

History of Earthquakes in Jamaica

Jamaica is located in a geologically active area, and is therefore subject to earthquakes (as well hurricanes). [The Office of Disaster Preparedness and Emergency Management](#) (ODPEM) states that Jamaica is located along the “northern margin of the Caribbean Plate” and that “the presence of very active faults on the island makes Jamaica very vulnerable to earthquakes.” The erratic nature of earthquakes means that they strike without warning, ranging in intensity from “slight tremors to great shocks, and may last from a few seconds to as long as five minutes” (ODPEM). Shocks could even come in series over a period of several days.

[The Unit for Disaster Studies in the Department of Geography and Geology](#) at the University of the West Indies, Mona has been documenting the history and causes of earthquakes in Jamaica. Rafi Ahmad from the Unit for Disaster Studies stated, in a report offered to the Environmental Journal after an analysis of the 1993 earthquake, that “any significant earthquake event (magnitude 5.4 and over) to affect the island in the future is likely to have enormous loss potential” (Ahmad, 2001).

Below are the major documented earthquakes that have affected Jamaica over the years.

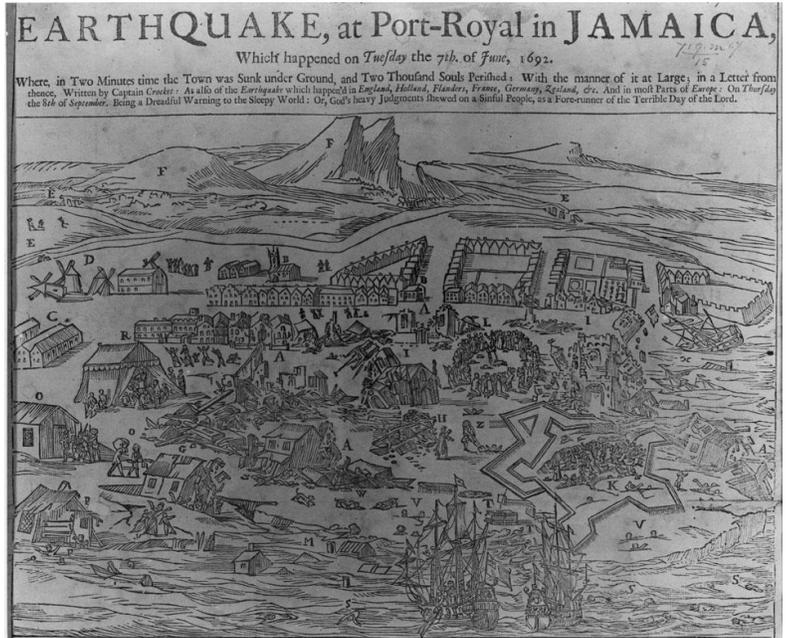
The Port Royal Earthquake of 1692



Sources of early Jamaican history document the earthquake of 1692 as being a great calamity that caused great devastation. Even though the effects of the earthquake were felt over the whole island, the town of Port Royal was worst affected. June 7, 1692 began as an ordinary day; in a letter written to Sir Hans Sloane on June 20, 1692, it was noted that the skies were clear and the weather was excessively hot, calm and

dry. At about midday, what was described as a “mysterious roar in the distant mountains” was heard followed by a shaking; the first tremor was gentle followed by a more violent one. Historian George Bridges (1827) stated that this was instantly followed by “a shock accompanied by screams of anguish, cries of horror, rushing water and the crash of edifices.” With the third rumbling noise, the town of Port Royal, which was once considered the “receptacle of much wealth and the scene of much wickedness,” began shaking violently and within minutes, a great portion of Port Royal had sunken into the earth (Bridges 1827). Approximately

1500 to 2000 of its inhabitants were killed and an additional three thousand were injured. In the aftermath of the earthquake, thousands more died from disease and injury. The wharf which was filled with spoils sunk immediately causing a huge tidal wave that destroyed ships that were in the harbour, even throwing one ship to the middle of the island. Lewis Galdy in Bridges' *Annals of Jamaica* volume 2 reported that the water had overtaken the streets that moments before had displayed the "glittering treasures of Mexico and Peru." Persons in the town had moved to Morgan's Fort, hoping to find refuge in its wide open space, but they too were swallowed up by the opened earth. The famous burial place, Palisadoes, was washed away by the sea and carcasses that were buried there could be seen floating all around the whole harbour.



