

January 2012

# The Process of Colonial Adaptation: English Responses to the 1692 Earthquake at Port Royal, Jamaica

Julie Yates Matlock  
*Eastern Kentucky University*

Follow this and additional works at: <https://encompass.eku.edu/etd>



Part of the [Other History Commons](#)

---

## Recommended Citation

Matlock, Julie Yates, "The Process of Colonial Adaptation: English Responses to the 1692 Earthquake at Port Royal, Jamaica" (2012).  
*Online Theses and Dissertations*. 109.  
<https://encompass.eku.edu/etd/109>

This Open Access Thesis is brought to you for free and open access by the Student Scholarship at Encompass. It has been accepted for inclusion in Online Theses and Dissertations by an authorized administrator of Encompass. For more information, please contact [Linda.Sizemore@eku.edu](mailto:Linda.Sizemore@eku.edu).

THE PROCESS OF COLONIAL ADAPTATION: ENGLISH RESPONSES TO THE  
1692 EARTHQUAKE AT PORT ROYAL, JAMAICA

By

Julie Yates Matlock

Thesis Approved:




---

Chair, Advisory Committee




---

Member, Advisory Committee



---

Member, Advisory Committee



---

Dean, Graduate School

STATEMENT OF PERMISSION TO USE

In presenting this thesis in partial fulfillment of the requirements for a Master of Arts degree at Eastern Kentucky University, I agree that the Library shall make it available to borrowers under rules of the Library. Brief quotations from this thesis are allowable without special permission, provided that accurate acknowledgment of the source is made. Permission for extensive quotation from or reproduction of this thesis may be granted by my major professor, or in his absence, by the Head of Interlibrary Services when, in the opinion of either, the proposed use of the material is for scholarly purposes. Any copying or use of the material in this thesis for financial gain shall not be allowed without my written permission.

Signature Julie Yates Matlock

Date 07/05/12

THE PROCESS OF COLONIAL ADAPTATION: ENGLISH RESPONSES TO THE  
1692 EARTHQUAKE AT PORT ROYAL, JAMAICA

By

Julie Yates Matlock

Bachelor of Arts

The University of Virginia's College at Wise

Wise, Virginia

2005

Submitted to the Faculty of the Graduate School of  
Eastern Kentucky University  
in partial fulfillment of the requirements  
for the degree of  
MASTER OF ARTS  
August, 2012

Copyright © Julie Yates Matlock, 2012  
All rights reserved

## DEDICATION

This thesis is dedicated to my grandmother, Marie Yates,  
who always encourages educational pursuits.

## ACKNOWLEDGMENTS

I would like to thank my major professor, Dr. Brad Wood, for his guidance, patience and constant encouragement. I would also like to thank the other committee members, Dr. John Bowes, Dr. Todd Hartch, and Dr. Catherine Stearn for their assistance. I would like to express my gratitude to the library staff at Virginia Highlands Community College, especially to Reva Russell and Joel Rudy, for their research assistance and help in obtaining inter-library loans. I also give immeasurable thanks to my husband, Jason, for his understanding and patience during this project. I would like to thank my parents, Anthony and Carol, and my sister, Janet, for their encouragement. I would like to also acknowledge the history faculty at the University of Virginia's College at Wise for sparking my interest in history, especially the late Dr. Dana Sample.

## ABSTRACT

This thesis investigates how colonists adapted to their new tropical environment after a destructive earthquake occurred in Jamaica on June 7, 1692. This earthquake killed approximately two thousand people and destroyed half of the bustling harbor town of Port Royal. The earthquake dramatically changed the landscape of England's most successful Caribbean town and affected the colonists.

Historian Richard Dunn contended that colonists did not adapt to their tropical environment for at least a century after first inhabiting the Caribbean. This study argues against Dunn's theory in that the earthquake served as a catalyst in accelerating the colonists' rate of adaptation to their environment. This adaptation is evident because colonists changed the inherited ideas brought with them from England regarding building styles and town design, and the earthquake accelerated Jamaica's transition to a planter-dominated society.



## TABLE OF CONTENTS

CHAPTER	PAGE
I. Introduction.....	1
II. The Jamaican Colonists' Response to Inadequate Building Materials.....	14
III. The Jamaican Colonists' Response to a Flawed Location.....	25
IV. The Jamaican Colonists' Response to the Decline of Buccaneers and Small Planters.....	37
V. Conclusion.....	52
Bibliography.....	59
Appendices.....	63
A. Figure 1.....	63
B. Figure 2.....	65
C. Figure 3.....	67
D. Figure 4.....	69

## CHAPTER I

### INTRODUCTION

The English colonial town of Port Royal, Jamaica, also referred to by contemporaries as the “Sodom of the Universe” for its reputation as a place for excessive drinking, gambling, and prostitution was one of the liveliest towns in the Caribbean “Wild West.”<sup>1</sup> The English easily captured the weakly defended Jamaica from the Spanish in 1655, but they were inexperienced colonizers in the New World. This inexperience causes one to question how the colonists adapted to the tropical environment they now inhabited. Despite many challenges during the process of adaptation, by the beginning of the eighteenth-century, colonists laid the foundation for Jamaica to become England’s most profitable colony.

In particular, the town of Port Royal, situated next to a natural deep water harbor, became the busiest port in English America, which is evident by the records of port traffic. In 1688, 213 ships entered Port Royal’s harbor, whereas only 102 ships were recorded at Barbados. Comparatively, all of New England’s ports totaled 226 ships for the year.<sup>2</sup> Not only were maritime shipping statistics high, but Port Royal’s population

---

<sup>1</sup> Richard Dunn, *Sugar & Slaves: The Rise of the Planter Class in the English West Indies, 1624-1713* (Chapel Hill: University of North Carolina Press, 1972), 9; Larry Gragg, “The Port Royal Earthquake,” *History Today* 50 (September 2000): 32.

<sup>2</sup> Nuala Zahedieh, “Trade, Plunder, and Economic Development in Early English Jamaica, 1655-89,” *Economic History Review*, 2<sup>nd</sup> ser. XXXIX, 2 (1986): 219.

was second only to Boston in the late seventeenth-century, with pre-earthquake population estimates at approximately 6,500 residents with 2,500 being slaves.<sup>3</sup>

In 1683, Francis Hanson, a visitor to the island noted that “there is more plenty of running Cash Proportionally to the number of its Inhabitants than is in London.”<sup>4</sup> This great amount of cash flowed through the streets of Port Royal because of the illicit activities of buccaneers, who used the port as their operating base. The buccaneers continually raided Spanish ships and strongholds throughout the Caribbean, and the captured booty significantly increased Port Royal’s wealth, which also contributed to the raucous atmosphere of the harbor town.

Port Royal also attracted second sons of the British elite as well as members of the poorer classes who desired opportunity and property ownership. John Taylor, a visitor to Port Royal, observed that merchants lived an extravagant lifestyle and that craftsmen “live here verey well, earning thrice the wages given in England,” which indicated the available opportunities for prosperity.<sup>5</sup> The colonists were not seeking to change aspects of the British lifestyle that they transported to Jamaica, and which motivated them to succeed. Instead, the colonists viewed Jamaica as a new frontier to pursue wealth and opportunity that eluded many of them in England.

Despite the plentiful opportunities available to newcomers, Jamaica had an overall reputation as an unhealthy and dangerous place. According to contemporary Edward Ward, seventeenth-century Jamaica was “the Dunghill of the Universe, the

---

<sup>3</sup> Nuala Zahediah, “The Merchants of Port Royal, Jamaica, and the Spanish Contraband Trade, 1655-1692,” *The William and Mary Quarterly* 4 (Oct. 1986): 570; Michael Pawson and David Buisseret, *Port Royal Jamaica* (Oxford: Clarendon Press, 1975), 99.

<sup>4</sup> Francis Hanson, *The Laws of Jamaica, Passed by the Assembly, and Confirmed by his Majesty in Council, February 23, 1683* (London: Printed by H. Hills, 1683), Preface.

