

Schiegl, Solveig (Institut für Ur-und Frühgeschichte, Abteilung Altere Urgeschichte und Quartärökologie, Tübingen, Germany; solveig_schiegl@hotmail.com), Philipp Stockhammer, and Lyn Wadley (University of the Witwatersrand). A mineralogical study of the MSA hearths in Sibudu Cave.

Sibudu Shelter was formed within an erosionally weak sandstone-bed of the Natal Group. Large parts of the MSA-strata were apparently well protected from humidity. This is reflected by the excellent stratification of the sediment record and numerous well-preserved plant ash deposits. The latter play an important role in the interpretation of occupation phases and the use of space. Their distribution and function therefore reflect behavioral and social aspects of the anatomical modern humans. (Wadley 1999).

Mineralogical analyses of the ash deposits prove the use of wood fuel. Among other components, plant ash contains variable amounts of phytoliths, which consist of biogenic silica. During plant life phytoliths are formed inter- and intracellularly and frequently their morphology reflect the cell anatomy of the host plant in a specific way. During wood combustion the phytoliths are released into the ash. Phytoliths are stable in many sedimentary milieus over long periods (Piperno 1988). Very good preservation of the phytoliths in the majority of ash deposits in Sibudu Shelter has been established by applying light microscopy to phytolith fractions, which were gained through mineral separation. The good preservational shape of the phytoliths makes them an appropriate tool to clarify the following aspects, which are associated with hearths. (1) The kind of plant resources, which were used as fuel. (2) Identification of plant species from the phytoliths assemblages found in the hearths. Plants, which were used by the site inhabitants must first be analysed by means of charcoal and seed analysis. This information in turn is used to build up a phytolith reference collection from corresponding modern plants, which forms the basis for the identification of specific fossil phytoliths. (3) Differentiation between different phases of usage of a fire place. (4) Lateral and vertical separation of adjacent ash

deposits which is macroscopically hardly attainable. (5) Establishing the intra- and interstratal difference in the degree of alteration of the plant ash in individual hearths reflects important aspects of site formation processes. Applied analytical methods are FT-IR (Fourier transform-infrared spectroscopy) for the mineral identification and transmitted light microscopy for the phytoliths, analysis.

References: Piperno D.R. (1988). *Phytolith Analysis - An Archaeological and Geological Perspective*. London: Academic Press.

Wadley L. (1999). Cultural modernity in the MSA of Southern Africa: What is the evidence? Abstract Package. World Archaeological Congress 4. Symposium: Emergence of Mind. University of Cape Town. 10th-14th January 1999.

Sealy, Judith (University of Cape Town; jcs@Beattie.uct.ac.za). Hunter-gatherers, pastoralists (and farmers?) in the Eastern Cape Province of South Africa: some observations on burials and stable isotope values.

This paper will be a preliminary report on a study of burial styles, stable isotope results and radiocarbon dates for approximately 100 skeletons from the Eastern Cape Province. This area is characterised by substantial variation in burial style, with graves ranging from unmarked graves in rock shelters to those marked by very large stone cairns, usually associated with seated burials. The latter may be graves of Khoi pastoralists. Stable carbon and nitrogen isotope analyses of the skeletons will be discussed, with particular attention to the extent to which it is possible to use them to assess the importance of animal foods in the diet. The chronology of the burial styles will also be investigated, especially in the light of recent attempts to reconstruct the historical process by which features of Khoi society observed in the seventeenth and eighteenth centuries were assembled.