



Geoarchaeology of the karstic area of Mirambello, North-East Crete (Greece): palaeoenvironmental investigations and human settlement implications

M Ghilardi (1), S Kunesch (2), V Robert (2), A Farnoux (3), and H Wurmser (4)

(1) Centre Franco-Egyptien d'Etude des Temples de Karnak (CNRS USR 3172), matthieughilardi@orange.fr, (2) Laboratoire de Géographie Physique (CNRS UMR 8591), (3) Université Paris 4, UFR d'Archéologie et d'Histoire de l'Art, (4) Ecole française d'Athènes

The present work aims to detail the preliminary researches dealing with the geomorphologic, topographic and archaeological setting from two major settlements located in north east Crete. The project undertaken by the French school of Archaeology in Athens aims to reconstruct the palaeoenvironmental evolution of the whole area during the last millennia. Fieldworks, including coring, had already been done in August 2006, April 2007 and September 2008; we propose to present the main results. The settlements of Latô and Dreros belong to the area of Mirambello characterized by its spectacular karstic processes and landforms, different karstic depressions with different size can be identified and classified into Dolines and Poljés. As far as the archaeological interest is concerned, villages and cities were occupied during the hellenistic period; several remains are still present around and inside these depressions. Using a G.I.S., the first step consisted in establishing a local geomorphological mapping, taking into account the geological background and the historical occupation of the area. The second step consisted in establishing topographic cross sections of the doline, where the ancient settlement of Latô is located, based on various DGPS surveys. Several questions concerning the occupation of this depression arose : how and for which reasons people decided to leave close to this specific landform ? Which type of activities (farming, grazing, cultivation. . .) existed and did they were related with natural resources exploitation ? A project associating the local greek archaeological services (Ephoria of Aghios Nikolaos, Director Ms. Apostolakou), the mayor of Nea Polis, the University of Paris 12 (GEONAT EA 435) and the French School of Athens tries to depict the historical evolution of the landscape. Four boreholes (up to a maximum depth of 5 meters) had been drilled in the poljé of Dreros and in a doline situated 1 km away from the ancient settlement of Latô. Sedimentological analyses based on grain-size distribution, magnetic parameters (magnetic susceptibility at low and high frequency) and geochemistry have been realised at 5 cm interval and allow us to reconstruct the infilling of the depressions.