve as refuges during extreme conditions, and what physical and environmental conditions may influence survival of juvenile salmon.

Even during the most extreme drought years, the study found, summer survival in certain reaches was similar to survival in non-drought years, indicating that many stream pools act as drought refuges. In other reaches, lack of flowing water led to salmon being trapped in drying pools where they experienced high mortality.

"For the most part, as long as water persisted in pools throughout the summer, salmon were able to survive," says Vander Vorste. "So even though we saw decreased survival in many pools, there were some places that emerged as refuges."

With the trend toward increasing drought, it's going to be harder for these salmon to hang on, says California Sea Grant Extension Specialist Mariska Obedzinski, who heads the salmon monitoring program. "So it's really important that some of these pools did maintain conditions that supported survival," explains Obedzinski. "That gives us hope that there is at least some habitat out there that can support these fish during drought."

California Sea Grant's Russian River Salmon and Steelhead Monitoring Program works closely with resource managers in the Russian River watershed, providing current data on salmon survival and monitoring stream conditions throughout the year, informing streamflow augmentation projects as well as emergency fish rescue operations. The new study, which emerged from a partnership with the Russian River Coho Water Resources Partnership Program, provides new information that could help resource managers strategize as to what measures are most effective and feasible to protect salmon during a drought.

"There are limited resources to address streamflow issues, so this study helps focus our attention in certain areas," says Obedzinski. "There are different strategies for different conditions." Knowing which areas are likely to serve as refuges could lead managers to prioritize those areas for protection, while knowing what areas are most impaired in a drought can help prioritize areas for streamflow enhancement.

In addition to answering important questions for local salmon recovery, the study also informs broader ecological questions about the role of habitat fragmentation for endangered species.

"Drought is not only going to affect the Russian River, but will also affect streams and rivers up and down the West Coast and around the world," notes Vander Vorste. "Identifying environmental factors that are limiting salmon survival during those periods is an important finding that could have broader implications."

Faculty secure WiSys research grants

Projects include new staph drug, greener waste

A pair of grants from the nonprofit organization WiSys will support innovative research the College of Science & Helath.

Professors William Schwan, Microbiology, and Rob McGaff and John May, both Chemistry and Biochemistry, have received $45,500 to research a lethal factor protein that is induced when Staphylococcus aureus, more commonly known as "staph," is exposed to a new drug.

The drug, patented as SK-03-92, was first developed by researchers in UWL's Biology, Chemistry and Microbiology departments. It may be an effective tool in killing bacteria associated with staph, which causes thousands of infections and deaths in the U.S. each year.

"We believe that the SK-03-92 drug may kill S. aureus by inducing the release of a lethal protein that lyses the bacteria cells within 20 minutes, which would be a novel mechanism of action for an antibacterial agent," Schwan explains.

Schwan and May had originally planned to hire three undergraduate researchers to assist with the project during summer but COVID-19 caused delays.

If the team is ultimately successful, Schwan says, the science and medical communities will gain a deeper understanding of the new treatment.

Meanwhile, chemistry and biochemistry Professor Robert McGaff has received $50,000 to study new methods of removing harmful compounds from fuel sources and industrial waste streams.

This emerging field, known as "green chemistry," focuses on reimagining products and processes in a way that reduces or eliminates harm to the environment.

Originally, McGaff planned to supervise and troubleshoot the project, with three students conducting the lab work during summer, but the plan had to be scrapped due to COVID-19.

So, McGaff planned to do some of the lab work himself, with a student carrying out the rest of the experiments.

If the project is successful, McGaff says there is potential for the commercialization of the new technology, for the creation of jobs in Wisconsin, and for licensing income for the UW System.

But that's not all.

"Our research," he says, "will hopefully benefit our entire planet."

McGaff isn't new to WiSys honors. In 2016, he received the inaugural Innovator of the Year Award from the WiSys Technology Foundation, for his research efforts to make Earth-friendly chemistry more commercially viable. The award recognizes one innovator annually from across the UW System.

About WiSys

WiSys is a nonprofit organization that supports UW System campuses by helping identify innovative technologies and bringing them to the marketplace. The group awarded more than $1 million in grants during the 2018-19 academic year.

