

## **PALEOGEOGRAPHY, SEDIMENTATION AND NEOTECTONIC IMPLICATIONS AT THE KAMBOS DEPRESSION AND KITRIES BAY AREA (MESSINIA, PELOPONNESUS, GREECE)**

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The Kambos depression and Kitries Bay area are located some 10 km to the south of Kalamata city (SW Peloponnesus, Greece). The area represents a complex multi-fractured neotectonic macrostructure, typical of the transitional neotectonic zones between a mega-horst and a megagraben. The post-alpine sediment succession found in the area consists of conglomerates, sandstones and marls.

Detailed mapping and sampling, followed by micropaleontological and sedimentological study of the area, led to the following conclusions:

(a) The deposition of the post-alpine sediments took place in a relatively shallow marine environment which, nevertheless, was deepening gradually towards NNW at the Kitries Bay area. At the same time, the Vardia-Koka horst worked as a barrier for the clastic material that came from the Taygetos Mt. horst and resulted the filling of the Kambos graben with continental conglomerates.

(b) The age of the sediments is at least Early Pleistocene, as proved by the presence of *Hyalinea balthica* (SCHROETER) at the base, as well as throughout the rest of the stratigraphic column. This is further confirmed by the coiling direction percentages of the tests of the Neogloboquadrinid group of planktonic foraminifera.

(c) From the very end of the Pliocene to the end of the Early Pleistocene, the area was constantly subsiding below sea-level. Sedimentation was taking place, unconformably on the alpine paleorelief. At the end of the Early Pleistocene, the regional kinematic regime shifted to an uplifting one. The area emerged gradually and, as a result, the marine sediments were uplifted up to (at least) 360 m above sea-level.

(d) The subsidence rate is calculated to be at least 0.45 mm/year. The uplift rate is at least 0.45 mm/year at the southern part and 0.37 mm/year at the northern part of the area.