



*Episode 7, 2006: Mystery Crystal Cross,
Tallahassee, Florida*

Tukufu Zuberi: Our last story investigates the origins of a mysterious religious relic. It's 1539, and under the banner of the cross, the Spanish explorer Hernando De Soto is making landfall in the New World in an area the Spanish call La Florida. Hunting for gold, De Soto and his men devastate the indigenous Appalachi Indians with warfare and disease. Eventually, the Spanish establish a Franciscan mission and convert what's left of the native population to Christianity. Now, almost 500 years after De Soto's invasion, archaeologists are digging at the site of this former mission. They are unearthing artifacts that are shedding light on the arrival of Christianity in the New World and providing clues about the Appalachi's traditional way of life. An Appalachi descendent now living in Louisiana wants to know if a striking artifact found in the early days of the dig, some 15 years ago, may hold the answers to a mystery about his tribe's past.

Gilmer Bennet: there was some excavating done, digging in the church that produced a cross. I have never seen anything like it anywhere, from anyone.

Tukufu: I'm Tukufu Zuberi and I'm visiting Tallahassee's Mission San Luis where the cross was discovered. It's Florida's only reconstructed Franciscan mission. How you doing?

Gilmer: Doing fine.

Tukufu: Gilmer Bennett, chief of the Appalachi Indians, has flown in from Louisiana to meet me here at the long-ago home of his ancestors. We're talking in the reconstructed mission church. How did it make you fee to come and visit this place?

Gilmer: Oh, we've always loved it. We feel like it's part of us, you know? That you feel like you're home. The first time we come, they were just excavating all the land out here. It was interesting, the artifacts, and to see, you know, what our people was capable of doing.

Tukufu: It's a beautiful cross. Can you tell me the story behind the cross?

Gilmer: They have some dispute about who had built it...

Tukufu: Gilmer explains that he knows very little about the cross, just what he's heard from the archaeologists, that it was unearthed in the early '90s. What would you like to know about the cross?

Gilmer: Well, I'd just like to know how this cross got -- who built it and where it come from. I feel in my heart that Appalachi-ans built it.

Tukufu: Mm-hmm. Okay, well, I'll tell you what, I'll go and see what I can find out, and get back to you as soon as I can, all right?

Gilmer: Great.

Tukufu: The cross is such an iconic Catholic symbol, and this one is exquisite. I'm certainly curious at the prospect of Native Americans carving such an artifact. My first step is to find out more about how this cross was found. Archaeologists began excavating at San Luis in the 1980s. Bonnie McEwen is the director of research.

Bonnie McEwen: We've found over a million artifacts, a full array of materials that they used in their everyday life.

Tukufu: Now, let's go back to the time when you found the cross.

Bonnie: Okay.

Tukufu: And, you know, what happened?

Bonnie: Well, I pulled the notebook from 1991, when we first found it. One of our crew members at the time had found a "glass or crystal-faceted artifact." We didn't know that it was a cross at the time because there was so much clay attached to it. I believe this is the cross when it was first discovered beneath the floor of the church.

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Tukufu: Bonnie explains that when they began reconstructing the original church, they discovered that hundreds of Appalachi had been buried there.

Bonnie: But we have very few skeletal remains because our soils are so acidic that most of the bone that's 300 years old is long gone.

Tukufu: So this is actually an artifact from the person.

Bonnie: Right, that was buried with that individual.

Tukufu: Wow. And so what are the implications of that?

Bonnie: Well, it's a very iconic artifact for a mission because it revealed the fact that Appalachi Indians were being buried with Christian symbols, and really speaks to their religious conversion.

Tukufu: Bonnie calls the cross the most remarkable object they've found at the dig. So what did you do to discover more about the cross?

Bonnie: Well, one of the first things we did was take it to a geologist. He's still here in town, and I know he'd be happy to speak with you.

Tukufu: I'm curious to see what the geologist found out, but first, I want to learn a little more about San Luis mission. When the Spaniard Hernando De Soto invaded in 1539, his sights were set on gold and conquering the native people of La Florida. But the Appalachi were proud farmers who launched relentless attacks on Spanish encampments. So strong was the Appalachi resistance that they were not conquered until the 1600s. By the early 17th-century, disease had so decimated the native population that the Appalachi saw an alliance with the Spanish as their best option. For a half-century, Mission San Luis was the western capital of Spanish Florida with the Christianized Appalachi and the Spaniards living alongside each other in apparent harmony. But there are no written accounts from this period by the Appalachi. Underneath this smooth surface, there were major rebellions as the Appalachi protested the Spanish practice of forced labor. This is interesting. The friars were importing religious trinkets from Spain. Here's a list of items shipped to the Spanish Americas. By 1613, they had imported nearly 12,000 religious objects from the Old World to the New World. And look at this. The Spanish were sending quartz rosaries and glass crosses. It seems quite possible the cross was brought over from Europe and not made by an Appalachi. I'm taking the cross to geologist Stephen Kish at Florida State University. I want to find out about his first encounter with the object. What did you think the first time you saw it?