Left, Professor Robert McGaff, Chemistry and Biochemistry, works in the lab with student research assistant Rachel Butler in this 2016 photo when he received his first WiSys award.

Right, Mattie Mae Krause, a May 2020 graduate with a biology major on the pre-med track, received the inaugural scholarship from the Tommy G. Thompson Center on Public Leadership. Krause was named Miss La Crosse Oktoberfest in 2016 and has been active in numerous campus and community organizations.

A scholar leader

Student earns scholarship from Thompson Center on Public Leadership

A spring CSH graduate received the inaugural Tommy G. Thompson Scholarship.

Mattie Mae Krause, a biology major minoring in chemistry and nutrition on the pre-med track, received the scholarship from the Tommy G. Thompson Center on Public Leadership.

Krause, a 2016 graduate of La Crosse Central High School, graduated in May before heading to the Midwestern University's Arizona School of Podiatric Medicine in Glendale, Arizona. She hopes to return from med school to work with underserved, rural communities that don't have easy access to health care.

UWL submitted three applications, narrowed down from 40 submissions, for the one scholarship reserved for the campus. Applicants were asked to provide their definition or understanding of leadership; a discussion of how they demonstrated leadership on campus; their life aspirations; and an explanation of ways their leadership reflects Gov. Thompson's spirit and legacy of bringing people together to develop common sense solutions.

Krause says she has been able to connect with Thompson's ability to bring people together through bipartisan practice while serving as a resident assistant, being challenged to help connect more than 40 residents each year to help facilitate their residential and academic experience.

"My residents come from all different backgrounds so being able to help them find their similarities with each other is very important to help them form friendships and live together in a respectful and cooperative manner," Krause noted in her application. "Gov. Thompson's devotion to the residents of Wisconsin connects directly with my definition of leadership as he put their best interests first and worked to advocate for others in need."

Krause was active during her four years on campus. Along with being Miss La Crosse/Oktoberfest in 2016-17, she worked as a resident assistant for three years, served as president of the university's American Red Cross Chapter and Pre-Med Club, and interned with the Residence Life Office.

Throughout college she volunteered at the St. Clare Health Mission, Children's Miracle Network Hospitals, and with her church as Sunday School and Bible School teachers. She also volunteered with the emergency services and pediatrics departments at a local hospital.

SUPERB SCIENTIST

Burkhart recognized as a radon leader

James Burkhart is ending his distinguished career just as he began it 55 years ago — with the blessing of Maurice O. Graff.

It was summer 1965 when Burkhart, an electronics technician fresh out of the U.S. Air Force, returned to his hometown for college. Physics professor Richard Blade asked the undergraduate Burkhart to teach a lab. That required approval from Provost Graff.

After Burkhart agreed to a haircut, Graff approved the unusual arrangement and Burkhart's illustrious teaching career began. Now, Burkhart is receiving the distinguished alumni award named in Graff's honor.

With his bachelor's degree, Burkhart taught calculus-based physics while earning a master's and doctorate at UW-Milwaukee. Doctorate in hand, he became an assistant professor at Gallaudet University in Washington, D.C., in 1973. He quickly caught on to sign language at the country's only accredited college for the deaf.

But after four years of a nearly 150-mile daily commute, Burkhart moved his young family to the University of Colorado-Colorado Springs. There he fused a long, outstanding career of teaching, research and administration, along with a knack for high-quality measurements of radon before retiring in 2018.

Burkhart won both college and campus outstanding teaching awards at Colorado Springs. He also received the highest honor of the CU system, lifetime Presidential Teaching Scholar.

The Department of Physics and Energy Science grew from around 25 majors to 100 during his 18 years as chair. And, Burkhart was key to the campus acquiring a master's in physics and a doctorate in natural sciences.

Following extensive work with radon in his Colorado Springs lab, Burkhart built a radon chamber. It was one of only two nationwide to certify radon testing devices for Environmental Protection Agency standards.

In 1995, the U.S. EPA named Burkhart director of the Western Regional Radon Training Center, in which he led instruction for countless radon measurement courses. His two-day classes prepared thousands of health and radon professionals, realtors, post office employees and others to pass a national exam to operate a radon enterprise, championing efforts to reduce radon-induced lung cancer.

