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Department of Forestry MICHIGAN STATE UNIVERSITY

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A NOTE FROM THE DEPT. CHAIR Richard K. Kobe provides details about MSU Forestry students, their dedication, passion, and impact **ALUM UPDATES** Forestry alums share where they are now PAUL BLOESE RETIRES AFTER 40 YEARS OF SERVICE Paul has been a trusted colleague, mentor and friend to many in the department over the years CARBON PROGRAM IMPACTS ON U.S. FOREST PRODUCT INDUSTRIES Forest Economics Professor Raju Pokharel has received an \$800,000 grant from USDA NIFA PROFESSOR SELECTED FOR FULBRIGHT GLOBAL SCHOLAR AWARD Professor David MacFarlane has been selected for the Fulbright Global Scholar Award for 2024-2025 THE INTERSECTION OF ART AND NATURE First-of-its kind Michigan State University (MSU) dual program that combines a Master of Fine Art (MFA) degree in Studio Art, paired with a PhD in Forestry **INFLUENTIAL FORESTRY ALUM BARB HEIDEL RETIRES** MSU Forestry alum, Barbara Heidel BS '86, is retiring after 36 remarkable years with the U.S. Forest Service

Front cover: Multicultural Scholars Study Away Program, Tahquamenon Falls, Photo by Corey McKenzie Back cover: Multicultural Scholars Study Away Program. Photo by Justin Kunkle

FROM THE department chair

Dear MSU Forestry Alumni and Friends.

in our character today. Our extended family encompasses alumni, like Barb, who have been incredibly generous This issue's theme of 'New Chapters' provides an inside in engaging with our students. Similarly, the late David look into the everyday dynamism of MSU Forestry. We are Jessup (see below) was exceptionally generous in giving a leading forestry program with a growing national and back, establishing with his wife the David and Mary Jessup international reputation because of our fantastic students. Summer Camp Endowment, which has provided the faculty, staff, and alumni. financial support for a transformational field experience for hundreds of MSU Forestry students. We are sorry to report David's recent passing and the loss of an ardent fan and aenerous donor.

You might think that a competitive pressure-cooker environment goes along with being a top academic program, but that is far from reality. We value high-quality work and are a supportive community that welcomes and A supportive environment with high expectations fosters provides opportunities to talented individuals, regardless long-term commitment. A perfect illustration of this of their background or economic means. This has been an commitment is Alumnus Paul Bloese, MSU Forestry's integral part of our history and remains an important part Tree Improvement Manager for 40 years, who recently of our character. began enjoying the new chapter of retirement. Paul made incredible contributions to genetic improvements of important tree species, including increased productivity of red pine and disease resistance of hardwood species. While focused on genetics, Paul was always available to provide guidance and help on a wide range of research projects at the Tree Research Center. Paul, we appreciate your many contributions and congratulations!

As a top forestry program, our faculty are pursuing important issues that could have profound implications for the future of the forestry profession. Raju Pokharel's newly funded research project (p. 6) on the implications of forest carbon markets on timber supply and 'leakage' is a great example of the cutting-edge research occurring here. As a top forestry program, our faculty receive prestigious awards and fellowships, as illustrated by Dave If you are interested in sharing your story and learning MacFarlane's recent Fulbright Global Scholar Award, which more about MSU Forestry's innovative programs, please is taking him to Mexico and Italy (p. 7). Our top faculty feel free to reach out. The support of our alumni and attract top students, who push disciplinary boundaries, as friends is critically important in these challenging times for demonstrated by PhD student Hailey Becker, who may be higher education. But I am confident that through working the first MSU student to pursue joint degrees in forestry together as a community, MSU Forestry's star will continue and studio art (p. 8.9). to rise.

