

Out of sight, but not out of mind:

Searching for traces of activity through soil analysis of Bedouin Campsites at Wadi Faynan, Jordan



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Introduction

The application of soil analysis in order to identify spatial activity patterns at archaeological sites in recent studies has provided fruitful insights into social use of space in the past. However, problems of equifinality and the complexities involved in accounting for various taphonomic processes that have influenced the studied anthropogenic soils limit the accuracy and extent of interpretation possible today.

By analysing soil samples from abandoned modern day Bedouin campsites in Wadi Faynan, Jordan, this project aims to contribute to our understanding of the potential this method carries. The samples were taken from camps at various stages of abandonment, following an extensive survey of daily life at these tents.

Methodology

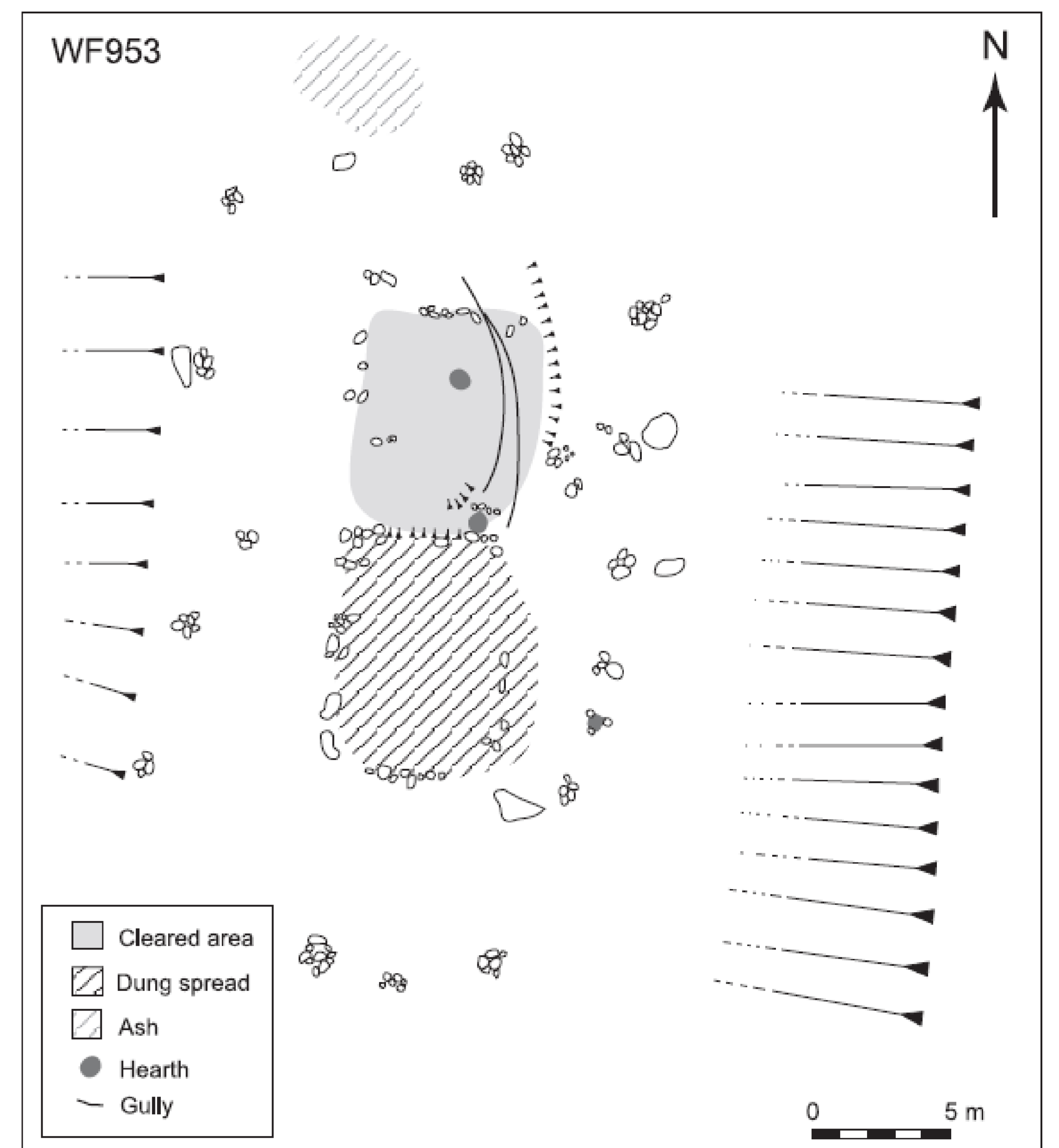
A portable XRF scanner (pXRF) was used in order to establish which geochemical signals were present throughout the sites, and their relative amounts (in parts per million). These are influenced by various activities such as burning, refuse disposal and animal husbandry. In addition, the samples were examined for their phytolith content. Phytoliths are silica representations of plant cells that remain in the soil following plant decay, and can inform us about plant use in specific locations.

