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REU Symposium showcases student research at SIUE

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EDWARDSVILLE - After eight weeks of archaeological field and laboratory research and fish-monitoring in the Mississippi and Illinois rivers, 10 undergraduates from around the United States shared their research findings during the Southern Illinois University Edwardsville Research Experiences for Undergraduates (REU) Symposium held Thursday, July 26, on campus.

Funded by the National Science Foundation (NSF), Carol Colaninno, PhD, assistant research professor in the SIUE STEM Center, alongside co-PI John Chick, PhD, director

of the Great Rivers Field Station, U of I Natural History Survey just finished the second year of the program.

Entitled, "*Exploring Evidence of the Anthropocene: Archaeological and Ecological Interdisciplinary Research Experiences for First Generation Students in the Upper Mississippi River System,*" the research program allows students to gain an understanding of the scientific method while learning excavation and fish-monitoring techniques, lab-based data collection, research writing and data analysis. The program also caters to first generation and non-traditional college students, offering student and career development sessions throughout the summer.

The Anthropocene is a proposed geological epoch in which scholars suggest current climate and environmental conditions have been heavily influenced by human activity rather than natural processes.

"We put in so much hard work during the summer on our project and to see it come together the way we wanted was incredibly satisfying," said Olivia Mullenax, a rising sophomore at the University of Minnesota. "This experience also allowed us to explore an original research question that scientist haven't studied before."

Mullenax's research partner Courtney Camp, a rising senior at the University of Georgia, explained their project, "*Influence of Human and Fishing Strategies on Fish Communities in the Upper Mississippi River System.*"

"Our project looked at the influence of human fishing strategies over time, and our recent management practices that support sport and commercial fish species," Camp said. "We also looked at data from archaeological sites, including the fishes that Native Americans caught and modern day fish communities.

Camp continued. "This experience allowed me to make a lot of great connections, and I hope to use those connections, especially when I get to graduate school."

Maria Brauer, a rising junior from Belmont University, was excited to be able to conduct ecological research a year ahead of what is normally expected of her at her university.

"I think I found something I really love thanks to this summer experience," Brauer said. "We researched planktivorous fish, which are native to the Upper Mississippi River System. My partner, Jennifer McBride from SIUE, and I sought to understand how these native fishes have been affected by invasive species, the bigheaded carps, who eat the same food."

“It has been great to see these students walk into the program initially a bit intimidated by research, walk out as researchers,” Colaninno said. “We are extremely proud of what these students have accomplished over the past eight weeks.”

The symposium drew all types of visitors, including SIUE faculty and administrators, as well as some of the participants’ friends and family. REU participant Emily Lange, of Edwardsville, spent the summer excavating and learning to identify fish bones from archaeological deposits. Her father, Jeremy Lange, was pleased to see the outcome of her research.

“It was a remarkable opportunity for her and everyone involved, including the parents,” Lange said. “It allowed her to do something to further her education while giving her the chance to earn some money at the same time.”

Jerry Weinberg, PhD, associate provost for research and dean of the SIUE Graduate School, believes the REU gives students the opportunity to develop key skills and assists in raising the profile of the University as it houses the natural resources that allow for such incredible hands-on research opportunities.

Though the students’ work at SIUE is complete, these student scholars and their faculty mentors will present their research once again at the upcoming Mississippi River Research Consortium in April 2019 in La Crosse, Wis.