<sup>5</sup> John Taylor, *Jamaica in 1687: The Taylor Manuscript at the National Library of Jamaica*, ed. David Buisseret (Kingston: University of the West Indies Press, 2008), 241.

Refuse of the whole Creation...as Sickly as an Hospital, as Dangerous as the Plague, as Hot as Hell, and as Wicked as the Devil”.<sup>6</sup> Ward’s colorful description of the colony epitomized many English colonists’ sentiments toward their new tropical environment. European colonists did not perceive the Caribbean as the tropical paradise that attracts present-day tourists. Instead, everything about the Caribbean colonies was completely juxtaposed to what the colonists left behind in England, including the climate, physical environment, available food supplies, and the wildlife surrounding them. One significant part of the environment that wreaked havoc on the colonists was natural disasters, such as earthquakes and hurricanes.

According to their severity, earthquakes and hurricanes devastated colonists who were attempting to adjust to their foreign environment. The most significant natural disaster to affect the colonists living in Jamaica was the earthquake that occurred on June 7, 1692. At approximately 11:43 a.m., time stopped for the residents of Port Royal, which is evident from the hands of a gold pocket watch discovered during a 1950’s underwater excavation in Port Royal Harbor.<sup>7</sup> Horror and destruction followed the violent earthquake that rocked Port Royal, which resulted in the deaths of approximately 2,000 residents.<sup>8</sup> One of the largest and most widely circulated accounts of the earthquake is from Reverend Emmanuel Heath who was the rector of St. Paul’s Anglican Church. Heath observed that many individuals drowned when the wharves and several streets closest to the harbor were destroyed along with two of the forts. Others were

---

<sup>6</sup> Edward Ward, *A Trip to Jamaica: With a True Character of the People and Island*, 3d ed. (London, 1698): 14, quoted in Kay Dian Kriz, “Curiosities, Commodities, and Transplanted Bodies in Hans Sloane’s ‘Natural History of Jamaica,’” *The William and Mary Quarterly* LVII, no. 1 (January 2000): 35.

<sup>7</sup> Marion Clayton Link, “Exploring the Drowned City of Port Royal,” *The National Geographic Magazine* 117, no. 2 (February 1960): 173, 179-80.

<sup>8</sup> Thomas Parkhurst, *The Truest and Largest Account of the Late Earthquake in Jamaica, June the 7<sup>th</sup>, 1692* (London: 1693), 5-6; Pawson and Buisseret, 121.

trapped when the earth opened and then closed, leaving them “buried with their Heads above ground, only some Heads the Dogs have eaten, others are covered with Dust and Earth by the People which yet remain in the place, to avoid the stench.” In addition to the people killed in the earthquake, the tremors also disturbed the graveyard, leaving many skeletons and decomposing bodies floating in the harbor.<sup>9</sup>

Port Royal was a very chaotic and tumultuous place after the earthquake. In addition to the death and destruction, many survivors looted homes, warehouses, and according to one eyewitness, even deceased individuals had “their Pockets pick’d, their Fingers cut off for their Rings, their Gold Buttons taken out of their Shirts.”<sup>10</sup> From various accounts, post-earthquake Port Royal appeared to be dangerous, unstable, and disorderly. Reverend Emmanuel Heath commented that the inhabitants of Port Royal were “so desperately wicked it makes me afraid to stay in the Place.”<sup>11</sup> These descriptions of Port Royal indicate the turbulent atmosphere after the earthquake and the many challenges faced by the survivors in addition to the destruction of their physical environment. In this colony, where many “found sin very high and religion very low,” the moral compass of Jamaica’s residents did not significantly change after the earthquake.<sup>12</sup>

Several eyewitness accounts of the earthquake exist, including a group of letters compiled by physician, Hans Sloane. In these letters, one eyewitness observed that “All our houses [were] thrown down all over the Island, that we were forced to live in Hutts”

---

<sup>9</sup> Reverend Emmanuel Heath, *A Full Account of the Late Dreadful Earthquake at Port Royal in Jamaica; Written in two Letters from the Minister of that Place* (London, 1692), 1.

<sup>10</sup> Parkhurst, 6.

<sup>11</sup> Heath, 2.

<sup>12</sup> Francis Crow to Giles Firmin, 7 March 1687, “Conditions in Jamaica in 1687,” ed. Henry J. Cadbury, *The Jamaican Historical Review* 3 (March 1959): 53.

and “tho’ Port-Royal was so great a Suffererr by the Earthquake, yet it left more Houses standing there, than in all the Island besides.”<sup>13</sup> This account indicates that the strength of the earthquake was felt over the entire island and caused significant damage to areas outside of Port Royal. The earthquake survivors also experienced shortages of food and water as well as disease, which led to approximately 2,000 more deaths in the aftermath of the earthquake.<sup>14</sup> The town where the inhabitants of Port Royal earned their livelihood was completely destroyed in just a few minutes time, whereas it had taken several decades to develop the Caribbean outpost into a significant colonial town.

The English colonists who survived the earthquake at Port Royal lived through a unique experience that headlined news throughout the British Atlantic world. Until this time, a natural disaster of this magnitude had never occurred in Jamaica, and it brought with it an exceptional set of circumstances due to the characteristics of natural disasters. Earthquakes are included in the category of natural disasters because they are terrifying, unexpected, and ultimately supersede the realm of human control. The last reason is predominantly why natural disasters impact humans like nothing else on earth. The force and speed by which natural disasters strike, and the destruction they cause, can dramatically change human lives and their environments within a matter of seconds.

Natural disasters are also classified and studied as a field of environmental history. Historian, Alfred Crosby defines environmental history as “the story of humanity as an often passive or distracted participant in local, regional, and world-wide

---

<sup>13</sup> Hans Sloane, “A Letter from Hans Sloane, M.D. and S. R. S with Several Accounts of the Earthquakes in Peru October the 20<sup>th</sup> 1687. And at Jamaica, February 19<sup>th</sup>. 1687/8 and June the 7<sup>th</sup>. 1692,” *Philosophical Transactions* 18 (1694): 84, 93.

<sup>14</sup> Matthew Mulcahy, “The Port Royal Earthquake and the World of Wonders in Seventeenth-Century Jamaica,” *Early American Studies* (Fall 2008): 404; Sloane, 84, 97, 100.

ecosystems.”<sup>15</sup> Throughout the centuries, humans undeniably affected the earth’s land, soil, water, plants, and animals. Environmental history has only recently claimed its deserved position as a minor field of history in the United States. Additionally, the historical community also accepts Emmanuel Le Roy Ladurie’s expanded definition of the field as “embracing climate, epidemics, natural calamities, population explosion, urbanization, industrial overconsumption, and pollution.”<sup>16</sup> The earthquake that occurred at Port Royal, Jamaica, on June 7, 1692, epitomizes Ladurie’s definition of a “natural calamity,” yet it also exemplifies Crosby’s definition, because the inhabitants of Port Royal were “passive participants” at the mercy of the earth’s movements.

Historical disaster studies are important because they allow current and future generations to understand the hardships that accompanied natural disasters in the colonies and elsewhere, all the while enhancing the unpredictable nature of life. In Colonial American studies, the importance of disaster research is unparalleled, because British explorers and settlers to the Caribbean committed to inhabiting a completely new world with a different climate, terrain, animals, and food, only to bear frequent earthquakes and hurricanes at intense levels they had never previously experienced. Additionally, European colonists’ exposure to various natural phenomena colored their perceptions of the New World in an often negative way due to their inexperience. More specifically, colonists arrived in the Caribbean unaware that the earth’s crust consisted of plates that moved against each other causing the earth to “quake.” They assumed that the earth moved and shook due to unexplainable or theological reasons. However, as time went on

---

<sup>15</sup> Alfred W. Crosby, “The Past and Present of Environmental History,” *The American Historical Review* 100, no. 4 (Oct. 1995): 1177.

