

Understanding construction and activity areas at Neolithic sites through combined ethnographic, phytolith and geochemical investigation

Sarah Elliott

Department of Archaeology, Anthropology & Forensic Science, Christchurch House, Talbot Campus, Fern Barrow, Poole, BH12 5BB, UK

Emma Jenkins

Department of Archaeology, Anthropology & Forensic Science, Christchurch House, Talbot Campus, Fern Barrow, Poole, BH12 5BB, UK

Samantha Allcock

Department of Archaeology, Anthropology & Forensic Science, Christchurch House, Talbot Campus, Fern Barrow, Poole, BH12 5BB, UK

Carol Palmer

Council for British Research in the Levant, British Institute in Amman, PO Box 519, Jubaiha 11941, Amman, Jordan

This paper summarises results of scientific ethnoarchaeological investigations into abandoned mud and stone constructed village houses and the implications of the results for the interpretation of Neolithic archaeological sites. The INEA project (Identifying activity areas in Neolithic sites through Ethnographic Analysis of phytoliths and geochemical residues), develops and applies a method that combines the analysis of microscopic plant remains (silica phytoliths) and geochemical residues to inform on construction methods and the use of space in recently abandoned historical villages and Neolithic settlements. Ethnographic sediment samples from defined activity areas and building materials from the 19th-20th century village of Al Ma'tan in the At Tafila governorate were analysed to determine if certain anthropogenic actions have particular phytolith and elemental signatures. Archaeological sediment samples from Wadi Faynan 16 and 'Ain Ghazal formed the comparative case studies. For the recent village comparative samples, phytolith and elemental signatures were strongest for categories linked to construction practices, particularly for floors and structural features; with geology, age and natural vegetation a key source of variability. When compared with the Neolithic samples, the phytolith and elemental remains were good at recording patterning that could be indicative of certain activity types, but there was also evidence of mixing and multipurpose use that required cautious interpretation.

Keywords: ethnoarchaeology, archaeological sediments, soil geochemistry, phytolith analysis, archaeological activity areas