

What is the canvas of the Nazca line in Peru made of

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The Nazca Lines are a series of large ancient geoglyphs in the Nazca Desert, in southern Peru. The arid plateau located about 400 km south of Lima. Researchers believe the Nazca Lines were created by the Nazca culture between 500 BC and 500 AD. Since the discovery of geoglyphs, their unique shapes and enormity have been noticed, research on details of distribution and their interpretation has advanced, and conservation activities are thorough. On the other hand, details of the geologic formation on which the geoglyphs were drawn was unknown.

The purpose of this study is to clarify what is the canvas of the Nazca lines made of. It is impossible to collect strata in this area. Since the entry into the area was severely restricted and it was not possible to collect and analyze the strata, we examined the formation process of the Nazca plateau from outcrop observation and topography analysis.

The altitude of the Nazca plain at about 400 meters is located between the Andes and Coastal Range of altitude 1000m class. The outcrops along valleys surrounding plains, horizontal deposition layer made of sand mud than 100m thickness are exposed. Marine sediments containing trace fossils are distributed, covering thereon lacustrine-fluvial deposits. A gravel layer of several tens of meters in thickness is confirmed in the valley wall. This is a local river channel deposits along the valley. The surface of the plain is covered with thin gravel. This gravel was supplied from the mountain side in the process of uplifting the inner bay sea floor.

Geoglyphs is depicted in whitish line dark red plains. The white line is a clay layer beneath the gravel layer. When clay dries to near the shrinkage limit, it becomes an off-white solid clay ground. The dry climate of Nazca promoted solidification and whitening of the clay layer. Gravel does not move in the wind, but the sand is moving. Dust accumulated in depressions lines blown off easily by the wind, the line is maintained. In this way, the drawn line is maintained without disappearing, has become can be stored for thousands of years.

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