<sup>16</sup> Crosby, 1185-87.

and colonists acclimated to the area, they dismissed minor earthquakes because of their frequency. British colonists' Caribbean experiences with natural disasters, such as earthquakes and hurricanes, somewhat altered their views of earthquakes and hurricanes as solely "acts of God" and some colonists began to view them as "merely natural phenomena."<sup>17</sup>

According to historian Matthew Mulcahy, seventeenth-century colonists had various explanations for the origins of natural disasters including "astrology, natural philosophy, and providentialism."<sup>18</sup> Astrology and other magical practices, which were very commonplace in England, were transported to the colonies and were very popular at the time of the earthquake, as evidenced by the widespread use of almanacs and other methods of predicting the future.<sup>19</sup> For example, John Taylor asserted in his travel account that "[Jamaica]...is subject to earthquack" and relayed a prediction in 1686 in which an astrologer foretold that Port Royal "would be swallowed up by the sea" after an earthquake.<sup>20</sup> Taylor's further description that many people vacated Port Royal after the prediction indicates that many residents trusted astrological methods and acted upon the prophecies.

Natural philosophy embodied the theory that natural events "arose from processes God established to regulate the natural world."<sup>21</sup> Various natural theories existed regarding the causes of earthquakes. One natural causation theory of the 1692 earthquake

---

<sup>17</sup> Ted Steinburg, *Acts of God: The Unnatural History of Natural Disaster in America* (Oxford: Oxford University Press, 2000), 21.

<sup>18</sup> Matthew Mulcahy, *Hurricanes and Society in the British Greater Caribbean, 1624-1783* (Baltimore: Johns Hopkins University Press, 2006): 35.

<sup>19</sup> Jon Butler, "Magic, Astrology, and the Early American Religious Heritage, 1600-1760," *The American Historical Review* 84, no. 2 (April 1979): 325, 330; David D. Hall, *Worlds of Wonder, Days of Judgment: Popular Religious Belief in Early New England* (New York: Alfred A. Knopf, 1989), 76.

<sup>20</sup> Taylor, ed. Buisseret, 118-19.

<sup>21</sup> Mulcahy, *Hurricanes*, 40.



was an “Exhalation of Hot and Cold that is enclosed in the Caves of the Earth.”

According to this explanation, the air needed to escape from the earth and could not find a wide enough opening in the surface, so the shaking occurred because the air was being dispelled through too small of a passage.<sup>22</sup> Natural philosophers often cited chemical reasons for earthquakes such as “The Nitro-Sulphureous spirit which causes the Trembling of the Earth.”<sup>23</sup> Professor Robert Hooke also proposed that earthquakes were “Eruptions of fiery Conflagrations inkindled in the Subterraneous regions or perhaps from shifts in the planet’s centre of gravity.”<sup>24</sup> As evidenced by the previous quotations, natural philosophy provided an alternative explanation for observable events, such as natural disasters, but was not the primary interpretative method.

After the 1692 earthquake, there was a sense of impending doom and many with religious views could see God’s judgment at work. The theory behind providentialism included the idea that all events had divine meaning in the world. Seventeenth-century colonists categorized events into “general providences” and “special providences.” Natural events such as earthquakes, especially the most severe and destructive such as that which occurred at Port Royal, were deemed “special providences.” Ultimately, colonists viewed earthquakes as a “wonder betokening God’s judgments.”<sup>25</sup> Ministers throughout the British Atlantic world interpreted natural disasters as an expression of divine judgment and encouraged their own congregations to repent of their sins. For example, minister William Corbin admonished that “Sin is the cause of all Calamities and

---

<sup>22</sup> *A Sad and Terrible Relation of Two Dreadful Earth-quakes that happened in England and at Jamaica* (printed for P. Brooksby, J. Deacon, J. Blare, and J. Back, 1692), 14.

<sup>23</sup> Mulcahy, *Hurricanes*, 45.

<sup>24</sup> Gragg, 33.

<sup>25</sup> Mulcahy, *Hurricanes*, 36; Hall, 71; Keith Thomas, *Religion and the Decline of Magic* (New York: Charles Scribner’s Sons, 1971), 80-4, 89.

Judgements.”<sup>26</sup> The English possessed knowledge of earthquakes in Europe, and they also experienced tremors in their own country occasionally. For example, an earthquake occurred in England on September 8, 1692, just a few months after the earthquake in Jamaica.<sup>27</sup> Given the severity of the earthquake in Port Royal, some contemporary commentators, such as Puritan minister Thomas Doolittle, connected the two earthquakes in that the less severe earthquake in England was a warning for individuals to repent of their sins because they were spared the destruction experienced in Jamaica.<sup>28</sup>

Earthquakes were overwhelmingly interpreted as providentialism, and to many in the British Atlantic world, it was inevitable that “An angry God had punished [Port Royal] for its debauchery.”<sup>29</sup>

Although earthquakes were rare events in England, seismic activity was a common occurrence to colonists living in Port Royal by the time of the 1692 earthquake, which is a reflection of how colonists changed their ideas about the observable processes surrounding them in their natural environment. Dr. Hans Sloane reported that “Inhabitants of Jamaica expect an Earthquake Every Year.”<sup>30</sup> Visitor, Francis Hanson, also remarked in 1683 that “There are Earthquakes sometimes, two or three perhaps in a Year, but so moderate that they are over before one can well be sensible what they are,

---

<sup>26</sup> William Corbin, *A Sermon Preached at Kings Town in Jamaica Upon the 7<sup>th</sup> of June, Being the Anniversary Fast for that Dreadful Earth-Quake which happened there in the Year 1692* (New York: William Bradford, 1703), 4.

<sup>27</sup> Jelle Zeilinga de Boer and Donald Theodore Sanders, *Earthquakes in Human History: The Far-reaching Effects of Seismic Disruptions* (Princeton: Princeton University Press, 2005), 80; *A Sad and Terrible Relation of Two Dreadful Earth-quakes*, 5.

<sup>28</sup> Thomas Doolittle, *Earthquakes Explained and Practically Improved: Occasioned by the late Earthquake on Sept. 8, 1692 in London, many other parts in England, and beyond the Sea* (Boston: Benjamin, Harris, 1693), Introduction; Maxine Van De Wetering, “Moralizing in Puritan Natural Science: Mysteriousness in Earthquake Sermons,” *Journal of the History of Ideas* 43, no. 3 (July-September, 1982): 421-2.

<sup>29</sup> Dunn, 187.

<sup>30</sup> Sloane, 81.

and never have yet been so violent to do any harm.”<sup>31</sup> In an account of the 1692 earthquake by Reverend Emmanuel Heath, rector of St. Paul’s Church, Heath was meeting with John White, the president of Jamaica’s council, when the earth began “rowling and moving.” White assured Heath, “It is an Earthquake, be not afraid, it will soon be over.”<sup>32</sup> The calm attitude expressed by White at the beginning of the earthquake illustrates that colonists’ experiences conditioned them to believe that earthquakes were not a concern because of their previously mild strength. Minor earthquakes in North America and Britain were significant events that were interpreted as warnings for individuals to change their lifestyles. However, as Matthew Mulcahy points out, colonists in Jamaica adapted their viewpoints based on their experiences of living with a high frequency of minor earthquakes.<sup>33</sup> Obviously earthquakes presented a known risk in Jamaica that colonists accepted, because the benefits of living in Jamaica outweighed the terrors of such natural events.

Although colonists continued to populate Jamaica despite the risks, historian Richard Dunn argues that English colonists did not adapt to their tropical environment for at least one hundred years after first inhabiting the Caribbean. Instead, British colonists continued to emulate the customs of proper society in their diet, dress and accommodations in order to maintain class hierarchy. In the foreign environment of Jamaica, when colonists donned certain articles of clothing, consumed comforting “English” food, and built towns with familiar designs, they did not feel as out of place,

---

<sup>31</sup> Hanson, *To the Reader*.

