

Archaeological insights of the social impact of the Huaynaputina explosion 1600 AD, southern Peru: a multiscale regional perspective.

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On February 19th 1600, the Huaynaputina volcano erupted. The activity lasted about three weeks and was the largest in historical times recorded in South America. Ash falls not only affected the region of Moquegua and Arequipa where the volcano is located, but also regions as far away as Lima, Cuzco and Arica; a thin layer of tephra was found even in the cap of the volcano Sajama (on 6,000 masl) in the bolivian Altiplano (270 km SE from Huaynaputina). The eruption produced a deep social impact. Chronicles of the socioeconomic disaster abound in colonial and ecclesiastic archives of the early 17th century. This natural disaster struck an Andean society engaged in a process of social and political changes and territorial reorganization related to the imposition of Spanish colonial order (Virrey Toledo leys). Moreover, this fury of the gods of nature also produced a strong symbolic impact in these times of acculturation and religious conflicts. Huaynaputina ash deposits were identified in various archaeological sites in the south central Andes. For example, recent archaeological excavations in the mountainous region of Arica (Northern Chile) have identified layers of tephra (up to fifteen centimeters) in households of pre-Hispanic origin. In southern Peru, ongoing geophysical investigations has identified architectural remains of an entire village buried under up to three meters of pumice and lahars, at Calicanto site, near Quinistaquillas (province of Moquegua), located at the foot of the volcano. The comparison of these new data with the archaeological records of tephra deposits in different sites of the South-Central Andes allows a multiscale regional assessment of the social impact of the eruption and the modalities of resilience of the Andean settlements.