

Regional

Schulz investigates threat of invasive species

While the news is full of stories about animal species going extinct and the role that humans play in their extinction, what we don't hear much about is another threat caused by species invading natural ecosystems. With the globalization of trade and commerce worldwide, this issue has become an increasingly serious environmental problem. Someone who works in understanding how that happens is Kurt Schulz, a professor in the department of biological sciences at Southern Illinois University Edwardsville.

Schulz was born in Colorado Springs, Colo. He received his bachelor's and master's degrees in biology from the University of Wisconsin at Milwaukee and his doctoral degree also in biology from the University of Wisconsin at Madison.

Coming from a family with a great interest in the outdoors, Schulz said that he's known since childhood that he wanted to be a college professor. He has devoted his career to the study of invasive species – an issue he considers one of our planet's most serious environmental threats.

"One issue is that many invasive species are supplanting the natives and are really making the plant and animal communities that we have around here less stable and less diverse," he said. "We already are living in a world that is very changed from what Lewis and Clark saw."

Although Hawaii and Florida are always mentioned as states with very serious invasive species problems, the Midwest also has its problems.

"Illinois has almost become an agricultural factory," Schulz said. "And while that is a choice that we have all made, what we have also done is to create habitat for all the species that can tolerate our climate."

In states where agriculture has not developed so intensively, such as Michigan, Minnesota, or Wisconsin, where the soils are not as good, the landscape tends to be made of more forest or natural vegetation that tends to resist the non-native species better, he explained. The question must be asked, just what can the average person do about



Dr. Kurt Schulz working at his lab.

this problem?

"Number one, I encourage folks to get involved in a little nature study, look around and find out what is around them," Schulz said. "And there are plenty of folks who do these things. And the second part about this is to say, 'You know if I let populations of these organisms flourish on my property, it might be a bush here, a bush there, or a tree

here and a tree there, but I am part of the problem because all of the invasives we have here are highly dispersible.' " Another area in which Schulz works to improve the environment is through forest restoration.

"In the end the idea is that you are trying to put into place a forest community that functions like a normal forest. For instance, if the composition of species was similar to

what Lewis and Clark might have found here, that would be nice," Schulz said. "So we are trying to reinstate that at least as best we can, what we know to be an integrated and sustainable system. It's a tall order."

The other issue with plants is that they are more sensitive to environmental factors than one may think. "The thing that most surprised me is that when a plant wilts and

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it looks like it is completely losing ground, the wilting itself may be a response to being in a condition that is too hot or too difficult," he said. "So what the plant is doing is dropping a leaf, reducing its profile to the sun and because it does that it no longer feels a level of stress that it might normally."

For a scientist like Schulz, many times these issues are not just scientific concerns, but also ethical ones.

"One of the issues is that we are very challenged by some problems that are biological and environmental," he said. "The thing that is hardest to get across to my students is that the timeline for what we are worrying about now is so much shorter than the natural processes that inflicted things in the ecosystem." Schulz added that he is also very concerned about the growing mistrust by the general public for the solutions offered by scientists.

"What has been said about climate change is scandalous," Schulz said. "It is a lack of political will, not a lack of scientific evidence to deal with it. And I try and point out to folks that we can't help what the facts are, that the facts are there and we have to get a handle on them and realize that the clock is ticking for us."

Schulz is trying to teach by example through his work with colleagues on the SIUE campus. "There are quite a number of faculty that are working on our new nature reserve here at SIUE, trying to figure out what is there, how to repair the parts that are broken, and set it up so that people can enjoy it and we can learn from it and it continues to be a resource into the future."

Aldemaro Romero is the Dean of the College of Arts and Sciences at Southern Illinois University Edwardsville. His show, "Segue," can be heard every Sunday morning at 9 a.m. on WSIE, 88.7 FM. He can be reached at College_Arts_Sciences@siue.edu.

Photo by Jessica Wright