



N-S section through Aghia Kyriaki Bay illustrating phase 3 in the geomorphological evolution of the area.

Hansom, J.D., Hall, A.J. and Photos-Jones, E. 2001. Rapid environmental change during industrial minerals exploitation in the Aegean: the case of Roman Aghia Kyriaki, Melos, Greece. In: J.E. Fell, P.D. Nicolaou and G.D. Xydous, 5th International Mining History Congress, 12-15 Sept 2000, Milos Island, Greece: Book of Proceedings. Milos Conference Center - George Eliopoulos. 92-100.

Abstract

This paper aims to establish links between the working of industrial minerals in Roman times and the dramatic changes to the local environment at Roman Aghia Kyriaki, a site in Melos identified previously as being of "special purpose" and as a potential industrial settlement and minerals processing facility. As far as field evidence is concerned, the working of industrial minerals (IMs) on a small scale using early technology is likely to make little environmental impact. However, the presence of a large number of humans involved in mining and processing of IMs is likely to influence local environmental change, in particular through agricultural development. Several lines of evidence point towards the Aghia Kyriaki area being subjected to substantial environmental changes, most of which, but not all, coincide with the period of human occupation. The earliest changes seem to have occurred after around 50 ka years ago when much of the area was affected by the deposition of the poorly sorted sediments which covered much of the surface of Melos. Although the timing between each phase is as yet unknown, the 4-phase model presented suggests that almost the entire period of valley in-fill and second episode of gully incision proceeded contemporaneously with occupation because the walls and buildings in the lower parts of the sedimentary sequences, were buried by sediment whereas the buildings and walls in the higher parts of the sedimentary sequences are built into gullies. In the dearth of dates for either the sediments or the artifacts, and using previously established estimates of the ages of sedimentary processes on Melos, we provisionally ascribe the onset of valley in-fill to before 1000 BC and the second period of gully incision to after the period of main occupation but before 400 AD.