<sup>32</sup> Heath, 1.

<sup>33</sup> Mulcahy, “Port Royal,” 395.

and in their minds, maintained their proper rank within English society.<sup>34</sup> Life was hard and short in the New World, so the rich colonists in Port Royal displayed their wealth prominently in a manner later termed “conspicuous consumption” by economist, Thorstein Veblen, and consisted of showy displays of wealth to indicate social status. Although this term was not coined until the publication of *The Theory of the Leisure Class* in 1899, “conspicuous consumption” retroactively describes the habits of the wealthy in Port Royal.

Additionally, historian Jack Greene proposes stages of social development of Jamaica and other early modern British colonies in America. For instance, Port Royal exemplifies the first stage, defined as “social simplification,” which is “characterized by much unsettledness.” Colonists in this stage were concerned with surviving in their new environments and struggling to establish some social elements similar to those of their home country. Early colonial Port Royal fits neatly into Greene’s first phase of social simplification because it was a rowdy, rough, and disorganized place. The presence of Spanish silver obtained by buccaneering efforts and illicit trade, along with Port Royal’s status as one of the busiest harbors in the colonies, allowed Port Royallers to even more quickly gain material wealth and “satisfy their own individual quests for happiness.” The stage of “social elaboration” occurred as colonists grew more accustomed to their local environments and developed social entities similar to England. As a result of Jamaican colonists’ increased wealth and population stability, the third stage of “social replication”

---

<sup>34</sup> Dunn, 263-64, 299.

happened when colonists further emulated English society to the highest level, which would not have occurred until prosperous economic times.<sup>35</sup>

Greene also asserts that throughout the stages of social development a certain “tension” exists between factors that he labels as “inheritance” and “experience.” Inheritance embodies the colonists’ desire to replicate the customs of their home country. The lifestyle that the colonists attempted to emulate in Jamaica also helped them develop a sense of cohesiveness in the strange New World, and further indicates the stronghold that inheritance had over colonists during the process of developing societies to fit their new environments. The factor of experience encompasses the unique events and knowledge acquired by the colonists in their new societies. In Jamaica’s case, the examples of colonists becoming accustomed to minor earthquakes indicates adaptation through learned experience. The tension between the factors of inheritance and experience directly affects the rate at which certain societies move through the stages.<sup>36</sup> The blanket argument by historians Dunn and Greene that colonists did not adapt for over a century is incorrect because different social, economic, and physical factors were present for each colony that either slowed down or accelerated the rate of adaptation.

Although Dunn argues that English colonists did not “learn how to live in the tropics” for at least a century, and Greene asserts that colonists did not develop “more coherent and elaborated societies” for at least a century after colonization, specific events did increase colonists’ rate of adaptation.<sup>37</sup> The tragic earthquake that occurred on June

---

<sup>35</sup> Jack P. Greene, *Pursuits of Happiness: The Social Development of Early Modern British Colonies and the Formation of American Culture* (Chapel Hill: University of North Carolina Press, 1988), 165-8.

<sup>36</sup> Greene, 169.

<sup>37</sup> Dunn, 299; Greene, 165.

7, 1692, was an event that increased colonists' adaptation to Jamaica's physical and economic environment. The severity level of the earthquake greatly influenced the colonists' experience, which necessitated accelerated adaptation rates. The ways in which colonists exhibited their increased adaptation level was evident by the modifications to their building style, their reassessment of Port Royal's physical location as a town, and their transition to a planter dominated society better suited to a stable agricultural economy.

The old adage that "Necessity is the mother of invention" applies to Port Royal and adaptation in general, because people will not change their customary way of living unless it is required of them due to extenuating circumstances. The severity of the earthquake undoubtedly provided the catalyst for change, although, the colonists in Jamaica were content in their pursuit of a normal English lifestyle. However, the earthquake forced the colonists to re-examine their way of life, and in turn their adaptation to the Jamaican environment was even more accelerated by their desire for survival.

## CHAPTER II

### THE JAMAICAN COLONISTS' RESPONSE TO INADEQUATE BUILDING MATERIALS

The Spanish who inhabited Jamaica before the English conquest left many buildings, especially in Spanish Town, whose designs were quite unimpressive to the English who even viewed them with disdain. Contemporary visitor, John Taylor went as far as to equate Spanish houses with “barns or stables in England.”<sup>38</sup> In Dr. Hans Sloane’s observations from his stay in Jamaica from 1688-89, he records the following regarding Spanish houses:

The Buildings of the *Spaniards* on this Island are usually one Story high, having a Porch, Parlour, and at each end a Room, with small ones behind for Closets, &c. They are built with Posts put deep in the ground, on the sides their Houses were plaistered up with Clay on Reeds, or made of split Trunc[k]s of Cabbage Trees nail’d close to one another, and covered with Tiles, or Palmetto Thatch.

The previous description by Dr. Sloane emphasizes the height of Spanish built houses as being one story and constructed of posts and natural materials. The English considered this post-built style referred to by Dr. Sloane to be archaic because the English upper classes last used this style in the fourteenth-century.<sup>39</sup>

---

<sup>38</sup> Taylor, ed. Buisseret, 244.

<sup>39</sup> Hans Sloane, *Voyage to the Islands of Madeira, Barbados, Nieves, S. Christopher and Jamaica, with the Natural History of the Herbs and Trees, Four-footed Beasts, Fishes, Birds, Insects, Reptiles, etc. of the Last of those Islands*, 2 vols. (London, 1707, 1725), 1: xlcii, quoted in James Robertson, “Jamaican Architectures before Georgian,” *Winterthur Portfolio* 36, no. 2/3 (Summer-Autumn, 2001): 86-7.

Additionally, most Spanish construction featured porches and windows made of wooden shutters to take advantage of the tropical breezes. Another characteristic of Spanish buildings were large double doors that led to courtyards, which were greatly criticized by John Taylor as being able to fit three horses in the doors' width. The more open concept features of windows and oversized doors seemed foreign to the English colonists who perceived glass windows as a luxury and one of the most important indicators of wealth. However, during the 1688 earthquake, John Taylor noted that there was "much damage to glass windows," highlighting the disadvantage of using window glass in the tropics.<sup>40</sup> The absence of chimneys in Spanish structures was also noticeable to the colonists. In Britain, chimneys, like glass windows, served as indicators of social status.<sup>41</sup>

All of these design elements implemented in Spanish construction contrasted with those of English buildings, because the doors and windows allowed breezes into the houses, the chimneys were located in a separate building designated as a kitchen, and the construction materials were more suitable for the extreme weather conditions. Although English building traditions prevailed in Jamaica prior to the 1692 earthquake, alternative opinions existed as to the practicality of English construction methods. For instance, Dr. Hans Sloane observed that the English built houses are "neither cool, nor able to stand the shock of Earthquakes" unlike Spanish houses, which were constructed with hot temperatures and seismic events in mind.<sup>42</sup> Dr. Sloane also experienced an earthquake in 1688 while in an upper story of a brick house in Spanish Town and later reported to the

---

<sup>40</sup> Dunn, 291; Taylor, ed. Buisseret, 119, 244.

<sup>41</sup> Robertson, "Jamaican Architectures," 90.

<sup>42</sup> Sloane, *Voyage*, I, x, xlvii, quoted in Dunn, 291.



Royal Society that the Spanish post-built technique was used “on purpose to avoid the Danger which attended other manner of Building from Earthquakes.”<sup>43</sup> This observation by Dr. Sloane indicates that even after the 1688 earthquake, English perceptions of Spanish building styles were beginning to change, and that he and perhaps other colonists realized the merits of the simplistic yet practical construction methods of the Spanish.