We value contributions to the MSU Forestry community, which makes this Department a more interesting and vibrant place for everyone. Alum Barb Heidel (BS '86, p. 10) experienced this support and family-like atmosphere in the 1980s – a time when few women entered the profession - and these community-minded values persist

IN MEMORIAM: DAVID JESSUP | BS '55

David Jessup passed away February 27, 2025. He was an avid gardener, deer hunter, and loved being on the water. David and his wife Mary established the David and Mary Jessup Forestry Summer Camp Endowment. It's through his foresight in setting up those funds that we have been able to build our field camp course into what it is today. The family has kindly identified our endowment for donations. (for.msu.edu/jessup) David was well-known and loved in the community, and we are grateful for his kindness.



Go Green! Rulad IC Take



Scan to donate to David and Mary Jessup Forestry Summer Camp Endowment

Alum Updates

DAVID ORNDORF | BS '64

I graduated MSU forestry in 1964 and worked for Mead paper for 32+ years. I am now long retired and still vertical. I live on 58 acres in central Ohio filled with wildlife and 200+ years of old growth timber.... ain't much left around here. I am growing and hybridizing apples as a hobby.

I'm surrounded by turkeys and deer and glad to still be vertical at 83.

TERRY READ | BS '66, MS '67 🧹

I've been in Iron River, MI for 30 years now assisting forest owners in a four-county area managing their lands and helping them understand what a forest is all about. Most of my days involve inventory of forest lands. I write a lot of plans for Michigan's Qualified Forest Program and Commercial Forest Program. 70% of the time, I am working on timber sales for land owners. So, my advice to all you older foresters out there, keep doing the work.

At age 80 I still mark and sell about 500 acres of northern hardwood timber sales a year. One area of frustration is after my first career working for the Forest Service, the last 15 years as District Ranger at Kenton, MI on Ottawa National Forest, I do get frustrated seeing how the Forest Service has degraded itself from a service organization to something else.

JERRY GRIEVE | BS '72 🔪

After two short stints with Osmose Wood Preserving Company & Bartlett Tree Experts, I spent 44 years with The Michigan DNR. The last eight of which were dealing with land management issues on state forest lands. Still reffing high school soccer, and some travel with Monica in our truck camper. We live on a 40 acre "farm" but the horses and cows are long gone.

I hiked to the bottom of the Grand Canyon 11/23. I thought that was pretty good for a 73-year-old, until two days later a 92-year-old hiked rim-to-rim.

We have a daughter working for the province of Alberta in water quality. Not a MSU grad, (Alma & IU). One son is teaching In England (MSU, '11 & Penn State) and another son is working as an Urban Forester in Washington, DC (MSU, Forestry, '14 & Virginia Tech).



After 35 years with Washington State Department of Natural Resources as a forester, land manager and firefighter, I am retiring in 2025.

For the past 20 years, I have been managing the Strait District on the beautiful north Olympic Peninsula. I have had the pleasure of working with and supervising many devoted foresters, engineers, and -ologists to responsibly manage DNR's lands.

The Spartan tradition lives on in Straits district. Ben Stein (2010) has been my Planning Forester since 2021 and Lucas Kuty (2025) interned last summer. They are both outstanding foresters, caring people, and committed to responsible forestry.

It has been a great ride and I am thankful to MSU for the valuable education.

BEN STEIN | BS '10

After finishing my M.S. at Penn State in 2012, I worked in Michigan for several years as a conservation district forester and tried hardwood procurement. Wanderlust got the better of me and I headed west to try seasonal positions in Colorado and California.

For the past six years I have settled into a permanent job with Washington DNR in the foothills of the Olympic Mountains where I coordinate timber sales, manage T&E butterfly habitat, and fight wildfire. I have enjoyed the supervision and mentorship of Brian Turner (1984) and still maintain lasting relationships with dear friends from the class of 2010.

MATT DEERING | BS '22

I just had my degree from the University of Canterbury conferred in February: a Master of Forestry Science with Distinction. Additionally, I've started working at the University of Canterbury's School of Forestry as an Assistant Lecturer for the next year. I'll be delivering silviculture lectures to, and leading field activities for, undergraduate students here in New Zealand.



Daul Bloese, Tree Farm Manager, has retired after 40 years dedicated to the department of forestry. Paul has been a trusted colleague, mentor and friend to many in the department over the years.