The "Giddy House" in Port Royal, once the Old Royal Artillery House - NLJ Photograph Collection

In other parts of the island, brick and stone buildings had either been leveled or greatly damaged. Many monuments had been shattered or so badly damaged that they were irreparable. The town of St. Jago de la Vega (Spanish Town) also suffered severe damages and following the earthquake, there was much looting, robbery and violence – even the dead were robbed of whatever valuables they had on them. Bridges noted that one of the consequences of this great earthquake was the loss of official papers and public records of the island, thereby rendering our history

incomplete. Also, as a result of the earthquake and destruction as well as the fear of a recurrence, the Council of the island decided to abandon the Port Royal site and land was purchased from Sir William Beeston for the establishment of a new town further up the harbour, on the site of what is now the city of [Kingston](#).

The Kingston Earthquake of 1907

The earthquake of January 14, 1907 was by far the worst calamity to befall the city of Kingston. The massive earthquake measured an estimated 9.5 on the Richter scale. Reports state that near the end of 1906 the weather was “unseasonably chilly” but before the first week of 1907, the temperature had risen to a comfortable

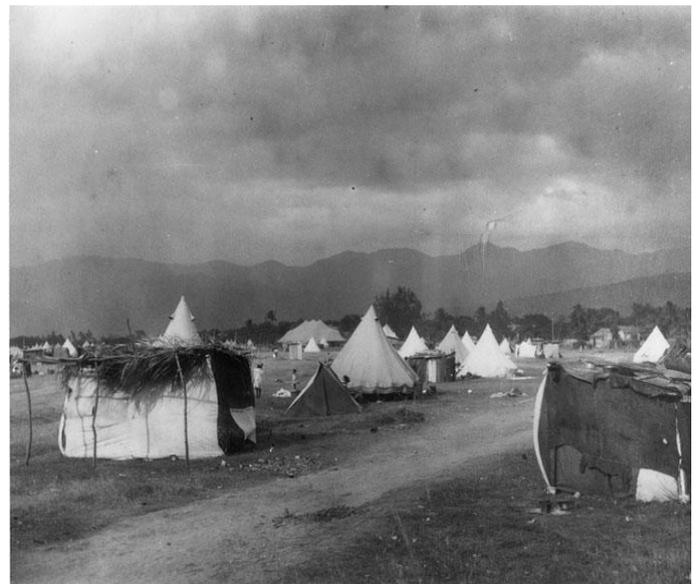


Mico Institute After 1907 Earthquake, NLJ Photograph Collection

degree. On the day of the earthquake, Kingston was filled with visitors from Canada, England and the United States as well as delegates from the West Indian islands who were attending an agricultural conference at the Mico College. The circus was also in town. At approximately 3:30 in the afternoon after the first speaker had concluded his address, a severe thirty second tremor was felt. During the quake, bricks were seen everywhere as walls and edifices fell, and

almost immediately after the quake, fire broke out in Kingston. The fire destroyed fifty-six acres of commercial Kingston – it engulfed South Parade on the north, Mark Lane on the east and Orange Street on the west. Nearly every building on Harbour Street, Port Royal Street and Water Lane had been demolished.

Newspapers such as the Jamaican Daily Telegraph and Anglo-American Herald reported that stores collapsed, covering “hundreds of persons of all classes of the community.” The Gleaner Company’s offices were demolished and they could only resume printing on January



The Camp used as shelter for the homeless victims of the earthquake, NLJ Photograph Collection

18, 1907 at the Government Printing Office. In the Gleaner’s January 18 publication, it was reported that hundreds were killed instantly; omnibuses and streetcars were overturned, a number of churches, and banks and other business places were severely damaged. Few habitable houses remained in Kingston and lower St. Andrew and many were forced to camp in Kingston Race Course (now National Heroes Park) and other open spaces. After the initial tremor, another severe quake was felt at about 7:30 pm and as the fire worsened and

more persons were injured, the Public Hospital became overcrowded. On the first night, 27 legs were amputated and individuals with extensive injuries were brought in for treatment; patients eventually had to be laid on the grassy area adjoining the hospital. By the morning following the earthquake, the fire had still not



A Burnt Trolley Car amidst the Rubble on King Street, Kingston after the 1907 Earthquake, NLJ Photograph Collection

been entirely extinguished and periodic shocks could still be felt. Most of the unclaimed bodies found were buried in a ditch in the May Pen cemetery. In the days following, other unidentified bodies were cremated in a large pit. As with the earthquake of 1692, looting took place all over the town and as a result, Governor Swettenham posted armed guards on the streets. On the 17th of January, the United States warships, 'Missouri' and 'Indiana,' landed sailors who took some injured aboard and provided much needed help in recovering those injured and trapped in

collapsed buildings and helping with the clearing of debris. A relief fund, chaired by Archbishop Enos Nuttall, was organized shortly after the earthquake and the committee saw to the clothing and feeding of the displaced citizens.

