



Identification and impacts of earthquakes on the Roman Town of Patras- Archaeological evidence

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In this paper we examine the interactions between earthquakes and inhabitation history of the town of Patras (NW Peloponnese, Greece), flourishing during the Roman period. Instrumental seismicity data and the seismic history of the last two centuries indicate that the wider area is among the most seismically active parts of Europe. But surprisingly, for older periods no historical evidence of ancient earthquakes exists. If this absence of evidence of ancient earthquakes is indicative of a real absence of earthquakes, this may be important for different disciplines. For Seismology, it may perhaps indicate clusters of seismicity separated by intervals of quiescence, each at least several thousand years long. It may also indicate that the inhabitation history of Patras town was not interrupted by major natural catastrophic events, and some destruction observed in ancient remains can be assigned to anthropogenic effects.

In order to contribute in the solution of this problem, we made a systematic Archaeoseismological investigation of Patras and examined for the first time several hundreds of reports of archaeological excavations that have been made during period of reconstruction of the city (1972-2004). Among these, about 100 reports provide evidence of destruction layers, some of which satisfy the criteria for identification of earthquakes from archaeological data. A further correlation of this evidence in space and time was made, and permitted to identify with certainty a few major seismic events which marked the history of Roman Patras (1st-6th century AD).

In spite of their catastrophic effects, these earthquakes have not led to the abandonment of the ancient town (inhabitation hiatus), but have certainly left their marks in the urban and perhaps social and economic history of this Roman town. Some certain uniformity in the frequency of earthquakes in Patras was also inferred.