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GEOMORPHOLOGY OF THE MELENDIZ RIVER IN CAPPADOCIA (TURKEY): SETTING OF PRE-POTTERY NEOLITHIC SITES OF AŞIKLI AND MUSULAR, AND CLIMATE RECONSTRUCTION DURING THE ONSET OF THE HOLOCENE

ABSTRACT: KUZUCUOĞLU C., *Geomorphology of the Melendiz River in Cappadocia (Turkey): Setting of Pre-Pottery Neolithic sites of Aşıklı and Musular, and climate reconstruction during the onset of the Holocene.* (IT ISSN 0391-9838, 2013).

The reconstruction of the river dynamics in the Melendiz valley (Cappadocia, Turkey) is studied on the basis of geomorphology and archaeological data acquired from two Pre-Pottery Neolithic (PPN) sites, *i.e.* dated c.a. 8300 to 7000 BC. Together with the study of terraces in the vicinity of the sites and the results of 3 cores retrieved from the alluvial fill of the floodplain, data enlighten climatic trends and changes as well as river environmental responses during a period spanning from the end of Late Glacial to 7000 BC (*i.e.*, 9000 cal. BP). During the Last Glacial a gravel deposit accumulated in the valley, and this deposit was incised before the turn of the Late Glacial / Holocene. The incision of hydro-climatic origin was probably accentuated by tectonic uplift. When the PPN

population arrived on the shores of the Melendiz River at the beginning of the Holocene, the valley was wide open between incised Last Glacial terraces, and the settlement occurred on a bed-load blanketing the valley floor (braided river). The relationships between archaeological layers and river deposition, conservation and erosion during the occupation of Aşıklı and Musular sites (*ca.* 8300 to 7000 BC) indicate depletion of precipitation during the first two millennia of the Holocene. Like in other regions located at the foot of mountainous ranges in central Anatolia, humidity rose together with runoff from upper basins, which was triggered by higher precipitations (rain and snow) on highlands.

KEY WORDS: Pre-Pottery Neolithic, Early Holocene climate, Central Anatolia, Aşıklı, Melendiz, Musular.

INTRODUCTION

The Pre-Pottery Neolithic (PPN) sites of Aşıklı and Musular face each other on each side of the Melendiz river valley in western Cappadocia. ¹⁴C dates from Aşıklı settlement range from 8300 to *ca.* 7500 BC, while dates from Musular overlap the end of Aşıklı occupation, continuing until *ca.* 7000 BC. Archaeological findings in Aşıklı allow the study of the domestication practices while those of Musular allow the study of the off-site activities and rituals of the Aşıklı community based on cattle hunting. Both sites contribute to the understanding of the spatial distribution of early sedentary communities and the local neolithisation process, favouring the hypothesis of multi-regional centres and successive stages of plant and animal domestication practices development in the Eastern Mediterranean. In this context, the study of the geomorphological setting of the sites and the reconstruction of their dynamic relationships to the river and the water resources provide information on several important matters: (i) the environmental conditions of the instalment of the first PPN populations *ca.* 8500 BC, of the growth of the Aşıklı village during 1000 years (until 7500 BC), of the appearance and development of Musular settlement (7600-7000 BC), and of the abandonment of Aşıklı *ca.* 7500 BC; (ii)

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