"He has touched and inspired thousands of radon professionals with his classes, continuing education seminars and research presentations," notes Dallas Jones, executive director of the American Association of Radon Scientists and Technologists Inc. "He loves his students as much as he loves teaching them."

Along with his many academic achievements, Burkhart has promoted science through magic programs, acted in numerous theatrical productions and served as a sign language interpreter. And, he's been lead vocalist for a campus band that, among other gigs, performs at the president's pre-football receptions.

James Burkhart, '68

- Internationally recognized scholar in radon science and leader in developing high-quality radon measurement equipment to reduce radon-induced lung cancer.
- Professor emeritus in the Physics Department at the University of Colorado-Colorado Springs.
- Bachelor's in physics and math. Master's and doctorate, UW-Milwaukee.

COMPANION CHAMPION

McGinley a leader of drugs, vaccines for animals

He may not have provided medication directly to people, but Mike McGinley has helped thousands improve their lives.

For more than 38 years, McGinley has championed providing better drugs and vaccines for animals — most who are dear to their owners. By doing that, he's not only helped countless animals, he's done a lot for the animal owners and their feeling of well-being and companionship.

"Job one for me and the teams I have led has always been to improve the lives of animals by preventing or mitigating disease and meeting unmet and underserved needs through more effective vaccines and drugs," explains McGinley. "At the same time, when we've been able to do that we feel we have succeeded in improving the lives of human beings as well."

The '82 microbiology major works as a consultant to the animal health industry following his recent retirement as president of Biologicals & Pharmaceuticals for Heska Corp. The company saw remarkable growth during McGinley's leadership. His research and vaccine development have garnered three U.S. patents and 33 scientific publications.

Along with work, McGinley focuses on family. He and his wife, Kathi, have three children. Their oldest, daughter Morgan, has autism with seizure and pervasive developmental disorders. Most of his non-professional time is spent supporting his wife who is Morgan's full-time and "incredibly effective advocate," he notes.

"Morgan would not be where she is today without Kathi's tireless advocacy on her behalf," McGinley explains. He reports that Morgan, now in her early 30s, lives a happy and fulfilling life as independently as possible.

"She has been a blessing to us in ways we never could have imagined when we received her diagnosis years ago," McGinley says.

His contributions outside of work include not only supporting Morgan, but others with autism through various support and therapy groups.

Michael McGinley, '82

- Revered for a dedicated career in animal health, improving the lives of animals by preventing disease and championing more effective vaccines and drugs.
- Past President of Biologicals & Pharmaceuticals, Heska Corp.
- Bachelor's in microbiology. Master's and doctorate, Iowa State University; advanced management program, Harvard University.

ALUMNI HONORS

Two CSH alums are recipients of the 2020 Maurice O. Graff Distinguished Alumni Award, which recognizes outstanding achievement of alumni who have brought honor and distinction to the university. The two will be honored with other distinguished alums in September 2021.

OVERSEAS ADVENTURE

Students study seaweed farming on the Island of Zanzibar

CSH students traveled to Zanzibar as part of the 2018 and 2019 Tanzania Study Abroad Program.

The Zanzibar Archipelago, located about 35 miles off the Tanzanian mainland in the Indian Ocean, contains the islands of Unguja, Pemba and several other small islands. The Archipelago has rich marine resources that form the backbone for socio-economic and cultural values for the inhabitants.

Despite these resources, the majority of people live in poverty due to many factors, including climate change and conflicts with tourism.

The students joined women's groups to learn about the seaweed farming process, the benefits and the related challenges.

Seaweed farming

The peg and line method of planting starts with tying seaweed fragments on nylon strings stretched between two wooden pegs and left submerged for up to six weeks. Harvesting involves untying mature fragments and stuffing them in bags to transport.

Transportation of the seaweed is an arduous and skillful task. In deep waters, women tie bags around their waist and drag them through water at the incoming tide pace. At the shore, the 55-pound bags are placed on their heads and carefully balanced for a two- to three-mile journey to the villages. There they are sun-dried before selling to agents who process them for use in food, pharmaceuticals and cosmetics.

