
Volcanism in south-Cappadocia (Turkey): evidence of Late Glacial to Historical time eruptions and relationships with human settlements

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Résumé

Since the last decades, Late Glacial to Holocene volcanic activity has been reported in Cappadocian volcanoes: Hasandağ, Erciyes and Acigöl. However, most of this activity corresponds to the eruption of lava flows and domes with local extensions, and without any stratigraphic connection with past settlements known in this area. It has thus been difficult to discuss about hazards and potential impact of volcanism on settlements, in spite of a drawing (often discussed as representing an eruption) sketched on the wall of a Neolithic house at Çatal Höyük (Konya plain) is dated 8.4 kyrs ago (Mellaart, 1968; Hodder et al. 2006).

Thanks to Turkish-French research cooperation in geo-archaeology, palaeo-environment and palaeoclimate, we present here new sequences (cores and sections) in four locations and different morphological situations: (1) Melendiz river terraces (Aksaray); (2) Çiftlik Plain (Niğde); (3) Bor Plain (Niğde); (4) Ereğli Plain (Konya.). These geosystems belong to the southern part of the Volcanic Cappadocian Province (Melendiz river system and Çiftlik plain) and to the endorheic depressions lying north of the Taurus highlands (Bor and Ereğli plains). In the sequences presented, tephra layers of various thickness, grain size and lithic composition have been identified, characterized and dated, some of them having been collected in archaeological context.

The results presented here allow discussing: 1) an up to date chronology of Late Glacial to Historic volcanic activity in Cappadocia with a focus on pyroclastic eruptions; 2) the impact of volcanism hazard on ancient settlements.

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