

THE INTERPRETATION OF THE HISTORICAL RECORD OF EARTHQUAKES IN PORTMORE, ST. CATHERINE, JAMAICA, WEST INDIES

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ABSTRACT

Written records of natural disasters in Jamaica started with the coming of the Europeans. The record is short and presents limitations in calculating recurrence intervals, especially for unique events. The highest intensity earthquake on record is the Port Royal Earthquake of 1692. Portmore, St. Catherine, has been built up around the shores of Dawkins Pond and Hunts Bay. With a population of 100,000 and a density of 5,000 persons km⁻², Portmore is the fastest growing area of Jamaica. The population is expected to double by the year 2000.

The intensity of the 1692 earthquake in the study area was at least X on the Mercalli Scale. The literature recorded water spouts at the Port Henderson Hill, devastation at Passage Fort and arguments on the location of the epicentre. The water spouts have previously been interpreted as resulting from liquefaction. However, other processes may have caused them, while it is possible that the sites of true liquefaction went unnoticed. The present dense residential developments have effectively erased any evidence of liquefaction on the flat plains. The complete destruction of Passage Fort is curious, since even at Port Royal houses were left standing. Since 1692, other earthquakes of lesser intensity have occurred, including those of 1957 and 1993. The 1957 event was of sufficient intensity to disrupt the flow of a spring at Port Henderson, while the 1993 event raised questions about the location of epicentres of previous earthquakes.