



Seismic histories of Antioch and Erzincan (Anatolia) compared with regional tectonics

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Located at the junction of several tectonic plates, Anatolia is characterized by high seismic activity, resulting in several destructive earthquakes that struck the region in both historical and recent times. In spite of the long historical record of the region, the earthquake distribution lacks homogeneity both in time and space, tending to cluster around main cities, also changing as a function of the cities' relative importance in time. The recompilation and revision of the historical earthquake data of Turkey in the period 1000 AD to 1903 is an ongoing activity, which involves collection and storage of data from the main current earthquake catalogues together with earthquake specific studies based on traditional material, followed by a careful analysis of the retrieved data, in order to retrieve the best available knowledge of each event.

The study revealed that seismic histories of main historical centers in Anatolia are rich and well documented, mainly because important cities in the region are mostly located in tectonic basins, crossed by the major regional faults.

Here we analyze the seismic histories of two major historical centers in Anatolia, Erzincan, located on the North Anatolian Fault and Antakya (historical Antioch) located on the northern end of the Dead Sea Fault, encompassing the period 1000 AD to present. The damage data in historical Erzincan earthquakes are reported, mostly from the city center only, as opposed to the damage data of Antioch earthquakes, where in a number of cases, well distributed damage data points are available. We have thus devoted particular attention, whenever possible, to the collection and compilation of intensity and damage data especially as regards the two most important 19th century earthquakes, in 1822 and 1872 in Antioch.