Stephen Kish: Well, it's -- it's a very clear material. This suggests that it's either glass, which is artificially made, or quartz crystal, which is natural. For geologists, one of the easiest ways to determine whether something's glass or mineral is to use optical properties called polarization.

Tukufu: Okay.

Stephen: And glass is non-crystalline,

Tukufu: Mm-hmm.

Stephen: So it will not be affected by polarization of light, whereas quartz will.

Tukufu: Manufactured glass doesn't allow polarized light to pass. But quartz crystal lets the light through and shows some fascinating results. It's illuminating, look at that.

Stephen: The light is passing through the atoms of the quartz crystal and being rotated. Try the cross here and see what happens.



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Tukufu: Wow, I see it illuminating.

Stephen: You see it's illuminated, and then it goes dark. And also notice it goes dark not exactly along the axis of the cross but at a slight angle. That means that the crystal from which this was cut was actually larger than the cross that we see. Probably, uh, much larger than a regular banana.

Tukufu: So it's crystal quartz; what else can you tell me about it?

Stephen: Well, it's very clear with only a few flaws. By shining a laser on this piece of quartz, we can see sparkles that represent imperfections. Not so with our cross. When I shine them through the cross, it's very clear.

Tukufu: Wow. So this is a pretty unique piece of crystal.

Stephen: Something of this clarity and size could only come from a few locations: France, Spain, Italy, Brazil, Mexico, and the hot springs area of Arkansas.

Tukufu: But not Florida.

Stephen: Florida, the geology here is not appropriate for the growth of quartz.

Tukufu: My next stop is at the University's National High Magnetic Field Laboratory. Scientist Mike Davidson says that when he first received the cross from Bonnie McEwen at Mission San Luis, it looked so stylized, he made a quick assumption.

Mike Davidson: Well, when I first saw it, she'd told me that she thought it had been made by Indians at San Luis, mission San Luis. I didn't really think so. I thought it might have been made by the Spanish in maybe a machine shop in Europe.

Tukufu: Why is that?

Mike: It just looks like it was fabricated with higher-quality equipment than you would have here in Tallahassee back in the 1600s.

Tukufu: But when he studied the object more closely under a powerful digital microscope, the scientist saw some intriguing details.

Mike: Under the microscope, it becomes obvious that many of the features of the cross were made by hand tools. For example, the hole in the suspension loop is biconically drilled, probably with a bow drill.

Tukufu: I see. Mike explains that the artisan who made the cross drilled in part way from either side to make the hole using a bow drill, typically a Native American technique.

Mike: And on the outer edge of the suspension loop, we can see these little chaff marks here that were made -- flaking marks that were made probably by an antler or something like that.

Tukufu: This flaking technique was widely used to make projectile points.

Mike: With high magnification, it's obvious that many of the features of the cross were probably made by hand tools associated with Native Americans.

Tukufu: I'm not sure what to make of all this. Our cross is made of quartz, and the Spanish were importing quartz religious artifacts. But it was almost certainly made by a Native American craftsman. Dan Penton is an archaeologist and an elder of the Muskogee nation of Florida. We've arranged to meet back at Mission San Luis. He explains that the cross has long been a traditional Native American symbol.

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Dan Penton: There are all kinds of representations of the cross in our traditional belief system before the Spanish came. It's

For example, the central fire in the council house is symbolized by the four logs oriented to the cardinal directions.

Tukufu: Dan also doubts the quartz cross came from Europe. Another explanation is that they imported it from native peoples elsewhere in the Americas from as far away as Arkansas or even Mexico.

Dan: I think that they probably got the crystal as part of their normal trading network, which had been in existence for thousands of years, well before the Spanish came.

Tukufu: Do you think that Native Americans could embrace a symbol like this cross? Would it mean something in their own traditions? Then Dan tells me something else that shines light on the deeper meaning of our cross. I can't wait to tell Gilmer. How you doing?

Gilmer: Doing fine. What'd you find out for me?

Tukufu: The crystal quartz... I tell Gilmer the scientific tests had shown the cross was made by Native American craftsmen using quartz, but that until I spoke with Dan Penton, I hadn't been able to fully understand why this might have been important.

Dan: The quartz crystal is very important in the traditional ritual life of southeastern Indians. It is emblematic of the great body of water that separates the upper world from the lower world in our belief system. And it would be important to the Appalachi people. It would've been a high-status ritual item that would not just be available to just anyone, but it would be someone who was respected ritually in the community.

Tukufu: Dan says a quartz cross is the kind of thing seen throughout the Americas where both native communities and enslaved Africans became adept at blending Old World and New World belief systems in order to survive slavery and social upheaval.

Dan: Our people are practical people. And they incorporated new things that they thought were useful and they carried on old things that they thought were useful and brought them together in dynamic and, in most cases, stronger relationships. So you have two worlds coming together. And it strengthens that symbol rather than weakens it.

Tukufu: This cross was most likely made by an Appalachi craftsman. And in my view, this pays tribute to the creativity and the spiritual persistence of the Appalachi people, which you represent.

Gilmer: Well, I appreciate what you found, you know, and how it turned out. We, as Appalachian people, really appreciate your effort.

Tukufu: Well, as modest as they were, thank you very much.

Gilmer: Thank you.

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