Although the Spanish built large substantial structures throughout their many holdings in the New World, the Spanish in Jamaica constructed buildings more suitable for the tropical environment. The majority of English colonists failed to recognize the advantages of Spanish construction in Jamaica even after the 1688 earthquake, because the damage was not severe enough to warrant change. Historian James Robertson also proposes that the English tightly clung to familiar building patterns because of their “cross-cultural” rivalry with Spain. The familiar English patterns helped colonists define what it meant to be English in the Caribbean as well as to symbolize their permanency on the island.<sup>44</sup>

Jamaican land surveys in the 1660’s indicate that modest wooden structures comprised the majority of construction by settlers during the first two decades of English colonization. However, by the time of the 1692 earthquake, Jamaica’s wealth had increased and colonists displayed this wealth by using predominantly brick and stone to create familiar English building styles. The common wooden buildings were not mentioned as fully or with as much enthusiasm in contemporary travel accounts, because visitors to Jamaica were not interested in the common, but rather in the exhibitions of

---

<sup>43</sup> Sloane, “Letter,” 82.

<sup>44</sup> Robertson, “Jamaican Architectures,” 89-90

wealth and success.<sup>45</sup> For example, visitor John Taylor observed that half of the houses in Port Royal were multi-storied brick houses with tiled roofs and glazed windows as well as “yeild as good rents as those in Cheapeside in London.” Taylor’s estimate that half of the houses exhibited the above architectural features indicates the wealth available in Port Royal because materials such as glass windows were an expensive import that unfortunately did not withstand the tropical storms or promote air flow.<sup>46</sup> John Taylor’s architectural observations illustrate that he was impressed by Jamaica’s emulation of London building styles and materials.

The English style that developed in Jamaica derived from the architectural period in England from 1575-1690, which is classified as the “great rebuilding” because all classes were building or remodeling their houses. The central theme of this rebuilding was “more” including an increased number of rooms, stories, windows and chimneys as well as a transition from the use of wood and thatch to brick and stone. Additionally, the Great Fire of 1666 in London inspired colonists to model their houses after the newly built ones in the metropolis.<sup>47</sup> Brick became the most desirable building material of the wealthy in Port Royal, because brick built houses were valued more highly and viewed by society as the finest structures.<sup>48</sup> For instance, visitor Francis Hanson noted that the multi-story homes in Port Royal were “built with Bricks, and beautified with Balconies, after the modern way of building in London.”<sup>49</sup> Francis Hanson’s remark about the use of brick in Jamaica is confirmed by underwater archaeological research conducted at the

---

<sup>45</sup> Robertson “Jamaican Architectures,” 75-78, 84.

<sup>46</sup> Taylor, ed. Buisseret, 230-1; Dunn, 291.

<sup>47</sup> Dunn, 290-91; Robertson, “Jamaican Architectures,” 77.

<sup>48</sup> Roger H. Leech, “The Prospect From Rugman’s Row: The Row House in Late Sixteenth- and Early Seventeenth-Century London,” *The Archaeological Journal* 153 (1996): 226.

<sup>49</sup> Hanson, To the Reader.

site where the earthquake sunk part of Port Royal into the harbor. Various archaeological expeditions beginning in the 1950's to the most recent in the 1990's have uncovered numerous bricks along the sunken streets.<sup>50</sup> The colonists' use of familiar building materials and styles indicate that the English desired to transport their ideas of proper society including architecture, to the island of Jamaica to create a sense of civility.

Not only did popular architectural styles influence construction, but so did seventeenth-century theories regarding healthy living. Dr. Thomas Trapham was a physician to Governor Vaughn as well as a politician and planter in Jamaica. In 1679, Dr. Trapham wrote *A Discourse of the State of Health in the Island of Jamaica*, which was the first English book written about medicine in the West Indies.<sup>51</sup> At the time, the authoritative theory regarding health was that of the four humors, with the goal being to maintain balance among the humors to ward off illness. For example, Dr. Trapham and his contemporaries believed that breezes during the day were healthy but that night air was dangerous. As followers of this theory, Captain Thomas Barrett owned "two sets of curtains, three quilts, and five blankets for his two beds," and Sir Henry Morgan slept surrounded by "mohair hangings" to protect against the harmful night air.<sup>52</sup> From these inventories, it is evident that colonists in late seventeenth-century Port Royal tried to emulate British customs. This theory regarding the ill effects of night air also influenced English construction, and colonists incorporated glass widows and low ceilings as common design elements. These failed to promote air circulation and were impractical

---

<sup>50</sup> See Robert F. Marx, *Port Royal Rediscovered* (New York: Doubleday & Company, Inc., 1973) and Marion Clayton Link, "Exploring the Drowned City of Port Royal," *The National Geographic Magazine* 117, no. 2 (1960).

<sup>51</sup> M T Ashcroft, "Tercentenary of the First English Book on Tropical Medicine, by Thomas Trapham of Jamaica," *British Medical Journal*. (August 25, 1979): 475.

<sup>52</sup> Dunn 289, 309; Jamaican Inventories of Probated Estates, Jamaica Archives, Spanish Town, quoted in Dunn, 294.

for living in the tropical heat of Jamaica. Nonetheless, English colonists incorporated these dysfunctional aspects of design to reflect contemporary medical knowledge, despite the Caribbean climate.

The 1692 earthquake dramatically altered the landscape of Port Royal within minutes and destroyed the English style buildings. One witness described the destruction of the houses “as if it had been a Train of Powder laid under some mighty Pile of Buildings.”<sup>53</sup> The architectural style that the English used in Jamaica simply could not withstand the force of earthquakes and numerous factors exacerbated the effects of the devastating earthquake at Port Royal. The design and placement of the buildings in the town significantly intensified the destruction and revealed the English colonists’ lack of knowledge about earthquake construction. The shock created by the 1692 earthquake jolted the heavy brick and stone structures in Port Royal to their foundations because the rigid building materials did not allow for any shock resistance. Another eyewitness described the houses as “shook down and shatter’d...in so violent a manner, that [Port Royal] look’d more like a Heap of Rubbish, than any thing else, there being...scarce one House in ten left standing, and those soe crackt and shatter’d, that but few of them were fit, or thought safe to live in and stand now empty.”<sup>54</sup> The survivors at Port Royal were smart to be concerned about the safety of the buildings they constructed, after observing the sheer force and speed with which these modern English structures were destroyed by the earthquake. Not only were structures in Port Royal affected by the earthquake because “it scarce left a Planters House or Sugar-work standing all over the Island...and

---

<sup>53</sup> *A Sad and Terrible Relation of Two Dreadful Earth-quakes*, 13.

<sup>54</sup> Sloane, 90.

none in St. Jago, except a few low Houses built by the Spaniards.”<sup>55</sup> This eyewitness account confirms that the effects of the earthquake were not confined to Port Royal and were experienced throughout the island.

During the powerful earthquake, not only was the unstable ground shaken at Port Royal, but the ocean floor also shifted, creating a great tidal wave that engulfed the town. Scientists propose that at the time of the earthquake, a process known as “liquefaction” occurred beneath Port Royal. Liquefaction occurred when the water rushed underneath the foundation of the town turning the individual particles of sand into a liquefied state resembling quicksand. In turn, the watery sand could not support the tall, heavy buildings and the most affected structures sank into the harbor.<sup>56</sup> The process of liquefaction is evident by the results of earthquake damage which caused Forts James and Carlisle along with Thames, Queen, and High streets to slide into the sea.<sup>57</sup> These results indicate that the earthquake did not simply shake the brick and stone structures so as to shift their foundations and eventually topple to the ground, but rather moved the sandy foundations downward, so that many of the buildings situated on the streets closest to the ocean were submerged intact with their upper stories remaining above water.

After the earthquake, one eyewitness observed of the houses that there were “only Eight or Ten that remained from the Balcony upwards above Water.”<sup>58</sup> Another contemporary account also noted that “great heavy Brick Houses, whose Weight, on so sandy a Foundation, may be supposed to contribute much to their Downfall.”<sup>59</sup> The

---

<sup>55</sup> Sloane, 94.