Results

The graphs on the right show two types of results. The top one indicates the relative proportions of plant parts for each area, while the graph below shows the levels of chlorine per context.

Both methods work as comparative means, indicating differences between areas of occupation. When combined, the analyses can provide more specific information. The examples to the right show that even if two cases appear to have a similar pattern in one test (plant part distribution, top graph), they can be distinguished in another (chlorine levels, lower graph).

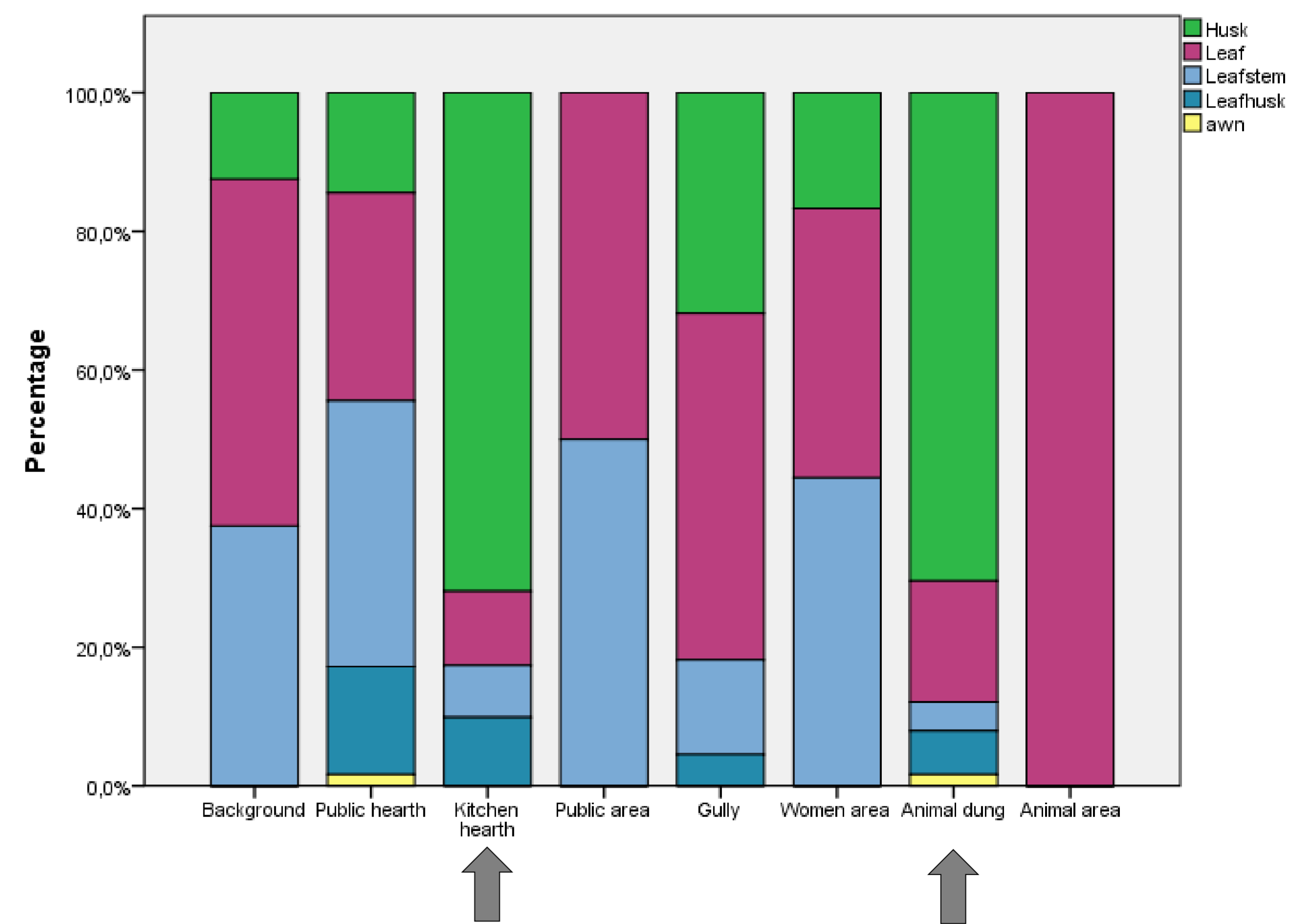
The graphs confirm what the survey had already established for these sites – “dung cakes” were used for fuel, mainly in the kitchen hearth (the public hearth contained additional plant fuel). The kitchen hearth samples therefore had a similar distribution of plant parts to the animal dung, but contained lower levels of chlorine.