Climate Change

Increased sea surface temperature has caused seaweed die-off, especially near the shore. Consequently, farmers are forced to move their plots further into deeper waters, adding extra challenges for farmers who cannot swim or afford boats to take them to deeper waters.

Tourism

Farmers face major pushback from the tourism industry. The owners of the major hotels want the beaches and the shallow waters to be 'pristine' and unadulterated by seaweed farms. They feel the aesthetics and practicality of the main attractions such as surfing, snorkeling and beach soccer are compromised by seaweed farms. Farmers, meanwhile, face the risk of losing their farms through legal maneuvering. They also complain that their movements and activities are constrained by tourist activities.

NEW HIRES FALL 2020

Kelsey Arendt

Geography and Earth Science – Academic Department Associate

Recreation Management and Therapeutic Recreation – Internship Coordinator Assistant

B.S., University of Wisconsin-La Crosse, (Exercise and Sport Science: Sport Management) | MS, Eastern Michigan University, (Sport Management).

Specialty: Administration, Department Operations

608.785.8333 | karendt@uwlax.edu

Sarah Eichenberg

Health Professions

Clinical Assistant Professor | B.S., University of Minnesota – Twin Cities, (Health and Wellness, Public Health) | MSPAS, University of Wisconsin-La Crosse – Gundersen – Mayo, (Physician Assistant)..

Specialty: Physician Assistant Studies-Cardiology, Emergency Medicine, Obstetrics, Pediatrics, Care-Base Learning, Capstone Seminar

608.785.5061 | seichenberg@uwlax.edu

Ryan Good

Geography and Earth Science

Associate Lecturer | B.A., University of Kansas, (Geography and English) | M.S., University of Florida, (Entrepreneurship) | ABD (expected in December), University of Florida, (Geography).

Specialty: Human – Environment Geographies and Sustainable Development

608.785.6674 | rgood@uwlax.edu

MD Rafiq Islam

Geography and Earth Science

Associate Lecturer | Ph.D., Kent State University, (Geography)

Specialty: Earth and Environment, Weather and Climate, Earth Surface Process and Landform

608.785.6675 | mislam@uwlax.edu

Mazin Khasawneh

Physics

Associate Lecturer | B.S., Yarmouk University | M.S., Al-alBayt University, (Opitcs; Ellipsometry) | M.S., Michigan State University | Ph. D., Michigan State University, (Physics).

Specialty: Fabrication and Characterization of Josephson Junctions

608.785.8484 | mkhasawneh@uwlax.edu

Karen Lagasse

Chemistry and Biochemistry

Associate Lecturer | B.S., Rensselaer Polytechnic Institute, (Chemistry) | Ph. D., Dartmouth College, (Biophysical Chemistry).

Specialty: General Chemistry

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Robyn Magee

Exercise and Sport Science

Lecturer and Assistant Gymnastics Coach | B.S., Louisiana State University, (Sociology) | M.S., Florida A & M University, (Sport Management).

Specialty: Research on Implementing Sports at HBCUs

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Julianne Merkes

Biology

Associate Lecturer | B.S., University of Wisconsin-La Crosse, (Biology) | M.S., University of Wisconsin-La Crosse, (Clinical Microbiology).

Specialty: Clinical Microbiology

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LeAnne Morey

Health Professions

Clinical Assistant Professor | B.S., Winona State University, (Management Information Systems) | MSPAS, Des Moines University, (Physician Assistant Studies).

Specialty: Therapeutic Recreation, Leisure Paradigms, Constructive Developmental Theory

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Samuel Schmidt

Exercise and Sport Science

Assistant Professor | B.S., University of Wisconsin-La Crosse, (Exercise and Sport Science: Sport Management) | M.S., University of Louisville, (Sport Administration) | Ph.D., University of Louisville, (Organizational Behavior and Leadership).

Specialty: Athlete Activism; Sport and Society; Esports

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W. Michael Petullo

Computer Science

Assistant Professor | B.S., Drake University, (Computer Science) | M.S., DePaul University, (Computer Science) | Ph.D., University of Illinois at Chicago, (Computer Science).

Specialty: Systems and Software Security

608.785.6817 | wpetullo@uwlwax.edu

Amanda Spiewak

Chemistry and Biochemistry

Associate Lecturer | B.S., University of New Haven, (Chemistry) | B.S., University of New Haven, (Forensic Science) | M.S., University of Rochester, (Chemistry) | Ph.D., University of Wisconsin-Madison (Chemistry).