<sup>56</sup> Mulcahy, “Port Royal,” 404.

<sup>57</sup> Pawson and Buisseret, 2, 121; Parkhurst, 4; Link, 167.

<sup>58</sup> Sloane, 86.

<sup>59</sup> Sloane, 91.

previous observation indicates that after the earthquake, colonists were becoming conscious of the negative aspects of building with heavy brick in the tropical environment, as well as of their error in not selecting a more solid settlement site. Additionally, in 1859, Jeremiah Murphy's letter was published in the *Falmouth Post* regarding his diving experience in Port Royal Harbor in which he wrote that "many of the houses remained perfect after the earthquake, though sunk in the water."<sup>60</sup> This diver's account also supports scientists' claims of liquefaction with the buildings remaining intact under the ocean water. Nonetheless, imagine the horror of the survivors who stood "on the Sea-shore...where once brave Streets of stately Houses stood, appearing now nothing but Water, except here and there a Chimney, and some parts and pieces of Houses...now Habitations for Fish."<sup>61</sup>

After the destruction of Port Royal, the English were faced with the dilemma of what types of structures to build in place of the ones that failed to survive the shocks of the earthquake. Colonists had the choice to re-build in the popular English style characterized by multi-story buildings constructed with heavy building materials or to re-evaluate their previous methods to better suit their new environmental circumstances. An eyewitness to the disaster noted that the low lying buildings constructed of timber were among some of the only structures surviving after the earthquake.<sup>62</sup> In Dr. Hans Sloane's compilation of earthquake testimonies to the Royal Society, another eyewitness who was in the harbor at the time of the earthquake returned and "found all Houses even with the

---

<sup>60</sup> Frank Cundall, *Historic Jamaica* (London: West India Committee, 1915), 58-9, quoted in Pawson and Buisseret, 144-5.

<sup>61</sup> Sloane, 93.

<sup>62</sup> Parkhurst, 2.

Ground; not a place to put ones Head in, but in Negro Houses.”<sup>63</sup> Quaker John Pike similarly observed that the earthquake “hath not left a house standing in the whole place that was built of either stone or brick, nor anything that was built with the same materials” and that colonists “now think a Negro’s house that is daubed with mortar and thatched... a pleasant house.”<sup>64</sup> The observations that the one story structures of earthen materials survived further illustrate how ill-suited the traditional English buildings were in the tropical environment.

Historians Dunn and Greene argue that adaptation was not evident in English colonial societies in the Caribbean for over a century.<sup>65</sup> However, the English modified their architecture style by adopting many of the Spanish tenets of construction after observing the destruction caused by the earthquake. These architectural features included constructing buildings mostly of wood and no more than two stories high. More evidence of the changed architectural practices in Port Royal was described in the 1730’s by Charles Leslie who noted that “In the Towns there are several Houses which are two Stories; but that way of building is disapprov’d of, because they seldom are known to stand the Shock of an Earthquake, or the Fury of a Storm.”<sup>66</sup> The previous observation from the 1730’s indicates that the English became aware of the practical differences between English construction methods and Spanish structures more suited to the Caribbean landscape. The English colonists had observed enough destruction from earthquakes and hurricanes in Jamaica to learn which types of structures survived the

---

<sup>63</sup> Sloane, 83.

<sup>64</sup> John Pike to unnamed brother, 19 June 1692, ed. Henry J. Cadbury, “Quakers and the Earthquake at Port Royal, 1692,” *The Jamaican Historical Review* viii (1971): 19-20.

<sup>65</sup> Dunn, 299; Greene, 165.

<sup>66</sup> Charles Leslie, *A New History of Jamaica from the Earliest Accounts to the Taking of Porto Bellow by Vice Admiral Vernon in Thirteen Letters from a Gentleman to His Friend* 2d ed. (London: J. Hodges, 1740), 30, quoted in Robertson “Jamaican Architectures,” 95.

natural hazards. Jamaica also was not the first English colony in the Caribbean, so colonists could also learn from the experiences of previous settlers in other colonies. For example, colonists in Barbados initially constructed their houses with rigid materials but by the 1650's the wealthiest planters resided in houses built of wood with plenty of windows to catch the island breezes.<sup>67</sup> Fortunately, Jamaican colonists could look to both their English neighbors in Barbados and their Spanish predecessors for examples in tropical construction methods.

Although Kingston existed across the harbor, Port Royal was rebuilt after the earthquake with wooden buildings which could withstand an earthquake, but these structures were defenseless against fire. On January 9, 1703, fire destroyed all the structures in Port Royal except for one building and two fortifications.<sup>68</sup> Port Royal was rebuilt again after the fire, and according to contemporary Francis Rogers, many of the houses were rebuilt with brick but none were more than two stories high and were fitted with large windows for “coolness.”<sup>69</sup> This observation reveals that colonists adapted their structures to the various natural calamities in which they faced. The second rebuilding of Port Royal exemplifies the tension labeled by Jack Greene as “inheritance” versus “experience.” In summation, after the earthquake, colonists realized that the multi-storied brick buildings were not practical and rebuilt with mostly wooden structures; however, after the 1703 fire destroyed Port Royal again, colonists reverted back to their brick structures with modifications to windows and restrictions on building

---

<sup>67</sup> Robertson “Jamaican Architectures,” 75.

<sup>68</sup> Cadbury, “Quakers,” 30; Robertson, “Jamaican Architectures,” 91.

<sup>69</sup> Francis Rogers, “The Diary of Francis Rogers” (November 30, 1705), in Bruce S. Ingram, ed., *Three Sea Journals of Stuart Times* (London: Constable, 1936), 226-7, quoted in Robertson, “Jamaican Architectures,” 92.



height. Colonists inherited their construction methods and their desire to use materials such as brick because this embodied the English culture. Colonists' reversion to less flammable brick after the fire illustrates further adaption of their building styles to better suit their foreign environment.

During the process of learning to survive in the tropics, the English colonists gradually employed many of the time-tested Spanish building techniques, after observing their ability to withstand Jamaica's natural environment first-hand. The 1692 earthquake was the most traumatic event to strike the island during the short history since the English captured Jamaica in 1655. The destruction that ensued from the earthquake provided new experiences for the colonists in Jamaica and helped shape their perceptions of their new environment. Ultimately, these tragic experiences influenced the English colonists' decision to reexamine the earlier Spanish building style and eventually adopt many of the central tenets of Spanish construction.

## CHAPTER III

### THE JAMAICAN COLONISTS' RESPONSE TO A FLAWED LOCATION

Town planning was paramount in the minds of colonial settlers and was one of the most evident ways in which European society was transferred to the colonies.<sup>70</sup>

Englishmen brought specific ideas regarding town placement and design with them to the New World. Towns served even larger social functions in that they provided colonists with protection and the security of a familiar lifestyle.<sup>71</sup> The formation of towns also granted stability and a sense of legitimacy to the colonists. After the English captured Jamaica, they noticed that the layout of the principal town, referred to by the English as Spanish Town, was very different from familiar English designs, which indicates that the Spanish also transported their own ideas about town planning to the New World.<sup>72</sup>

Ironically, Spanish Town distinguished itself as the capital for both the Spanish and English until 1872. Spanish Town was situated inland seven miles northwest of the harbor and was strategically established between the coast and the mountains. This site exemplified the Spanish pattern of constructing towns in the New World which was set forth in the Laws of the Indies under King Philip II in 1573. This uniform code for establishing Spanish towns included building away from the sea for protection, close to pastureland and farmland, and near a plentiful source of fresh water and timber.<sup>73</sup>

---

<sup>70</sup> Carl Bridenbaugh, *Cities in the Wilderness: The First Century of Urban Life in America 1625-1742* (New York: The Ronald Press Company, 1960), vi.

<sup>71</sup> John W. Reps, *Town Planning in Frontier America* (New Jersey: Princeton University Press, 1965), 3-4.

