

## Mysterious Nazce lines explained by water-fertility cult theory

WASHINGTON - A new theory has been advanced to explain one of archeology's most intriguing riddles: Why were the Nazca lines riddles: Why were the Nazca lines
formed in southern Peru hundreds formed in sout
of years ago?
The lines, which cover hundreds of miles of arid plateau, have been attributed to a coastal people called the Nazca, who lived there between 100 B.C. and A.D. 700.
Johan G. Reinhard, an American anthropologist and mountain climber who has lived in South America for the last four years, thinks the lines were made to thinks the lines were made to
honor gods thought to live in the honor gods thought to live in the
nearby mountains. They supnearby mountains. They sup-
posedly
controlled supply in the area and the fertility of crops and animal herds.
"To the Nazca people, ceremonies worshipping these gods must have been of prime importance," says Reinhard. "Mountains to the east were critical to agriculture, a mainstay of the economy.'
Based on Fact

The anthropologist points out that the bellef had a sound ecological basis, because mountains do influence weather and are the sources of many streams and rivers upon which harvests and animals rely.
"This also explains why mountain worshup is still common throughout the Andes and was prevalent among Incas at the time of the Spanish Conquest," he says. People of the region still practice


A giant 150-foot-long spider - one of the many Nazca lines etched in the sands of southern Peru - is clearly visible from the air. Probably made about 2,000 years ago by a coastal people known as the Nazcas, the lines, which cover hundreds of square miles, range from animal figures to elaborate geometric designs. Joだan G. Reinhard, an American anthropologist, believes they were made as part of a water and fertility cult associated with mountain deities.


Machu Picchu - 8,000-foot-high citadel of the ancient Incas - hangs on a mountainside in Peru. Since the discovery of Machu Picchu in 1911, scientists have speculated about its function in Inca society. A new hypothesis suggests that it was built not only for strategic reasons, but as a place to worship mountain gods. All of the major peaks around Machu Picchu were considered sacred by the Incas and are still worshiped by their Peruvian descendants.
the water-fertility cult. Exploring the summit of Cerro Blanco, one of the mountains near the lines, Reinhard recently found offerings of cotton plants and river stones near the summut. The cotton was meant to increase crops, the river stones the water supply for the fields.
Reinhard, whose work, is partally. funded by the National Geographic Soclety, feels that almost all the ancient Nazca figures found on the desert floor fit in with a water-fertility cult in one way or another. For instance, the umage of a glant spider was
probably made because the insect was assocrated with rain.
The birds could all be linked in one way or another with mountain gods, and the monkey, he points out, has been considered a protector of water.

## Bird's-eye View

Why were the anımal figures visible only from the air? So they could be easily viewed by the mountain gods or ther winged missaries, Reinhard believes
As for the straight lines, Reinhard thinks they served as sacred paths to places where
fertility rituals were performed or, in the case of shorter lines and large triangles, they denoted symbolic connectors with sources of water.

He points out that the oscillatin or spiral forms were symbols fó water and the zigzag marking might represent either rivers o lightning.
'In the case of phenomena so complex and little known as the geoglyphs at Nazca, we wll doubtless never be able to com pletely understand then meanings," cautions Reinhard.

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