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A reevaluation of the North Panama deformed belt seismicity through the use of historical seismograms

Author : Dr. Josep Batllo

- *Institut Geologic de Catalunya IASPEI*

The North Panama Deformed Belt (NPDB) extends along the Caribbean margin of Panama, from the Gulf of Uraba, Colombia up to Limon, Costa Rica. Here the Caribbean plate subducts below the Panama Microplate, and in its Eastern segment earthquakes are recorded up to depths of 70 km or more. In this zone originated the September 7th, 1882 San Blas Earthquake ($M_s 7.9$), which caused extensive damage in Central Panama and destroyed most of the initial works of the French Canal, directed by Ferdinand de Lesseps. This earthquake also originated a tsunami which killed more than 100 persons in the San Blas Archipelago in northeastern .In Central Panama lives more than 60% of the population of Panama in the cities of Panama and Colon and it is also traversed by the Panama Canal, an earthquake like the one in 1882 will have devastating effects on the economy of and perhaps the world, so it is crucial to understand the seismotectonics of the NPDB and characterize its seismicity. This region of moderate seismicity has been shaken by few major earthquakes so it is important to study events prior to the WWSSN. In the present project we have gathered new macro seismic information, to create an isoseismal map of the main events in the Caribbean region of as the September 7th, 1882 San Blas earthquake. The other major earthquakes of the Caribbean region of are being reevaluated, through the analysis of historical seismograms. One of these events occurred on November 30th, 1935 ($M_s 6.2$) and caused some damage in Central Panama .We have been collecting and digitizing historical seismograms from the and Europe to redetermine its magnitude, estimate its moment tensor and CMT. The present status of this research project on the earthquakes of the Caribbean of and further developments are presented here.