<sup>72</sup> James Robertson, "Late Seventeenth-Century Spanish Town, Jamaica: Building an English City on Spanish Foundations," *Early American Studies* (Fall 2008): 347.

<sup>73</sup> Reps, 41-42; Robertson, "Late Seventeenth-Century Spanish Town": 357.

In addition to meeting the specifications for selecting a town site, the Spanish colonists also followed certain design criteria. For instance, Spanish Town was constructed on a grid pattern consisting of mostly one storey houses, administrative buildings and a few churches. After the conquest of Jamaica, English soldiers inhabited Spanish Town while fighting the Spanish colonists that refused to leave the island along with the Maroons who were African slaves that joined the Spanish resistance movement. The English newcomers were surrounded by unfamiliar design elements upon their occupation of Spanish Town, which included large lots similar to an urban block organized around shared courtyards connected by narrow streets and with two open public squares. According to the observations of English Captain William Jackson, the houses in Spanish Town “stand somewhat sepperated one from another by which means it taketh up farr more roome than thrice ye number of our compacted buildings in Europe.” English colonists were not accustomed to houses on spacious lots but rather to narrow lots with the main shopping areas and public buildings typically facing the primary streets in English towns.<sup>74</sup>

The English retained Spanish Town as the island’s seat of local government and the town’s population swelled during Assembly meetings and court sessions. According to historian, James Robertson, the habitation of Spanish Town marks the first time the English “took over a foreign townscape and then tried to fit it to their presuppositions.” For instance, the English destroyed many of the small Spanish churches and transformed them as well as other buildings for government purposes and used the common square for

---

<sup>74</sup> Vincent T. Harlow, ed., “The Voyages of Captain William Jackson (1648-1645),” in *Camden Miscellany XIII*, 3d ser., 34 (1924): 18, quoted in Robertson, “Jamaican Architectures”, 88.

militia training.<sup>75</sup> Although Spanish Town already existed, the English colonists were compelled to build a town near the harbor to take advantage of Jamaica's central trading location in the Caribbean as well as one that truly embodied the English way of life.

A profitable location was the most important aspect of town planning in the minds of the English, and colonists, especially merchants, valued sites near popular trading routes. Colonists desired to take advantage of Jamaica's central location in the Caribbean, and the appeal of the harbor attracted them to the future site of Port Royal. The town of Port Royal was situated on fifty-two acres of sandy ground at the end of a ten mile extension of sand and gravel from the mainland, known as the Palisadoes. This land created a barrier between the harbor and the Caribbean Sea, although Port Royal resembled an island with a small stretch of sand connecting it with the rest of the Palisadoes.<sup>76</sup> Contemporary Richard Blome described the site of Port Royal as "exceeding narrow, and nothing but a loose Sand, so that it affords neither Grass, Stone, fresh Water, Trees, nor any thing else which could encourage the building a Town upon it, besides the goodness of the Harbour."<sup>77</sup> Jamaica is one of the largest Caribbean islands with a geographically diverse landscape including the Blue Mountains rising to an elevation of six thousand feet with half of the land below one thousand feet at the coastal plains.<sup>78</sup> Establishing a settlement at the end of the sandspit was primarily an economic decision for the British because they envisioned the possibilities for trade that existed in

---

<sup>75</sup> Robertson, "Seventeenth-Century Spanish Town," 348, 359-61.

<sup>76</sup> Mulcahy "Port Royal," 395-96.

<sup>77</sup> Richard Blome, *The Present State of His Majesties Isles and Territories in America*, (Printed by H. Clark, 1687), 7.

<sup>78</sup> Colin G. Clarke, *Kingston, Jamaica: Urban Development and Social Change, 1692-1962* (Berkeley: University of California Press, 1975), 1.

the deep water harbor, so colonists followed their inherited ideas about building towns near lucrative trade routes and crammed onto the most ill-suited landscape on the island.

Colonists did not settle on the edge of the sandspit for an easy way of life, because nothing about living on the point was convenient. A primary example of the difficulties posed to colonists was the lack of fresh water. Only salt water was readily available in Port Royal, so a normal part of everyday life included the transportation of fresh water by boat across the harbor from the Rio Cobre River. Colonists also imported almost everything including clothing, food, and building materials. As a result, a steady trade route with North American colonies was established, as well as illicit trading with the Spanish. Ultimately, the riches gained from trade and plunder outweighed the lack of readily available materials to meet the colonists' basic needs, and this wealth led to Port Royal's rise as the most populated English colony next to Boston.<sup>79</sup>

Port Royal's inconvenient location also affected the town's ability to house the local colonial government. Merchants convinced the first Assembly in 1664 to meet in Port Royal instead of in the interior Spanish Town. However, the trek to Port Royal was so distant and difficult for the planters that they objected to meeting there and were successful in moving the business of the government back to Spanish Town. The fact that Spanish Town, instead of the primary harbor town of Port Royal, housed the colonial government was unlike other English settlements. Typically, the primary port and leader in trade was also the seat of government.<sup>80</sup> One can assume that this separation of commerce and government was acceptable to the various colonial factions because government leaders continued to populate Spanish Town, while merchants and others

---

<sup>79</sup> Zahedieh, "Merchants of Port Royal," 570.

<sup>80</sup> Robertson, "Late Seventeenth-Century Spanish Town," 368, 389.

involved in trade continued to populate the cramped, sandy area of Port Royal despite its natural limitations and inability to house the local government.

The town of Port Royal was originally called Point Cagway and developed as the site of Fort Cromwell, later renamed Fort Charles, after Charles II was restored to the English throne. During this time, Nicholas Keene surveyed the land near the fort that would become the future hub of Jamaica. Port Royal grew rapidly and by 1658 three rows of houses existed, along with several public buildings, and the attractive harbor side lots were becoming scarce. Sir Thomas Lynch, who served as governor of Jamaica described the town as:

seated on the extreme end of the Point, containing in itt about 200 houses... This is the place where all merchants, strangers and saylers reside as being the seate of trade... whither resort all the men of warre that frequent the pointe, which makes houses soe deare that an ordinary house in this towne is worth £40 or £60 per annum.<sup>81</sup>

This description indicates that even by 1660, Port Royal's convenient location for trade attracted various types of individuals and that prime real estate in the bustling new town was already becoming a precious commodity.

Port Royal's population grew tremendously after its establishment as a base for privateers to raid and plunder Spanish ships. English ideology surrounding town building and tight living arrangements increased the need for additional space for trading, which led to the development and extension of wharves along the waterfront of Port Royal.

Merchants desired the wharves to unload their imported goods and wares from incoming

---

<sup>81</sup> Lynch's 31-page report, (?) November 1660, *Calendar of State Papers 1574-1660*, 57, quoted in Pawson and Buisseret, 12-13.

ships, which could dock at the wharves in the deep harbor. To accomplish this feat, residents obtained rights to “shoal water” from local officials to extend their wharves, and colonists would transport rocks from the mainland to make the sea floor more stable for the expansion of the wharves. According to one observer “the part of Land whereon Port Royal was built, was always encreasing since first inhabited.”<sup>82</sup> Colonists were notorious manipulators of their New World environments in order to create a landscape similar to their homeland, and Port Royal was no exception.

Port Royallers were not strangers to natural disasters such as earthquakes and storms. In 1683 and 1684, flooding from storms damaged buildings and caused a large channel to form through the middle of the town, which was described by John Taylor as “soe deep and large that ferry boats rowed to and fro therein, by which the Point was in great danger of being lost.” After the storms abated, colonists responded by repairing and rebuilding the damaged structures.<sup>83</sup> Evidently, the floods experienced by the Port Royallers did not influence them enough to change the location of their seaside town. This illustrates their persistence in maintaining a familiar way of life by remaining close to profitable trade routes. Their inheritance outweighed their experiences, and the colonists continued in their established living patterns. More specifically, in the flood examples, the colonists were influenced by the severity of the event, which is of central importance regarding the effects of nature on the colonists in Port Royal. Obviously the colonists did not perceive the floods as a serious enough threat to relocate to another town, and therefore, the lack of severity determined the way in which they responded.

