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Ground radar digs into religion's past

By Katy Human
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Larry Conyers, known for his expertise with ground-penetrating radar, describes the discovery of underground tunnels and a collapsed structure dating to the third century in Tunisia. (Post / Gien Martin)

Earlier this year, Larry Conyers pulled a sled filled with high-tech gear across an olive grove - near the small Tunisian town of Lamta - trying to divine what lurked below.

A woman in a home nearby shouted angrily as Conyers worked, he remembers, and tossed rocks at him and his colleagues.

Later, however, when the University of Denver anthropologist took the woman's hand and led her to his computer screen, her eyes widened, Conyers said.

The ground-penetrating radar on the sled had found what looked to be huge tunnels, wide enough for a subway train, snaking beneath the trees.

There was a stairway, Conyers said, pointing to a display on his computer screen in Denver, and a paved floor, a churchlike room, a collapsed arch.
It appeared there was a third-century church or funerary hall beneath the North African grove.

"This is Indiana Jones kind of stuff," Conyers said.

The Tunis site may turn into one of the best from a time when Christianity was spreading into North Africa, said archaeologist Susan Stevens, director of the Tunis project and a professor at Randolph-Macon College in Ashland, Va.

It was an era when Christianity was bumping - sometimes uncomfortably - into Roman traditions, Stevens said.

"This could represent an important transition - the Christianization of Roman burial practices," she said.

Stevens' project also shows how much archaeologists now rely on ground-penetrating radar technology and experts such as Conyers.

Conyers, once a petroleum geologist, said the concept is simple: A device sends radio waves into the ground that bounce off objects with different densities from surrounding material.

It takes experience, however, to accurately interpret the wiggles on the screen.

In Tunisia, those wiggles showed Conyers something big below the olive trees.

Stevens hopes to excavate the site next year, if she can negotiate permission from the landowner and Tunisian officials.

She already has a guess about what's there based on Conyers' images and other artifacts from the area.

"I think somebody important is buried there," she said. "Maybe a saint or martyr," a Christian persecuted by the
Romans.

Elsewhere in the region, scattered openings in the limestone bedrock lead down ancient stairs into tunnels, where burial shelves are carved into the walls, a third-century Roman practice, Stevens said. The new site, however, is unmistakably Christian.

A Tunis colleague of Stevens uncovered two brilliantly colored glass and marble Christian mosaics from the fourth or fifth century, she said.

Such motifs are generally found only in churches, Stevens said, but churches are almost never built underground.

Still, Conyers' images show a collapsed arched ceiling over a space that once measured about 30 by 45 feet, and 15 feet high.

"They took out bedrock to build a church, a funerary hall, something," she said. "We really have no idea why."

Since radars and computers became small enough to cart around the world in the 1990s, archaeologists have come to rely on them to pinpoint sites and limit unnecessary digging.

"It has turned into an absolutely essential tool for us," said Payson Sheets, an archaeologist at the University of Colorado at Boulder, who is credited with the first use of the technology in 1978 in El Salvador.

There, nearly 20 feet of hardened volcanic ash covered a small village, dating to about 600 A.D., he said.

The agricultural village his team discovered - with a borrowed ground-penetrating-radar unit - has kept archaeologists busy for years, he said.

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