

Toilets And Fountains In Ancient Palenque

The ancient Mayans may have had enough engineering know-how to master running water, creating fountains and even toilets by controlling water pressure, scientists now suggest.

Perhaps the earliest known example of the intentional creation of water pressure was found on the island of Crete in a Minoan palace dating back to roughly 1400 BC. In the New World, the ability to generate water pressure was previously thought to have begun only with the arrival of the Spanish.

Scientists investigated the Mayan center at Palenque in Chiapas, Mexico. At its height, this major site, inhabited from roughly 100 to 800 AD, had some 1,500 structures - residences, palaces, and temples - holding some 6,000 inhabitants under a series of powerful rulers.

The center at Palenque also had what was arguably the most unique and intricate system of water management known anywhere in the Maya lowlands. These involved elaborate subterranean aqueducts to deal with the spring-fed streams that naturally divide the landscape and could otherwise cause flooding or erosion.

One peculiar finding at Palenque was a buried, spring-fed conduit some 216 feet long (66 m). While other aqueducts under the site's main plaza stayed relatively level and maintained a roughly constant width, the rectangular conduit was located on a steep slope and abruptly narrowed at its end.

Assuming this sloping conduit was smoothly plastered as the aqueducts were at Palenque, the researchers calculated the resulting water pressure could drive a fountain shooting water roughly 20 feet high (6 m).