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USING PHYTOLITHS TO RECONSTRUCT ARCHAEOLOGICAL STORAGE PIT FUNCTION IN BRONZE AND IRON AGE ANATOLIA (TURKEY)

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Excavations at Kaman-Kalehöyük in Central Anatolia (Turkey) have identified the partial remains of several thousand storage pits, many of which had clearly visible linings. Identical lined storage pits appear across Bronze and Iron Age archaeological sites in Anatolia, coincident with significant socio-political reorganisation and environmental change, and are even referred to in ancient Sumerograms and Classical records. Despite their abundance, reconstructing the function and construction technology of pits been difficult, largely due to damage caused to them during continuous rebuilding in long lived settlements and the poor preservation of their contents. To overcome these issues, phytolith analysis was used to reconstruct the lining and fill of pits from the Early Bronze Age and Late Iron Age occupations of Kaman-Kalehöyük. The phytoliths recovered from the linings were dominated by inflorescence and culm long cell types from wheat/barley (*Triticum/Hordeum*), *Setaria/Panicum* (millet) and wild grass (*Pooideae*), likely reflecting the in situ decay of formerly stored crop contents and botanical materials used to line the pits to improve storage performance. In contrast, fills were dominated by high frequencies of grass short cells along with various *Cyperaceae* and spheroid dicotyledon/monocotyledon types, likely the remains of refuse from the end of the pit's use life. Taxonomic variation in the phytolith composition of pit linings and fills likely reflects local plant selection, availability and management strategies related to socio-political and environmental change in Bronze and Iron Age Anatolia.

Keywords

Phytoliths, Archaeobotany, Storage, Storage pits, Anatolia, Landscape management

Note/comment