

Reassessing the seismic value of archaeological destruction layers in Minoan Crete

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Since the work of Sir Arthur Evans at Knossos in the beginning of the 20th century, the history of the Bronze Age, Minoan civilization of Crete (c. 3000 to 1200 BC) has been intimately related to the seismicity of the island. Widespread destruction layers at the palace of Knossos and elsewhere on island have been commonly related to catastrophic seismic events, taking little account of the seismotectonic context of the southern Aegean. This situation has led to the definition of unrealistic 'seismological monsters', striking Bronze Age Crete, that still appear in earthquake catalogues.

We suggest that many, if not most of the damaging effects ascribed to earthquakes in Bronze Age Crete, have been defined without considering methodological uncertainties related to the use of Minoan archaeological evidence. The ambiguous value of Minoan archaeological remains as indicators of ancient earthquakes can largely be traced to the very limited applicability of the classical damage typologies, originally put forward in Greek archaeological contexts, to Minoan earthen and rubble constructions. A reconsideration of the formation processes of archaeological destruction layers in Minoan contexts, complemented with a territorial approach testing the simultaneity of the destruction, is brought forward as a new methodological basis for assessing the archaeological potential of comparable contexts in the Eastern Mediterranean and in other parts of the world, where cultural remains mainly consist of earthen and/or rubble constructions.