

Archaeology

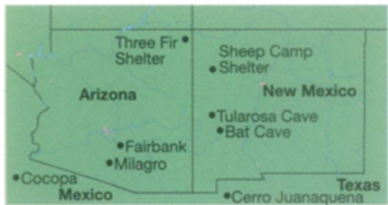
Sloping toward agriculture

The ancient settlement of Cerro Juanaqueña, located in northwestern Mexico, features a network of terraces carved into the summit and slopes of a steep hill. Prehistoric residents used the terraces as platforms on which to build their houses, according to two scientists who carried out excavations there last year. Moreover, they say, Cerro Juanaqueña highlights the largely unappreciated flexibility with which foraging populations of Central and North America cultivated a taste for farming.

Scientists have traditionally held that small bands of mobile foragers in the U.S. Southwest and Mexico made limited efforts to grow maize and other plants beginning around 3,500 years ago. Agricultural practices brought people into settlements of increasing size, and large farming villages emerged no more than 1,500 years ago, according to this view. Yet radiocarbon analyses of nondomesticated plant remains at Cerro Juanaqueña indicate that the settlement, which covers more than 25 acres, is 3,000 years old, say archaeologists Robert J. Hard of the University of Texas, San Antonio and John R. Roney of the Bureau of Land Management in Albuquerque. Since its discovery more than 30 years ago, the site has been placed at no more than 1,000 years old.

Extensive planning and huge amounts of labor resulted in the construction of 468 terraces, each about 60 feet long, Hard

Cerro Juanaqueña, with other sites from the same period.



and Roney contend. Terrace excavations yielded household utensils, animal bones in discarded piles, and sharpened stone points.

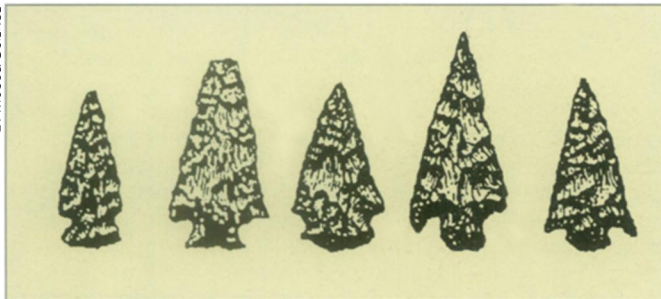
The researchers also found nearly 600 stone implements typically used for grinding grain. Ancient residents mainly ground the seeds of wild plants native to the region, they suggest; many seeds from such plants turned up in the excavation. A few charred maize remains were also unearthed, along with animal bones.

Population growth, settlement expansion, and agricultural innovations occurred at varying paces and in different combinations throughout the ancient Southwest, Hard and Roney propose in the March 13 *SCIENCE*. Cerro Juanaqueña got a surprisingly early start as a large, bustling site, but it moved relatively slowly toward intensive cultivation of maize and other crops on nearby floodplains, they maintain.

Ancient societies elsewhere in the world also appear to have adopted practices somewhere between foraging and farming before coming to depend on agriculture, writes archaeologist Bruce D. Smith of the Smithsonian Institution in Washington, D.C., in an accompanying commentary.

Future work at Cerro Juanaqueña will explore why people expended so much effort to live on a steep hill, says Hard. —*B.B.*

B. Moses/SCIENCE



Sharpened stone points from Cerro Juanaqueña.

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