Paul Bloese, Roy Prentice, and Randy Klevickas started working together at the Tree Research Center (TRC) in the early 1980's. Under Dr. James Hanover's Michigan State Cooperative Tree Improvement Program (MICHCOTIP), Paul was tree improvement supervisor and Roy was TRC greenhouse manager. Randy oversaw the TRC tree nursery and overall station



genetics work and manage the greenhouses. The years that followed are filled with projects, experiments, student connections, and of course thousands of trees planted.

What's next for Paul? "Sleeping in, tackling long deferred projects around the house, a little reading, a little gardening, and spending more time with my wife, kids, and grandkids."

Congratulations, Paul, we wish you all the best.

Carbon Program Impacts on U.S. Forest Product Industries

JACK FALINSKI

erest Economics Professor Raju Pokharel has received ■ an \$800,000 grant from the U.S. Department of Agriculture's National Institute of Food and Agriculture (USDA NIFA) to study the reliance of wood between regions and impacts of carbon offset programs on forest product industries.

Pokharel will lead a team looking at how the supply chain of wood products is connected across states and regions and how carbon offset programs affect wood flow, forest investments and raw material sourcing for forest product

> industries. The team will also estimate potential leakage, the shift in harvesting and production of timber from one region to another when policies or programs are implemented in an area.

> > Through preliminary research, Pokharel and his team have identified a key knowledge gap in this space. During a time when policymakers, scientists, industry leaders and producers have worked to identify solutions to limit the amount

of excess carbon in the atmosphere - a leading cause of climate change - carbon offset programs have become popular for landowners because of the credits received based on the amount of carbon their forests sequester.

As carbon offset projects and programs continue growing, it's unknown to what extent their impacts will have on forest management practices and wood products harvested for forest product industries, in addition to the scope at which harvesting is substituted from one region to another, resulting in leakage.

"As more forests enroll in these carbon offset programs, our team is going to evaluate what will happen to the wood supply and forest product industries," Pokharel said. "What will happen to trade? Are we going to import more or export more wood? Is the price of wood going to go up or down? And if one forest enrolls in a carbon offset program, will another forest in a different part of the country harvest more wood to meet that demand? What would be the amount of leakage? These are all questions we're going to answer through this project."

Modeling and analysis from the project will be carried out at a national scale to account for interstate and interregional reliance on forest product industries, including in the Mountain, Northeast, Northwest and Southern U.S. regions. Along with MSU, Colorado State University, Oklahoma State University, and the University of Idaho are current partners on the project.

Pokharel and his team will conduct a meta-analysis using literature, reports, policies and databases to identify how inputs such as carbon offset programs, carbon policies (including goals set to become net-zero by 2050), market prices and the supply chain of timber relate to and influence each other. They will also hold stakeholder meetings among suppliers, producers, consumers and other key players to understand how they're affected when different scenarios occur.

"Historically, carbon offset programs have been looked at unidirectionally, and I believe we have to look at them from all directions," Pokharel said. "These are novel programs, and we should do them and have been doing them, but we should do them right because they're just a part in a big ecosystem and economy."

For example, as it relates to the economy, Pokharel asked if more forests in a region enlist into carbon offset programs, what might happen to the local lumber mills if the supply of wood decreases due to a lack of harvesting? If lumber mills begin to close in the region, then who'll produce timber products and where will the wood come from?

Pokharel said this scenario could lead to leakage, an aspect he said hasn't been studied enough when it comes to carbon offset programs. If forests aren't being harvested in one region, Pokharel said that may prompt forests to be overharvested in another region.

"We have to create a balance," Pokharel said. "If a forest is enrolled in a carbon offset program in one region, we don't know if the carbon is fully captured, partially captured or not captured at all because not harvesting in one region might change the harvesting pattern in another region, negating the intentions of the carbon offset program.



Professor David MacFarlane selected for Fulbright Global Scholar Award 2024-2025

Forests protecting the villages in the valleys in the Italian Alps

Professor David MacFarlane has been selected for the Fulbright Global Scholar Award for 2024-2025. The prestigious Fulbright Global Scholar Award encourages international connections and fosters understanding and cooperation across nations.

