

## Regional

# Minchin studies, teaches conservation issues

When people hear about Tasmania, the first image that often comes to mind is the animated cartoon character “Tasmanian Devil” from the Warner Bros. “Looney Tunes” series. The cartoon may be a human invention, but the animal is very real. In 2009 they were placed on the Australian endangered species list. Nearly 70 percent of these animals have disappeared since the 1990s. Someone working here in Edwardsville who is familiar with the species – as well as other issues related to the conservation of plants and animals – is Peter Minchin, an associate professor in the department of biological sciences at Southern Illinois University Edwardsville.

“The real devil is a marsupial predator,” explained Minchin, adding that they are related to kangaroos. “They are nocturnal, and they are about the size of a cat. I think they got their name because of the sound that they make, which is a very diabolical sound. One of the earliest Dutch explorers that landed in Tasmania wrote in his log, ‘We hear devils in the forest.’ They are actually not harmful to humans. They are probably more scared of you than you are of them.”

Born in Hobart, Tasmania, Australia, Minchin earned his doctorate in botany from the University of Tasmania. Among the areas he researches and teaches is a field called restoration ecology, the science of restoring an area to a natural condition. A task many believe is nearly impossible.

“Often restoration doesn’t really mean putting things back the way they were, just improving them,” said Minchin. Then you have to decide how far back you want to go, what it used to be like, whether pre-European settlement condition or pre-human condition. In many cases we don’t know what conditions were like.”

Conservation gets even more complicated when you introduce the issue of climate change. While many people think that it just has to do with rising temperatures making ice melt, the fact of the matter is that these changes are also affecting the diversity of



Dr. Peter Minchin while doing field work with students.

plants and animals around the globe.

“Species are changing the timing of the year when they do things, or shifting their actual range of distribution,” Minchin said. “So there is really good evidence that a lot of events that normally occur at certain times of the year are actually happening earlier. For example, the flowering time of many plants is happening weeks earlier than it used to, and the reproductive time frame

for different animals is happening earlier because it’s warmer earlier in the year.”

Minchin said that ecologists today use all kinds of tools to understand how things are changing in our environment. One way is by utilizing fossilized pollen that is trapped in different layers of ice in different parts of the world. “That’s why ecology is so interesting,” he said, adding that he works to pass on his enthusiasm to his students.

“Well, I think that especially with my graduate students that’s part of what we do,” he said. “We try to know what it’s all about and make them aware of the things that are involved in science, especially when they get up to the level where they are going to be publishing. Some of them might want to go to Ph.D. programs.”

Despite his enthusiasm and hard work,

## Aldemaro Romero College Talk

as well as that of others in the field of conservation biology, there are many who argue that humans have already messed too much with the natural environment, to the point that it may be too late.

“Well, I am fairly pessimistic,” he acknowledged. “I think that this is pretty hard to correct now, like climatic changes for example. I think that even if we immediately stop producing greenhouse gases, or stop the use of fossil fuels tomorrow, the climate is still going to continue changing for a hundred years or more. But on the other hand, I think there are things that we can do.” Despite his pessimism, Minchin continues his work unabated and is currently studying natural communities of plants and animals. These communities are much more complex and delicate than most people think. Removing a single species or introducing an invasive one can create serious ecological damage.

“Right now, I am working with mathematical methods that can be used to analyze the way a community is changing,” he said. “For example, in restoration you can use this method to determine whether you are actually hitting towards the goal that you are trying to reach.” Minchin added that he sees his work not only as a scientific duty, but as a moral one.

“I think it is our duty as scientists to find the best possible science to take on all the problems that exist,” he said. “Then, of course, you have to have the political support to actually do it.”

*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.*