



## Seminar for Arabian Studies 2016 Paper Abstracts

### Session 2: Prehistoric Arabia Part 1. Chair: Robert Carter

#### Fishing strategies and ecological features in eastern Arabian Neolithic (sixth to fourth millennium BC): cutting edge and new approaches

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Archaeoichthyology is a young discipline developed over the 1970-1980s which is interested in the study of ancient fisheries through the taxonomic identification of fish consumption remains. First insight on ancient fishermen societies of Persian Gulf began with J. Desse in Khor (Khawr) and Shagra (Shaqrā', Qatar). Fishing is a predatory economy which strategies and tools are specific to exploit the aquatic area, an environment subject to high and fluctuating constraints.

The purpose of this paper is to propose a systematic study of eastern Arabia Neolithic fisheries (sixth to the fourth millennium BC). It was inspired by communications of an IFREMER working group which met in the late 1990s to discuss the issue of 'dynamic interactions within fishery systems'. It also draws on the organizational model described by B. Clavel and Y. Dreano and based on the multidisciplinary approach initiated by M. Beech in his PhD thesis. Through the study of exploited environment parameters, the technical characteristics of fishing tools and the identification of fish remains, a model will be presented that will describe the degree of economic and technological specialization of the fisheries, their seasonal and spatial organization, nutrient intake and fish consumption patterns. Regional diversity and chronological evolution of fisheries during the Neolithic period will also be discussed.

**Keywords:** Arabian Neolithic; subsistence strategies; Archaeoichthyology; halieutic systems; fishing strategies.

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## **A Niche Construction Approach to Vegetation Community Development in the South Arabian Neolithic: preliminary results**

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This paper presents the phytolith assemblages extracted from ten sediment samples collected during fieldwork in Wādī Sana‘a, Yemen, by the Roots of Agriculture in Southern Arabia (RASA) research project from 1998 to 2008 (McCorriston 2011; McCorriston et al. 2002). These samples range in date from the late 9th to the late sixth millennium BP and reflect both archaeological and palaeo-ecological contexts. A niche construction-based approach is used to examine the complex relationship between people, animals and vegetation. A quantitative comparison between the phytolith assemblage contexts, synchronically and diachronically, will provide a basis for interpreting exploitation patterns and resource potential.

Phytoliths, microscopic opal silica bodies formerly residing in now decayed plants, preserve well in Southern Arabian sediments (Parker et al. 2006). There has been a focus on examining the shifting climate during this period through a variety of environmental proxies (speleothem cores, paleolake pollen fossils, sedimentology), but phytoliths can illustrate the local impact of these shifts. The historical development between the deepening of dependence on agricultural practice that took place over South Arabian Neolithic period and macro-climatic changes like the movement of ITCZ can be best examined through this medium.

**Keywords:** Neolithic; phytoliths; Arabia; Niche Construction Theory; Yemen

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## **Hafit-Umm an-Nar (Reprise): transition or transmission?**

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Current debates on typology and chronology of the Early Bronze Age (EBA; c.3100–2000 BC) monumental tombs of south-eastern Arabia focus on continuity/discontinuity between earlier (Hafit) and later (Umm an-Nar) types, as well as on the possible presence of transitional types. Substantial evidence has emerged from field work that supports the hypothesis of continuity and intermediate

forms (Potts 2012; Williams & Gregoricka 2013). There still remain open questions, however, about the trajectory followed by monumental tomb design in this timeframe. The present work analyses EBA funerary structures by quantitatively assessing relative frequency and diversity over time in a fixed set of diagnostic traits observed in a regional sample (n=159). These measures are used to explore mechanisms of cultural transmission that can explain patterns of continuity/discontinuity during the third millennium BC at a regional level.

Previous models of diachronic change (Vogt 1985) are reassessed through phylogenetic analysis to explicitly address the impact of branching and demic processes on tomb variability. This research develops a simple probabilistic tool for the chronological determination of potential transitional forms, and generates new insight on the role played by human interaction in determining diffusion and persistence over time of specific structural elements.

Keywords: Early Bronze Age; Funerary structures; Hafit–Umm an-Nar transition; cultural transmission; phylogenetic analysis

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## The development of complexity at third millennium BC al-Khashbah, Sultanate of Oman: results of the first two seasons

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The transition from the Hafit to the Umm an-Nar period on the Oman Peninsula in the third millennium BC is regarded as a period of substantial social and economic change. Many thousands of tombs from the Hafit period remain; other archaeological evidence, however, such as settlements, are scarce.

Therefore, in 2015, a new archaeological research project of the University of Tübingen, funded by the German Research Foundation, was launched in al-Khashbah in order to investigate Hafit and Umm an-Nar period remains at the site. This paper focuses on the results of the first two seasons, in which an intensive field survey, an aerial survey, a geophysical survey and archaeological excavations in selected areas have been conducted. Amongst other archaeological remains, al-Khashbah features six so-called towers of the Umm an-Nar period, including the famous rectangular building. The most important discoveries of the first two seasons are a possible Hafit period settlement and Hafit period

towers, underlying the importance of the site for the investigation of the development of complexity in the third millennium BC.

Keywords: al-Khashbah; Hafit; settlement development; survey

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