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Plant-based pigment production on Rapa Nui.

Since 2007, the German Archaeological Institute and Kiel University are undertaking archaeological excavations on the island of Rapa Nui (Easter Island, Chile). Excavations in 2011 and 2014 revealed pits that contain thin layers of charcoal and phytoliths and thick layers of reddish iron oxide at various locations on the island. These finds resulted in the hypothesis that people burned rhizomes of *Schoenoplectus californicus* spp. *tatora* (totora) to produce pigment, dyes or paint. The pits date to the 13th and 15th centuries, after the onset of the deforestation of the island and before the first arrival of Europeans.

Phytolith analysis was carried out after micromorphological analysis had demonstrated that phytoliths were very common in one of the pits. The aims of the phytolith analysis were to understand what kind of material was burned in the pits, and to shed more light on the role of sedges. The research included samples from inside and outside pits from four soil profiles at three locations. The results provide new insights about plant use on Rapa Nui.