"Coastal mangrove forests are of critical importance globally and are highly sensitive to the effects of climate change, MacFarlane will spend a portion of his sabbatical leave in being affected by sea level rise, extreme storms, increased the 2024-2025 academic year collaborating with scholars wave heights, and air and sea temperature variations," said MacFarlane. at institutions in Mexico and Italy.

MacFarlane intends to advance an emerging concept called Italy's foresty diversity is largely due to its geographic "Climate-Smart Forestry," which emphasizes connections position as a peninsula in the center of the Mediterranean. between forests, society and climate. Climate-smart forestry focuses on enhancing human health and community "Italy has a long history of forest management in a resilience through adaptive forest management, increasing predominantly agricultural landscape, long cleared of carbon storage in forests to mitigate climate change, and much of the original forest cover, a context mirroring many using forest resources sustainably to substitute for non-European nations. Lessons learned in Italy about climatesmart forestry could be broadly applicable across the renewable energy and materials. European continent," said MacFarlane.

"Governments, communities and private landowners worldwide are searching for ways to increase the climate **ABOUT FULBRIGHT U.S. SCHOLARS** change resilience of forest ecosystems that support human Fulbright U.S. Scholars are faculty, researchers, administrators, and established professionals teaching or conducting research in affiliation with institutes abroad. Fulbright Scholars engage in cutting-edge research and expand their professional networks, often continuing research collaborations started abroad and laying the groundwork for forging future partnerships between institutions. Upon returning to their home countries. institutions, labs, and classrooms, they share their stories and often become active supporters of international exchange, inviting foreign scholars to campus and encouraging colleagues and students to go abroad.

well-being. Climate-smart forestry needs to be advanced from a concept to a science and practice to meet the needs of the diversity of climates and cultures across continents." said MacFarlane. MacFarlane will be working with scholars at the Mexican Center for Research and Advanced Studies of the National Polytechnic Institute (CINVESTAV), in Merida, Mexico, and the Department of Land, Environment, Agriculture and Forestry, University of Padova, in Padova, Italy. He hopes that his work as a Fulbright Global Scholar will connect the two countries, as they have strong similarities as well as important differences as case studies for climate-smart forestry.

The Fulbright Global Scholar Award allows U.S. academics and professionals to engage in multi-country, trans-regional projects. As a truly worldwide award, U.S. scholars will be MacFarlane said Mexico and Italy serve as perfect partner able to propose research or combined teaching/research nations for this research and teaching collaboration, due to activity in two to three countries within two different world their diversity of forest ecosystems. MacFarlane's previous regions.

work has been focused in the Yucatán region of Mexico, an area facing serious problems with deforestation specifically coastal mangrove forests.

The Intersection of Art and Nature: Combining Forestry and Artistic Vision

Doctoral student Hailey Becker has never exactly colored inside the lines or followed the status quo. In fact, Becker recalls her high school math teacher once telling her, "the best job for you probably doesn't exist yet."

Embracing her trailblazing nature, Becker is now embarking on a first-of-its kind at Michigan State University (MSU) dual program that combines a Master of Fine Arts (MFA) degree in Studio Art, paired with a PhD in Forestry.

grow, and she began developing a knowledge base that led beyond strict scientific research, which ultimately lead her to art classes. One specific class in particular, Poetic Computation taught by Professor Abhishek Narula, proved to be a game changer. Narula has a master's degree in electrical engineering and a Master of Fine Arts. This course was Becker's first exposure to electronic art and intermedia, the study of the in-betweenness of things. Seeing the way

"A lot of my artistic practice, unintentionally, has strong scientific components, even if it's just methodology," said Becker.

Having always had a profound interest in natural resources. Becker chose Forestry for her PhD program. When asked what ultimately led to this choice, she reflected "like materials science, it sounds really specific and people have preconceived ideas of what it actually means, but it is actually guite diverse and there are so many avenues to explore."

