

SIUE Biology Professor, “Dr. Bugguts,” Inspires through Science Engagement

by Megan Weiser
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EDWARDSVILLE - “Bug guts are complex places. A lot of insects have complicated microbiomes that rival humans. Some have interactions with microbes that are important for agricultural and medical issues.

There’s perhaps no better way to inspire a love for microbial ecology than through such relatable, understandable explanations, hands-on activities and exciting research opportunities. Southern Illinois University Edwardsville’s Brittany Peterson, PhD, candidly refers to her research lab as “The Bugguts Lab.” She invites students to learn and do with excitement, and provides an open door for all aspiring scientists.

“Science is for everyone,” said Peterson, an assistant professor in the College of Arts and Sciences’ Department of Biological Sciences. “Most of the students I teach are science majors, but they tend not to think of themselves as scientists. But, they are! Sometimes they just need opportunities and encouragement to flex their scientific muscle in a safe place.”

Peterson conducts research on insect-microbe interactions, specifically in termites and locusts. She is known for injecting energy into her courses and teaching lab. A true teacher-scholar, she stresses the value of student research.

“My research on insect-microbe interactions spills into my teaching a lot, because it’s a practical example,” Peterson said. “It’s approachable. It’s something we’ve heard of. We know about mosquito-borne diseases. We know what termites are. I’m constantly thinking of new and creative ways to tie microbiology into the real world.”

“You can only get so far in terms of practical applications of content in a teaching setting,” Peterson explained. “Bringing students who have taken or are going to take microbiology into a research setting enhances their experience. This is where the real-world techniques and applications of scientists take action.”

Senior biology major Mitchel Haddock, of Windsor, fell in love with entomology during his undergraduate career. When he met Peterson, research opportunities abounded. He worked as an Undergraduate Research and Creative Activities (URCA) assistant alongside Peterson, and now is an URCA associate conducting his own research under Peterson’s mentorship.

“She is ridiculously energetic about everything, and makes learning and doing research so much fun,” Haddock explained. “You can’t help but get excited yourself. In “The Bugguts Lab,” you never feel like you’re doing work. Rather, you’re working on something you love, and she excites you to do that.”

Peterson shares her enthusiasm beyond her classroom and lab via Dr.Bugguts on Instagram.

“I use Dr. Bugguts, because it communicates exactly what we’re getting at: I’m interested in the microbiomes of insects,” Peterson concluded. “I use the catchy handle to peel back that curtain about what it means to be a professor, and do research in science and biology. It’s not something that’s reserved for super genius people. It’s not reserved for anyone. Science is open, and there are seats at the table. My door is open, and I’ll take as many students as possible, because I think research opportunities are important.”

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Video: <https://www.youtube.com/watch?v=OvJsRXzL9uo>