ABSTRACT

This project demonstrates that a phytolith assemblage can be obtained from dental contexts of deposition that will allow application of a quantitative analysis technique in environmental investigation. This has not been done in archaeological studies in the literature where analysis is limited to qualitative analysis due to the small numbers of phytoliths retrieved from teeth.

A study is designed that makes use of multiple animal subjects. Kangaroos and grasses are collected from the New England Tablelands of New South Wales, an area of known environmental and ecological variation. An attempt is then made to seek relationships between animals and feed grasses based on analysis of their phytolith contents. What is sought is identification of variation of grass subfamilies in diets of animals collected from geographically separate areas.

Phytolith data, based on a developed grass phytolith key, of both animals and grasses is subject to a combined correspondence analysis, for this technique provides advantages in processing such a data set. Correspondence analysis proves sensitive by identifying a grass subfamily associated with a group of animals in both collection areas; this may have environmental significance. However, the study fails to reveal variability in grass distribution, ecological conditions confirmed by a commissioned vegetation survey. Although this study lacks robust results improvements in study design are considered.