Becker currently works in two different labs. Dr. Mojgan Nejad's Sustainable Bioproducts Lab allows her to keep interacting with materials science. Specifically, a



Becker first received her Bachelor of Science degree in Metallurgical Engineering from the University of Alabama, where she also excelled in jazz saxophone. She decided during her senior year to pursue a master's degree, after a professor told her she would be frustrated in the workforce without an advanced degree.

This led Becker to MSU in 2020 where she first embarked on a Master of Science in Materials Science and Engineering. Becker was beginning to fear losing a connection with music and the arts community, so she decided to pursue a degree in music as well.

As with many students from a large variety of majors, the COVID-19 pandemic drastically affected Becker's music program. Shifting her plans, and focusing her studies solely on materials science, she began noticing things - like the beauty in how metals fracture in specific ways. Becker's interest in science communication began to

he was able to mix the disciplines in a seamless way sparked Becker's interest in an MFA.

Professor Adam Brown was in the process of developing an MFA (the terminal degree in Art) alongside a PhD, exploring the idea of how this kind of pairing would inform both research and the art world.

An MFA is the terminal degree in the United States, but not in Europe. In Europe, the terminal art degree is a doctorate. Therefore, Brown wanted to explore having students work on their MFA alongside a PhD in another field, making them more competitive in the job market, and understanding how living in multiple disciplines informed their artistic and scholastic endeavors.

Becker flourished in this space, having a rich background of scientific research, as well as a deep connection with the art and cultural community around her.

biocomposite project where the team is attempting to create 100% fully bio-based epoxy resin from lignin, a byproduct of trees.

Becker also works in the Silver Lab, led by Dr. Emily Silver, focusing on Human Dimensions of Natural Resources. "I am interested in tensions between the human side and the objective side. Nothing we really do is objective," said Becker. "This kind of program allows me to explore these topics at different paces. I can dig into one topic that's so niche for so long. The art side lets me move out a bit, and science is more focused."

"Hailey provides an invaluable perspective to our MSU forestry community. Her work informs better science communication and will provide new and exciting ways for people to engage with trees and forests. We are both learning from each other as she contributes to our forestry social science team." said Dr. Silver.

Becker and fellow artist Patrick Taylor's recent art installation, which was located on MSU's campus, explored the complex relationship between humans and nature, specifically trees, is titled "Where the Light Gets In." The art display featured LED lights mounted on trees, in a way that looks like they are beams of light piercing the trees.

The title of the piece, which is inspired by a lyric by prolific songwriter and poet Leonard Cohen, refers to the way that trauma can actually open your eyes to positive aspects of the world: "there's a crack in everything; that's where the light gets in."

After the installation closed, the trees used were removed due to new construction, and the piece explores the

complex practice of tree removal. The signage at the installation challenges the viewer: "Many people, especially in urban areas, oppose tree removal due to a lack of understanding of forest management techniques and diminished trust in forest managers. Is opposing the "death" of a tree a step toward saving nature, or simply an attempt to purge us of our guilt over the collective human role in climate change? Can ritualizing the necessary cutting down of trees help us work through our grief and take steps toward a better future?" (Becker, Taylor)

Becker would like to eventually work in academia, someday rising to the rank of dean or provost. "I'd like to help set the academic mission of a school," said Becker. "Individual paths in education are individual endeavors. It's personal. This program sets me up to help other students navigate academia, now having an expansive understanding of where people are coming from."

Influential Forestry Alum Barb Heidel Retires

MSU Forestry alum, Barbara Heidel BS '86, is retiring after 36 remarkable years with the U.S. Forest Service.

Barb's first forestry work experience was a seasonal opportunity in Fairplay, Colorado, a district which ranges in elevation from 8,000 feet to 14,000 feet. After doing forest inventory and marking timber, she immediately knew the Forest Service mission was in line with her value system and was the place for her.

Barb knew since early in life, her interests would lead her to the forest. After a junior high school aptitude test included Forester in a list of well-suited professions, Barb's mother provided her with the book Making a Living in Conservation, and her father gifted her a Woodsey Owl Poster.

"Michigan State University Forestry was always the only option!" Barb said.

