**Diachronic changes in the Howiesons Poort of Sibhudu and southern Africa**

Manuel Will1, Nicholas J. Conard1,2

1 Department of Early Prehistory and Quaternary Ecology, University of Tübingen, Schloss Hohentübingen, 72070 Tübingen, Germany

2 Senckenberg Center for Human Evolution and Palaeoenvironment, University of Tübingen

**Abstract**

The Howiesons Poort (HP) of southern Africa plays an important role in models on the early cultural evolution of *Homo sapiens*. Researchers have often portrayed the HP as a homogenous industry of the Middle Stone Age during the Late Pleistocene, with more recent work emphasizing parallel technological change through time across southern Africa. In this contribution, we study patterns of diachronic variation within the HP and examine their potential causal factors. We also test previous temporal assessments of the presumed homogeneity of the technocomplex at the local and regional level. Relevant data come from Sibhudu (KwaZulu-Natal) with its high-resolution HP lithic assemblages and comparisons with other southern African sites. At Sibhudu, unidirectional change in lithic technology characterizes the HP sequence. There is a gradual reduction in typical HP markers, including the proportion of backed pieces, blades and HP cores, as well as declining size of blades and backed artifacts. Quantitative comparisons with seven HP sites in South Africa suggest that lithic technology varies between regions over time instead of following similar changes. The regional diachronic patterns in the HP partly follow paleoclimatic zones, which could imply different ecological adaptations and disparate connection networks over time. Concerning hypotheses of causal drivers at Sibhudu, directional changes in lithic technology are associated with shifting hunting patterns towards larger-sized bovids and a gradual opening of the vegetation. Diachronic changes at other HP sites such as Diepkloof, Klasies River and Klipdrift appear to be associated with aspects of mobility, technological organization and site use. Divergent and at times decoupled changes in lithic traits across sites precludes monocausal explanations for the entire HP, supporting complex models for the observed technological trajectories.