Overall, it was estimated that 800 to 1000 souls perished and thousands more had been injured; there were also many who have never been found. Property damage was extensive and estimated at 2 million pounds but fortunately, many were able to recover their financial losses from insurance companies.

March 1, 1957



The earthquake of March 1, 1957 was the heaviest felt earthquake since 1907. [The Earthquake Unit](#) noted that the majority of damages sustained were to the western parishes and the corporate area. Though not nearly as devastating as the earthquake of 1907, the effects were still significant. Some of these were:

Savanna-la-mar Anglican Church after Earthquake 1957 – NLJ Photograph Collection

- ***Disruption of electric services, transportation and communications.*** Jamaica Public Service reported damage to communication systems affecting the areas of Stony Hill, New Castle, Mountain View, Cross Roads and Downtown Kingston. Telephone lines to the Ocho Rios area and along the coast to Montego Bay went dead immediately after the shocks and were not in service again till some three hours later. Train services from Kingston to Montego Bay were affected as stones and debris blocked the track and caused a break in the track between Ipswich and Stonehenge. Two of the main roads leading out of the town (Anchovy road and the road to Hanover) were blocked by debris falling off hillsides.



Classroom of the Montego Bay Infant School after Earthquake 1957– NLJ Photograph Collection

- ***Injury and loss of lives.*** Three casualties were reported- the death of a vendor who was struck on the head by falling bricks from the wall of an old kitchen at 63 Charles Street in Kingston; a woman crushed by rolling stones while walking on the road and a railway employee who was instantly killed by falling stones. Several persons received minor injuries.
- ***Damage to buildings and infrastructure.*** The steeple of the St. James Parish church had fallen off causing damage to the roof. The clock tower in St. James was completely destroyed and several buildings were badly cracked but did not collapse. Spring Mount Police Station in St. James was badly damaged and the building had to be vacated.

January 13, 1993

The Earthquake Unit (which continues to record seismic activities on the island today), recorded a 5.4 magnitude earthquake on January 13, 1993. It was the most significant earthquake recorded since 1957 and as a result of this earthquake, Jamaica experienced:

- ***Damage to houses, buildings and infrastructure.*** Approximately 518 families suffered loss of houses and properties; of the 518 displaced citizens, 450 were from Kingston and St. Andrew. Water infrastructure was affected as the Rio Cobre pipeline in Caymanas Estate was damaged because of liquefaction, a phenomenon in which “the strength and stiffness of a soil is reduced by earthquake

shaking or other rapid loading,” (*Civil and Environmental Engineering, University of Washington*). Liquefaction-related cracks were observed on the Hunts Bay Causeway Bridge and there was also damage to the National Water Commission Water Treatment Plant building, water mains and pipelines in several areas. Significant damage was also reported to the buildings of various educational institutions.

- ***Injury and loss of lives.*** There were two fatalities, one of which was a result of the collapse of a cliff in Portland.
- ***Financial losses.*** Ahmad (2001) reported that economic losses were estimated at J\$15,810,000. There were 7, 871 insurance claims reporting losses of about J\$152 million dollars submitted to the insurance companies, and up to June 1993 claims in the value of J\$24 million were settled. The estimated total cost of damages incurred by the earthquake was \$200 million.
- ***Landslides.*** Landslides occurred along the Yallahs Water Pipeline route - between Hope River and August Town, Rest Haven and Bull Bay, and Cambridge and Eleven Miles. A landslide occurred in the limestone quarry located south of the Mona Reservoir. A number of roads were blocked or damaged as a result of landslides and the Government of Jamaica budgeted some \$2 million for the clearance of roads.

Sources:

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Newspaper Clippings File (Earthquake), National Library of Jamaica

Photograph Collection, National Library of Jamaica