

Professor to leave for India

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NEWS EDITOR

When a 7.7 magnitude earthquake hit the Gujarat region of India late last month it left destruction and devastation for residents, and an educational opportunity for one SCSU faculty member.

Richard Rothaus, assistant vice president of academic affairs and associate history professor at SCSU, along with his colleague, Eduard Reinhardt, assistant professor of geography and geology at McMaster University in Canada, are travelling to the quake site today to study changes to Gujarat's coastlines and plan to return to the United States on Feb. 14.

Rothaus and Reinhardt have worked together on two recent quakes, including one of similar size in Golcuk, Turkey about one year ago, and hope their experience in Gujarat will provide much needed archaeological and Geological data related to the effects of large earthquakes.

The trip to Gujarat will cost about \$4,000, a small amount of money considering the value of the resulting data, Rothaus said.

Rothaus said reports originating from the region estimate the death toll at between 50,000 to 100,000, which easily ranks the quake among the top ten deadliest in history.

"Even if it is 50,000 people, that is still outrageous. Things went very, very wrong," Rothaus said. "A lot of it is the population density, and this is, ironically, one of the least populated areas of India."

The most recent quake, which occurred around 8:30 a.m., Jan. 26, was similar in strength to the two other quakes which Rothaus and Reinhardt have studied, but because the population density was so high in Gujarat, the effects of the quake were much more severe, Rothaus said.

Another factor which may have exacerbated the situation in Gujarat, according to Rothaus, is the style of buildings which are currently in use in India and much of the world.

Anthropologist, geologist to return with findings Feb. 14

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"Most buildings in India are big, five-to-seven stories tall, concrete monstrosities with very heavy floors. When these buildings collapse, no one survives," Rothaus said.

Rothaus became interested in earthquake damage because of the pattern created by the quakes, and the archaeological benefits of knowing that pattern. Rothaus uses that knowledge to more accurately assess archaeological sites around the world.

"Now, just after the two quakes in Turkey, we know an awful lot more about what to look for in an archaeological site," Rothaus said.

Along with finding other related applications for his earthquake data, Rothaus said he also hopes his work will provide a more accurate cultural and historical perspective on earthquakes.

"There is a misconception out there that earthquakes are on the rise and the planet is about to end," Rothaus said jokingly. "They aren't on the rise, but what is on the rise is casualties related to earthquakes."

Rothaus attributes the rise in casualties to the places people choose to live and the way they create buildings.

"We really like to live on the coast, which is the most dangerous place to live," he said. "These are cultural choices, people didn't always

do that in all societies and in all periods of history. We have chosen to live a dangerous lifestyle."

"I think this is worthy of consideration. It doesn't have to be this way, there are other options," Rothaus said.

Those options, according to Rothaus, include avoiding coastal areas when building residences, especially in marshes and wetlands and revitalizing traditional architecture.

"People have been living in India for a very long time, they don't need western or American technology to know how to build," Rothaus said.

"A lot of the world's traditional architecture is designed for the region where they are located. There have been movements to adapt those regional building styles, and some have been very successful."

Rothaus said the most crucial and difficult part of the process is preparing for the trip and bringing all necessary supplies. With food, water and other supplies at a premium, it is important to not further stress the already weak infrastructures and resources, Rothaus said.

"The number one job has to be to stay alive and not get in the way," he said, noting that one of the most difficult parts of his job is dealing with the incredibly difficult circumstances surrounding a natural disaster.

Rothaus said he and his colleagues attempt, although they're not always successful, to refrain

from becoming involved with the people in the damaged areas, a struggle which is often shared by rescue workers.

"During disasters like these, the rescue teams will come in and it's so unimaginable, so overwhelming, that they all stop at the first area of destruction they come to," Rothaus said. "There are thousands of people who need your help, and it's almost impossible to tear yourself away from that and say 'No, I've got to go by all this because there is another town further down the way.'"

Rothaus said while it is extremely difficult at times, he and Reinhardt make every attempt to stay detached from the surrounding circumstances. But, that's not to say it always works out that way.

"We have to stay very focused on what we have to do. We have to do our job. Get in, and get out," he said. "One of the things we learned in Turkey, and I'm sure it will be the same in India, is that the people are really understanding. They understand that we are there working for science. I have always been pleased to discover that."

"The first few times we (studied earthquakes) we were worried that people might think we didn't care about their suffering," Rothaus said. "They didn't interpret the situation that way at all. They knew we had a job to do."