

Macroseismic information from Ottoman Archives for earthquakes of 19th century in Central-Eastern Turkey

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This paper summarizes the results of the historical investigation performed in the Ottoman Archives of Istanbul with main reference to the events of Central-Eastern Anatolian region in the 19th century. The study area is important because it includes most of the North Anatolian Fault (NAF). The investigation supplies confirmation and additional information for some of the earthquakes, while it also proposes a number of so far unknown earthquakes, with respect to the information provided by Ambraseys (2009).

The seismicity of this area is described by several earthquake catalogues, the most comprehensive of them being the descriptive volume entitled "Earthquakes in the Mediterranean and Middle East" by N. N. Ambraseys (2009). From this volume we observe, however that the information on the earthquakes of the 19th century comes mainly from press reports, in contrast to the period 1500 to 1800 for which Ambraseys and Finkel (1995) have conducted a comprehensive study investigating Ottoman sources, mainly chronicles of the period. For this reason we have concentrated our efforts to the 19th century. Another reason for the selection of this period was that the Ottoman state documentation was archived in a more structured way after 1830s, with the establishment of the state documentation office, the so-called Hazine-i Evrak.

The information revealed by the research is compared with Ambraseys (2009), some of the findings classified as confirmation of existing information in terms of event identification and associated macroseismic data, while some adding new macroseismic data points. More interestingly, the research uncovered a number of new small to medium size events in Central-Eastern Anatolian region with at least one or more macroseismic data points.