Specialty: Organometallic Chemistry, Forensic Chemistry, General Chemistry

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UWL 2020 giving day

Thank you!

1,407
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RAISED FOR OUR STUDENTS

Wilder Way, a main artery of La Crosse's new Grandad Bluff Trail Project, was named for Emma Lou Wilder who taught physical education and recreation on campus for more than three decades.

Closing thought. . .

Pioneer path

New La Crosse trails pay tribute to Emma Lou Wilder

Bikers and hikers stepping onto the newest Grandad Bluff trails can head down memory lane on a path named for a College of Science & Health icon.

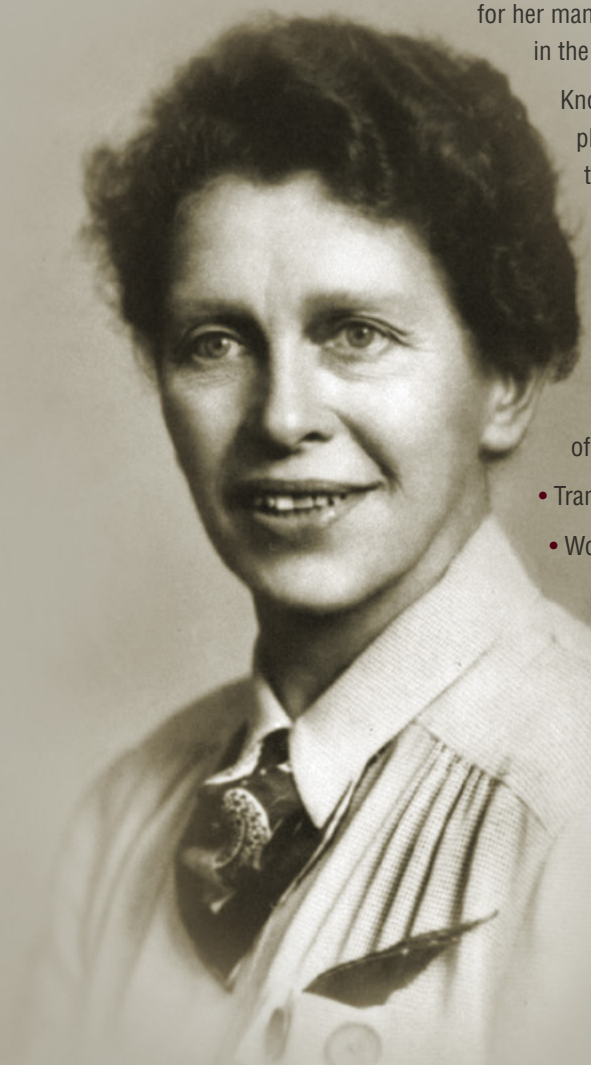
Wilder Way, named for Emma Lou Wilder, who taught physical education and recreation on campus from 1921-56, is a main artery of the Grandad Bluff Trail Project that opened in October.

The names for the eight trails were crafted by a community survey and a citizen board. The board selected Wilder for her many years of advocating women's recreation and exercise not only on campus, but also in the community.

Known for her pioneering work in women's physical education, Wilder taught 25 different physical education courses and developed women's physical education curriculum and the recreation major. She enjoyed sports, especially ice skating at Pettibone Park, and was known for her fitness encouragement, "Run a block, walk a block."

The other new trail monikers:

- "Xee xete," Ho-chunk meaning mountain.
- "Ni Tani," Ho-chunk meaning three rivers.
- "War Eagle," honoring the steamboat that burned and sank at the mouth of the Black River in 1870.
- Tramway, honoring the streetcar rail system that used to climb the bluffside.
- Wolfsbane, a rare, floral family local to the area.
- Clara's Climb, commending Clara Ebner, a descendent of the family who donated much of the bluff lands.
- Compass, paying homage to the original trail system.



Emma Lou Wilder, who taught on campus from 1921-56, was known for pioneering work in women's physical education and helping develop the women's physical education curriculum and the recreation major.

SEE AN INTERACTIVE MAP ▶