

Identifying activity areas in Neolithic sites through ethnographic analysis of phytoliths and geochemical residues (INEA)

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### **Signatures of human and animal occupation. Archaeological and ethnoarchaeological research in Jordan, Iraq and Iran**

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This seminar will include research from two on-going research projects in the Near East that I am involved with the Central Zagros Archaeological Project (CZAP- <http://www.czap.org/> ) and the INEA project (Identifying activity areas in Neolithic sites through ethnographic analysis of phytoliths and geochemical residues- <https://research.bournemouth.ac.uk/2014/07/inea-project-2/> ).

The CZAP focuses on sedentism and resource management in the Zagros Mountains of Iraq and Iran. The origin, spread and development of animal husbandry in the Near East is a key topic in the transition from hunter-gatherer to farming communities. During the management and domestication of animals, faecal material would have been deposited in and around sites. This can inform on human domestic activity, spatial patterns, the environment surrounding the site, ecology, the nature of early animal management, cultural activities and socio-economic information. Samples of known faecal origin provide a modern comparative dataset for archaeological samples. It is necessary to have region specific comparative reference collections that can be related back to archaeological sites within a given region because faecal signatures vary based on species, diet, environment and geology.

The INEA Project investigates combined analysis of phytoliths and geochemistry to determine if activity areas and construction practices in modern traditionally built

abandoned villages have particular signatures which can help us recognise the same areas archaeologically at Neolithic sites. Human occupation and activities in ancient villages alter the sediments on archaeological sites. This alteration is in the form of additions or depletions to the sediments of chemical elements, plant remains and other anthropogenic debris. Traces of activities can therefore be recognised in the geochemistry and phytolith assemblages analysed.

Increasingly an ethnographic approach, investigating patterns from modern samples, is being taken to compare against ancient deposits and to address each of the topics above. Human and animal activities on archaeological sites are regularly studied in detail; however, the application of ethnographic datasets is increasingly becoming important. It is also valuable to document modern communities and traditions especially with the growth of interest in combined methodologies. Near Eastern sites are key in the early establishment of settled villages and the development of domestication and farming. New research in this area is crucial to our understanding of the past.



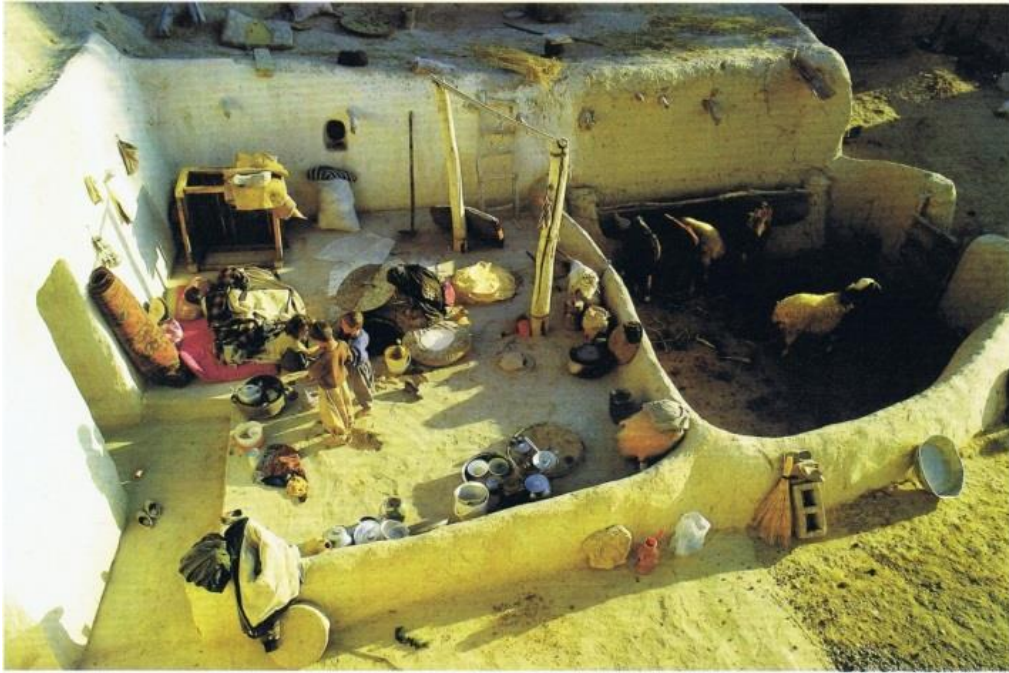
'Building 1' at Ma'tan. Ma'tan is an abandoned traditionally built village near Tafila, Jordan



Traditional method of producing roof plaster using green clay (samaga), temper (tibn) and water at the village of Ma'tan, near Tafila, Jordan.



Sheep and goat herds penned in temporary animal pens in the fallow fields during the summer in Bestansur, Iraqi Kurdistan



Traditional village in Iran where animals are penned adjacent to the living areas (from Kurds of Iran, N. Kasraian & Z. Arshi)