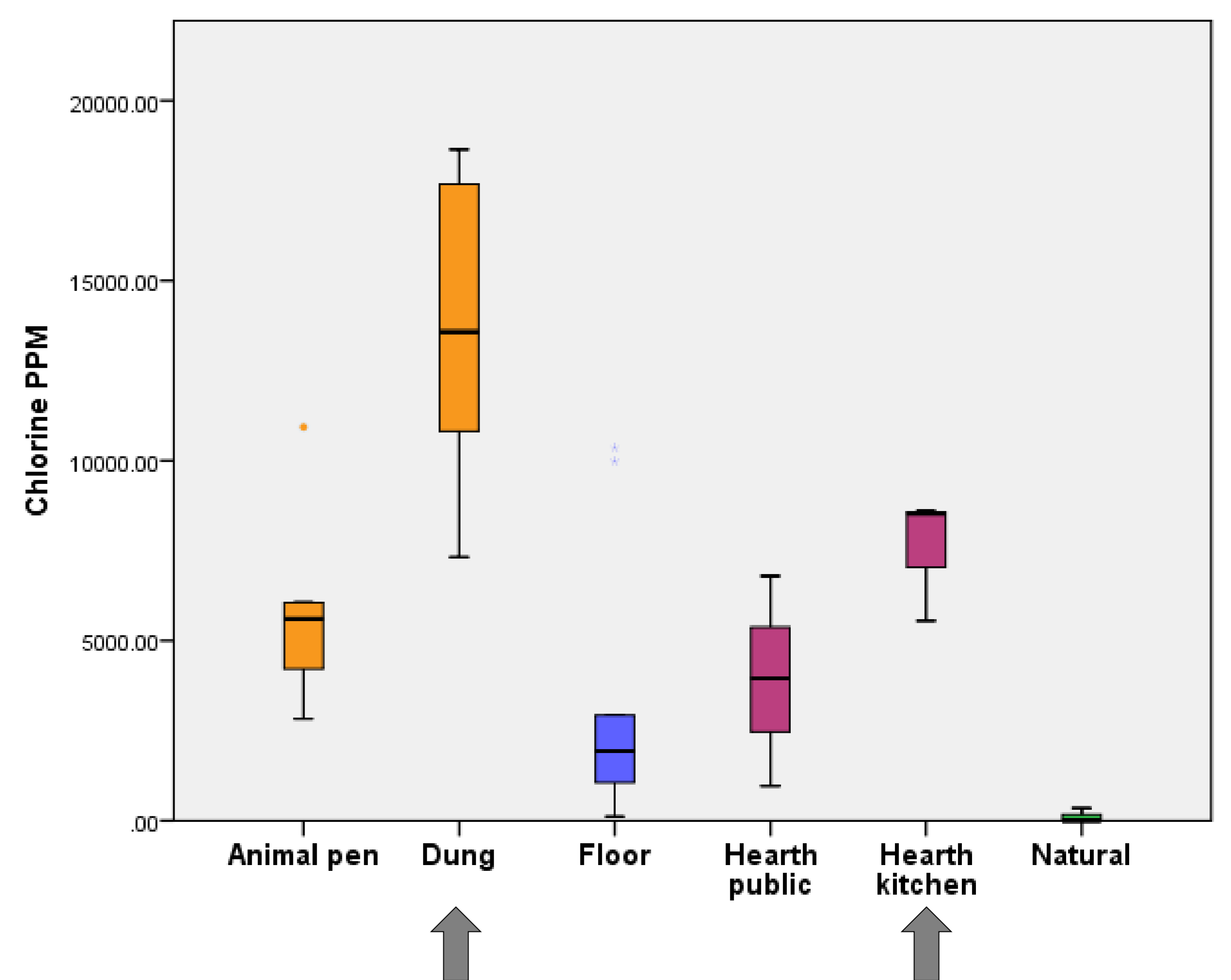
Plan of one of the Bedouin campsites that had been sampled after one year of abandonment.



Photograph of an occupied Bedouin tent.



Graph showing results of the phytolith analysis, the distribution of plant parts is similar in the kitchen hearth and dung samples.



Chlorine distribution in the various contexts available throughout the sites.