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Students play role in nature reserve research

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Segue/Logan Cameron |

In this week's segment of Segue, Southern Illinois University Edwardsville's Greg Budzban, PhD and dean of the College of Arts and Sciences (CAS), hosts an array of faculty members involved in the 380 acre nature preserve within SIUE's campus.

The SIUE nature preserve was established in 2010 as a protected area to promote learning about native Illinois ecosystems and wildlife, and appreciation for nature. It is located within the main SIUE campus, and contains old growth bluff forest, secondary forest, restored grassland and lakeshore habitats.

Budzban visits with three members of the Department of Biological Sciences: Peter Minchin, associate professor and ecologist, Kurt Schulz, professor and ecologist and David Jennings, an assistant professor who studies amphibians and reptiles. Also joining the discussion is Michele Lorenzini, archaeologist and instructor in the Department of Anthropology.

As part of the experiential learning that helps build the foundation of the SIUE educational experience, students actively work in the nature preserve.

Minchin is focused on the biodiversity aspects. He instructed a master's student to look at historic aerial photos and work out the course of the forest's development. "When the campus was first established, the preserve was a fairly small patch of forest, and it has gradually reforested in a pattern with sections of forest at different ages," Minchin said. "With Dr. Rick Esner, we have established a network of monitoring the preserve.

"We have students collecting data on vegetation, wild flowers, birds, insects and small mammals. In particular, we have a study on the southern flying squirrel. We are gradually building up a good idea of what we have in the preserve and what the patterns of diversity are. As a result, we can model conditions like the age of the forest and how it effects biodiversity."

Students also help Schulz with his research in "Canopy Understory Interactions," where the overhead tree canopy influences what lives beneath it as the forest grows, dies and regrows.

“Lately, our attention has turned to a number of plant species, such as the Asiatic honeysuckle, which is the dominant shrub on campus,” Schulz said. “These plants are invasive and tend to railroad that process.

“Initially, we were working on exterminating the thing, but there is no way to do that efficiently, cheaply and safely. So the next question is how can we shape the situation so the plant is a better-behaved citizen.”

Jennings is focused on the ponds that have been established for 30 or 40 years on the perimeter of the preserve. “The nice thing is they haven’t been disturbed for most of that time period,”

Jennings said. “Unlike a lot of the bodies of water around here, they make a really great example of what things should look like.

“They are our baseline for understanding what kinds of animals live in these ponds. We can use that to look at other ponds in the local community to compare all of these different areas and see whether we have the same species present or if some things are more common in some areas than others.

“I had an undergrad student working on it during last summer, and I have a couple grad students doing surveys now. In the spring, I’m going to take my herpetology class out there, and we are going to use it as a teaching tool so the students can get hands-on learning experience, get a little muddy and see what field work is all about.”

Lorenzini teaches a 400 level archeology course. “Students do surveying, look for archaeological sites and also try to relocate sites on campus,” she said. “They go out in the field and learn. It’s a resource for the community, and we want to preserve it.”

Budzban appreciates his faculty’s efforts working with students in the field. “This is one of the things that sets SIUE apart,” he stated. “The opportunity to do this kind of experiential learning even at an undergrad level is something that’s special. Having a resource like this within walking distance is wonderful.”

See more at siue.edu/naturepreserve, or visit the College of Arts and Sciences at siue.edu/artsandsciences.

Tune in to WSIE 88.7 FM every Sunday at 9 a.m. as weekly guests discuss the important issues and perspectives that emerge from the research and creative activities on SIUE’s campus.