Barb recalls entering MSU in 1980, the possibilities seemed endless. One of her favorite memories came from her first week on campus, walking through the Natural Resources Building mentally preparing for Forestry 101, when another forestry student, Tracy Knoop, recognized and approached her.

They had both spent summers at Sunrise Lake in Osceola County, Michigan at their family cabins and enrolling as students in the MSU Forestry program provided the spark to rekindle their friendship. When Barb went to work for the U.S. Forest Service, Tracy went to the Bureau of Land Management, where they still collaborated while on fire crews and have remained lifelong friends.

"Although the campus is big, it is the best. Supportive professors and the other forestry students made it feel like family," Barb said.



Although coursework has changed somewhat since the 1980s, the values and connections the students form and develop remain the same. The MSU Forestry Department provides a diverse range of study and applications, including urban, utility, public, and industry timber positions.

"Regardless of which direction we were going, we stuck together, helped each other with assignments, and helped each other with job searches," Barb said.

After graduation, Barb planned to work as an Urban Forester (ideally for the Detroit Zoo or a local municipality), having previous experience working for a utility company. The spring before graduation, now emerita Professor Donald Dickmann approached Barb and offered, "before you go back to Detroit Edison, you should check out the Forest Service." This led Barb to a student requisition from the Pike San Isabel National Forest, South Park Ranger District. Carpooling with a few other forestry students, Barb embarked on her first seasonal position with the USFS in Colorado.

Barb worked on the South Park Ranger District in Colorado for five seasons, then moved into a permanent forester position in the district, where she remained the timber forester until 1999, preparing timber sale contracts, easements and use permits, fighting fire, and working on prescribed burns. Needing to move back closer to family, Barb took a recreation management position in the Cadillac Manistee Ranger District. She always knew she would end up back in timber, but really loved the couple years spent doing recreation work.

"I learned so much and gained an appreciation for what our co-workers in recreation contend with, but, when a timber management assistant ranger position opened up, I moved back to timber," she said.

Forestry professor David Rothstein recalls meeting Barb in the Spring of 2017 when he took his Forestry Field Studies class to the Manistee District for a silvicultural field tour. "Barb and her team were incredibly enthusiastic about engaging with my students and providing a rich experience in both technical aspects of forestry as well as professional and career advice. It was clear to me in that first meeting that Barb was an outstanding role model for my students, and she exemplifies all of the best values of our profession."

"From that point forward, I made it a point to get Barb in front of my students any chance I could – no matter how far we had to drive. I am happy for Barb as she retires, but I am really going to miss her," Rothstein said. "Having worked with Barb for the past 20+ years, one" "Don't let anyone convince you that there will not be a job for you. Good and tough times come and go. If this is what you love, stick it out. Work hard, don't turn down opportunities even if you don't see the value in them. It is always valuable to see from the other person's point of view. If you love what you do, you will be good at it."

"Having worked with Barb for the past 20+ years, one of things that I admire about her most is her enthusiasm and willingness to serve as a mentor for others that are interested in forestry and natural resource management. Whether it be other employees, college students, international partners, or the local community, Barb serves as a leader in sharing her knowledge and providing opportunities for others to become engaged in all that we do," said long-time colleague and friend, Chris Frederick, District Ranger with the U.S. Forest Service, Huron-Manistee National Forests.

Forestry is a male-dominated industry, and even today, fewer than 20 percent of foresters in the United States are female. Barb never let the statistics deter her, and credits female foresters a few years older than her, for really busting down barriers.



"I was lucky to work with and be supervised early on by men who were not generationally closed minded about diversity in the work force," said Bard, who added that expectations were just as high physically and mentally for everyone.

- "I approach every person with this in mind: What skill or talent do they bring to the team? What do they like to do that we can build on. If someone comes to you with preconceived ideas, use it as an opportunity to have a conversation."
- Barb is optimistic about the future opportunities the forestry industry has for women interested in the field.
- "I know several women who operate logging equipment and are company owners. That is new in our business and a sign that things are going in the right direction. We must recognize each other's character and integrity, and in doing so we set an example," she said.



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