



the Collage

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Megan Grim | Geography Student Highlight

Megan Grim, junior Geography major at Kutztown University, has always been concerned about the environment. “I remember being a little kid and I would tell my dad “Turn off the lights, you’re killing the polar bears,”” she jokes. She chose the environmental track of the major, as this made the most sense to her. Now, she works to combine her passion with her education to try to help make the environment just a little bit better.

KU Bears research grant. The project looks at wildfires as a whole—how they start, and the technology used to spot and track them—but Megan aims to focus on the environmental impacts of wildfires and how they affect humans in the long run.

She’s found that climate change has affected wildfires, making them burn longer due to hotter, prolonged seasons,

Although Megan enjoys learning about many different areas of geography, the one topic she focuses on most is wildfires. Over the summer of 2023, Megan worked with Dr. Michael Davis, Professor of Geography at KU, on a research project titled, “Northeastern United States Wildfire Vulnerability Trends,” funded through the

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which then impacts animals and humans alike. “I’ve seen a lot of runoff, where everything leftover from the fires is picked up by the rain and moved into areas of water

that animals drink and humans use,” she explains. “This then leads to a whole cycle where animals that rely on each other are dying, and there are medical issues that impact people because of chemicals and debris pushed into the water.” This project is ongoing, as

Megan is still making progress in her findings and new research is published on wildfires in the northeast.

She has also helped Dr. Davis on another research project concerning the relationship between temperature and dew point in Pennsylvania. The project showed that because of global warming and climate change, the rise in temperatures has altered the dew point throughout the state. Megan plans to continue her research in different topics with a concentration on climate change. She wants to advocate for the issue, and even possibly do so by participating in local government.

Megan believes that geography will ultimately be the way to save the planet. “I think a lot of people think that geography is useless and that is 100% wrong,” she says. Many of her courses at KU have been eye opening to the grave state of today’s environment and have relayed information she hopes to pass on to others. “Essentially, geographers are teaching everyone,” she says. “If more people understand that geography is more than cultural geography—states and countries—then we can use and pass on the knowledge we learn as geography students to try to change some minds and move to sustainable energy.”

Kutztown University's College of Liberal Arts and Sciences Dean's Office Celebrates

Women in STEM



In honor of Women's History Month, the March 2024 issue of *The Collage* features women in STEM at KU.



Dr. Angela Hoptak-Solga | Biology Faculty Highlight

Dr. Angela Hoptak-Solga, professor of Biology at Kutztown University, originally wanted to be an orthopedic doctor before switching to genetics. Now, she has come full circle, studying bone density through zebrafish. She also works to encourage women to pursue careers in STEM and create a more accepting field, especially through her teaching.

Dr. Hoptak-Solga believes encouraging women to pursue careers in STEM is important, especially at an early age. “This country does a good job of providing funds to get girls interested in STEM,” she observes. “And it’s been working. We’ve seen an increase in the number of women that are entering the field.” The only problem, she points out, is that retention of women in the field is not as successful. She explains that over half of the people who graduate with a Ph.D. in science are women, and they’re on track to move their way up as scientists. Yet, about [83% of people](#) in senior positions at universities and research institutes are male. “There’s still a glass ceiling there,” she says. “There is still the point where women have to prove themselves.”

She also notes the struggle women in STEM fields face as they take on caregiver roles. About [40% of women](#) choose to leave their early STEM careers because they want to start families, and a work-life balance is difficult to maintain. “We as a society need to be more culturally

tolerant and supportive of caregiving roles,” she states. “Making it better and more accommodating for women to maintain their jobs in science and to raise a family—women would stay in the field if that happened.” She does note small changes made, especially here on campus with the addition of lactation rooms in academic buildings, yet there is still a long way to go. “We’re doing a good job of getting women interested, now let’s keep them in those positions,” she says. “Keep them there by making it more accommodating.”

One space Dr. Hoptak-Solga hopes to encourage women and others alike to pursue STEM is in her classroom. She tries to help first-year students who are non-Biology majors to appreciate biology more than they did coming into the course. Through courses like Biology and Society, she discusses issues in biology

hear stem cell research in the news, they’ll know what it is. We’ve also talked about if they’re having fertility issues so they can kind of have an idea of what’s going on.”

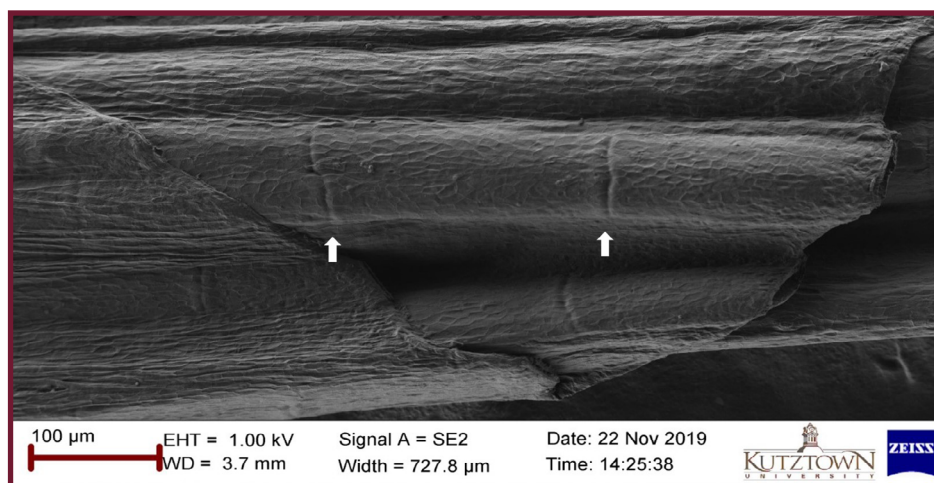
Dr. Hoptak-Solga hopes to make an impact with her research as well. Currently she is researching the application of zebrafish bone regeneration in humans to try and stop bone density loss, as zebrafish tails regenerate after being cut off or damaged. She explains that bone density decreases with age, but the same is also true for people like astronauts that are in microgravity environments, who lose one to two percent of their bone density per month. “Understanding how bones can repair damaged tissue, or ways to prevent bone loss in humans, would be helpful,” says Dr. Hoptak-Solga. “Obviously for the general population, but also maybe for astronauts on long distance trips to Mars.”

As Dr. Hoptak-Solga continues her research on bone density and encourages women and her students to have an interest in science, she hopes people of all gender identities will try to make a difference, despite how hard it may be. “Don’t let anything stand in your way,” she advises.

“You need to be driven and acknowledge the fact that there will be people in your way, but as long as you have the determination, the curiosity, and the stamina to be where you want to be, you can achieve great things.”

"Don't let anything stand in your way."

that are relevant to students, so they can gain a more informed perspective on what is going on in the world around them. “I try to pick issues that may affect them in the future,” she notes. “So, when they



Epidermal layer of skin from the tail fin of a zebrafish where the new tail grew (joints indicated by the arrows). Taken by Dr. Hoptak-Solga on the Scanning Electron Microscope at KU.