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# Professor studies invasive species in Africa

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**‘We are in the midst of a biodiversity crisis,’ says Fulbright Scholar James Vonesh. He has been studying why certain species thrive in a new environment while others don’t. Vonesh has developed innovative classes at VCU, including a camping-kayaking trip on the James River.**

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**F**rom developing an immersive experiential class on the James River to receiving a Fulbright Scholar award to study invasive species in South Africa, James Vonesh is a role model for students who strive to become researchers.

Vonesh is an associate professor in the Biology Department at VCU. He recently returned from conducting research in South Africa, where he focused on the invasive species of frog known as the *Xenopus laevis*.

‘We are converting the surface of this planet to be suitable for us,’ Vonesh says. ‘It boils down to habitat loss.’

As a teacher, Vonesh stresses the importance of experiential learning. Hands-on experience is the best way to ‘engage in the process of science itself.’

Vonesh explored why certain species spread and take off when in a new environment while others do not. Why is this important?

“We spend millions of dollars trying to manage and mediate the effects of invasive species,” Vonesh said. “We are in the midst of a biodiversity crisis. We are losing species, and populations of species are being reduced.”

Development is a major cause of the crisis, he said.

“We are converting the surface of this planet to be suitable for us,” Vonesh said. “It boils down to habitat loss.”

Vonesh will delve deeper into this issue as he conducts his current research on the importance of predator biodiversity. He is looking at what happens when predators are released from or added to an ecosystem.

As a professor, Vonesh dedicates about 40 percent of his time to teaching, 40 percent to research and 20 percent to service, such as community work.

As a teacher, he stressed the importance of experiential learning. Hands-on experience is the best way to “engage in the process of science itself.”

“As you get close to the edge, it becomes fuzzier, and there’s less and less evidence on a given question,” Vonesh said. “But that helps you narrow down to a specific question that we don’t know, and then the exciting part of science is that next step – the step into the unknown.”

Vonesh has helped VCU students step into the unknown by developing more immersive hands-on classes. They include:



Associate Professor James Vonesh of the VCU Department of Biology



Professor Vonesh doing research in South Africa

- “Footprints on the James,” in which students take a three-week overnight camping-kayaking trip to explore the biology of the James River.
- “South African Summits to Sea,” which examines the human and natural history of KwaZulu-Natal. •