

Nature Notes: At Spirit Eye Cave, A Cache of Corn Cobs Deepens the Mystery of the Ancient Big Bend

Bryon Schroeder interviewed August 29, 2019 for Nature Notes on Marfa Public Radio

Transcript by Andrew Stuart

It doesn't take an archeologist to recognize it was an important place for prehistoric peoples. In a limestone cliff near the Chinati Mountains, two openings give on to a hundred-foot-wide chamber. For thousands of years, people returned to this cave – to cook, to craft the implements of daily life, to bury their dead. Sheltered from the elements, Spirit Eye Cave preserved a remarkable record of those occupations.

Much of that record has been removed. For almost a century, the cave was targeted, or plundered, by artifact-hunters.

And yet, Spirit Eye still has powerful lessons to share. Some of its most evocative artifacts are among the most humble: corn cobs.

Bryon Schroeder is an archeologist at Alpine's Center for Big Bend Studies. He started Spirit Eye research in 2017. He's excavating intact areas. And he's working with collectors. Some have donated their collections, or allowed him to analyze artifacts.

Maize is a constant in these collections. It's known that Big Bend peoples were farming along the Rio Grande by 1200 CE. But Schroeder decided to date cobs.

One set – all very different in appearance – dated to 500 CE. Other corn dated back 2,100 years.

"The important part is that it pushed the use of maize back in this part of the world further than it had been," Schroeder said. "So there's just this background signature of maize, that's got me thinking that people had a relationship with maize in this area that we're just in the beginning of understanding."

It bucks the default assumption that archaic Big Bend peoples were strictly hunter-gatherers. And it has powerful social implications, Schroeder said. The region's ancient nomads were clearly connected to more agricultural societies.

"Somebody's got to be producing enough maize to have seed stock," he said, "and there has to be a relationship with those people. That to me is the exciting thing with that."



Archaeologist Bryon Schroeder standing in Spirit Eye. (Diana Nguyen / Marfa Public Radio)

Was the maize from present-day Mexico, or the Southwest? Southwestern societies developed unique varieties that could tolerate desert conditions. Spirit Eye maize is being analyzed at the University of York, in England. The results could illuminate ancient trade routes.

Generally, societies embraced agriculture not because it was inherently attractive, but because wild foods no longer supported their populations. "Settling down" to farm means sacrificing mobility, giving up diverse wild foods for a few crops – which might fail.

Spirit Eye's archaic people may have practiced what archeologists call "ancillary cultivation," using maize and other crops to supplement wild foods.

Schroeder draws a comparison to the Fremont culture, in Utah. The Fremont lived adjacent to agricultural Puebloan societies, and they added low-level cultivation to time-tested hunting and gathering.

By the time archaic Big Bend peoples experimented with maize, they'd likely been "messing with" plants for generations, Schroeder said. Evidence suggests the region's ancient people modified the landscape to irrigate wild plants like lechuguilla and agave.

"You already have that knowledge," Schroeder said, "and somebody gives you these, and says, 'Throw these in the ground.' You come back in a couple weeks – you've got food."

Archaic peoples likely picked small areas – around springs or wetlands – as garden plots.

"These aren't going to be huge acre fields," Schroeder said. "I think they're going to be small plots. They just made micro-niches – they just knew the landscape well enough that they knew this area would probably be good for that."

It would be premature to generalize from maize found at Spirit Eye. Schroeder is investigating other caves. By dating maize from other sites, he could get a fuller picture of its archaic use here.

And there could be a way to determine whether there was cultivation near Spirit Eye itself. Maize pollen doesn't travel far from where the plant is grown. Schroeder plans to test core samples.

"Trying to come up with some candidates, and coring them and trying to find maize pollen, is the next step," he said. "There's a spring up there, and if we go up there and core that spring area and come up with maize pollen, we're going to have a different picture of what's happening at the cave."

Spirit Eye has been crudely exploited in the past – a body dug up here was for years displayed in Marfa businesses. But if it's treated with respect, this special place can shed light on the complex history of the Big Bend's original inhabitants.