---

<sup>82</sup> Sloane, 91.

<sup>83</sup> Mulcahy, “Port Royal,” 400; Taylor, ed. Buisseret, 114.

However, the severity of the 1692 earthquake shook them into reconsidering the placement of Port Royal at the edge of the sandy point.

The devastating earthquake was unlike any other natural event that occurred since the English colonization of Jamaica, and news of the earthquake did not reach Britain instantaneously. The British records regarding the colonial governments, compiled in a collection referred to as the *Calendar of State Papers*, is one source available to analyze the aftermath of the earthquake. The first reference to the earthquake by the Jamaican colonial government was on June 20, 1692, approximately two weeks after its occurrence.<sup>84</sup> Before Britain even heard of the disaster, Jamaica underwent numerous aftershocks, a lack of food, water, and shelter, and remained virtually defenseless after the destruction of the forts in Port Royal. Deadly diseases and sanitation issues also accompanied the aftermath of the earthquake. After the earthquake, and prior to his arrival, newly appointed Governor William Beeston requested weapons, ammunition, ships, tools for rebuilding the city, and foot soldiers for protection.<sup>85</sup> William Beeston arrived on the island on March 9, 1693, and, in a letter to the British government on March 22, 1693, Beeston described the island as in a “ruinous condition and the people have been very sickly...earthquakes, sickness, and desertion have left the country very bare of men.”<sup>86</sup> Beeston’s previous description of Jamaica was written almost one year after the disaster, which illustrates the obstacles faced by the colonists who wanted their

---

<sup>84</sup> President and Council of Jamaica to Lords of Trade and Plantations, 20 June 1692, *Calendar of State Papers Colonial Series, American and West Indies, 1689-1692* 13, Public Record Office, (London: Mackie and Co., 1901).

<sup>85</sup> Colonel Beeston’s proposals as to Jamaica, 19 August 1692, *Calendar of State Papers Colonial Series, America and West Indies, 1689-1692* 13, Public Record Office, (London: Mackie and Co., 1901).

<sup>86</sup> Lieutenant-Governor Sir William Beeston to Earl of Nottingham, 22 March 1693, *Calendar of State Papers Colonial Series, American and West Indies, 1693-1696* 14, Public Record Office, (London: Mackie and Co., 1903).



basic needs of food, water, and shelter met, along with the inability to reduce the impact of disease on the population that survived the initial earthquake.

After the earthquake, the Council of Jamaica decided to move the town to a new location across the harbor from Port Royal to the Liguanea Plain, which was the future site of Kingston. Governor Beeston faced the monumental task of leading the recovery efforts when he arrived in the colony in March 1693. Ironically, prior to Beeston's arrival in Jamaica, the attorneys who managed his business affairs while he was in England sold two hundred acres that Beeston owned on the Liguanea Plain to the Council of Jamaica for the settlement of displaced Port Royallers at the new town site.<sup>87</sup> In an account by Dr. Christopher Love Morley, he recorded that people began moving to Kingston immediately after the earthquake but "dyed miserably in heaps" from inadequate shelter, disease, and lack of food, water, and medicine, which gave Kingston the reputation of being an "unhealthy Place."<sup>88</sup> In spite of this unfavorable opinion, many colonists settled at the new town named Kingston very quickly after the earthquake. The Minutes of the Council of Jamaica from August 9, 1692 reveal that "the Draught laid out by Mr. John Goffe of the Town of Kingston in the parish of St. Andrews and now produced and showne to this board is allowed and approved of."<sup>89</sup> The town plan for Kingston is usually attributed to Colonel Christian Lilly mostly due to the existence of a 1702 map of the town that he prepared which included the lot assignments and street names. Although the earliest map of Kingston is documented in 1702, the

---

<sup>87</sup> Minutes of Council of Jamaica, 28 June 1692, *Calendar of State Papers, Colonial Series, America and West Indies, 1689-1692* 13, Public Record Office (London: Mackie & Co., 1901).

<sup>88</sup> Sloane, 100.

<sup>89</sup> Minutes of Council of Jamaica, 9 August 1692, *Calendar of State Papers, Colonial Series, America and West Indies, 1689-1692* 13, Public Record Office (London: Mackie & Co., 1901), quoted in J. G. Young, "Who Planned Kingston?" *Jamaican Historical Review* 1 (1946): 146.

evidence from the Council of Jamaica indicates that the idea of establishing Kingston as an alternative site to Port Royal was evident just a few months after the disastrous earthquake.<sup>90</sup>

Town planning was a phenomena occurring throughout the British Atlantic world in the seventeenth-century, including the North American colonies of Charles Town in 1672 and Philadelphia in 1682.<sup>91</sup> The town of Kingston was planned with a “conscious effort at improvement” and landowners from Port Royal were given preference in lot selections if they chose to relocate. The plans for Kingston included a rectangular grid characterized by straight, wide streets and a common square in the middle referred to as the Parade, which had an uncanny resemblance to the design of Spanish Town.<sup>92</sup>

Designing towns was a common practice among the colonial English, and town building was central to their permanency in the tropics. The naming of streets was not widely practiced by the Spanish, but this practice helped English colonists establish a sense of familiarity and order. The English colonists in Spanish Town simply referred to the streets by landmarks or residences, such as the street near the “Red Church,” which further illustrates the strangeness of Spanish Town to the English.<sup>93</sup> Another indicator that Kingston was established as a result of the earthquake was the use of familiar Port Royal names for the new street names of Kingston, such as King Street, Queen Street, and Port Royal Street, which was fittingly the street closest to the trading wharves.<sup>94</sup>

Additionally, many of the streets in Kingston were named after members of the Council

---

<sup>90</sup> Young, 144-45, 150; Clarke, 8.

<sup>91</sup> Bridenbaugh, 12-13.

<sup>92</sup> Dunn, 297.

<sup>93</sup> Robertson, “Late Seventeenth-Century Spanish Town,” 382-383.

<sup>94</sup> Clarke, 8-9.

of Jamaica, such as White Street for John White, President of the Council of Jamaica at the time of the earthquake.<sup>95</sup> Despite the effort of many to establish a new town, differing opinions existed as to the best path of recovery for the English colonists.

Many proponents of the move believed that Kingston was a safer and healthier location for the town. However, strong opposition to abandoning Port Royal existed, mostly from the merchants who thrived near the strategically located harbor. The Council of Jamaica compromised with the differing factions and decided that both sites could develop simultaneously.<sup>96</sup> After Beeston returned as governor, he reassumed private ownership of the planned site at Kingston because the Council of Jamaica did not have the power to purchase land. This arrangement was also more personally lucrative to Beeston who then sold the lots privately. He accelerated the settlement of Kingston by formally establishing it as a parish in 1693 and relocating several colonial offices there as well.<sup>97</sup> As a result of the 1692 earthquake, many colonists desired to live in a seemingly safer site, and, therefore, founded Kingston. The development of Kingston as an alternate colonial town illustrates the gradual adaptation of colonists to their tropical surroundings. Throughout the establishment of both Port Royal and Kingston, it is abundantly clear that the English equated the existence of towns to civilization.

English historian Charles Phythian-Adams notes that “the residential pattern thrown up by each successive generation...must be regarded as deeply expressive of

---

<sup>95</sup> Young, 151-52.

<sup>96</sup> Cundall, 60.

<sup>97</sup> Young, 145-47; Clarke, 5, 9.

contemporary social values.”<sup>98</sup> The settlement pattern in Jamaica illustrates what English colonists deemed most important in their respective societies. English colonists adapted to the existing design of Spanish Town’s narrow streets and open courtyards in the interior of Jamaica to house their administrative offices, but found it necessary to establish a bustling seaport town in the center of trading action at Port Royal according to their “English” guidelines for settlement. However, after the 1692 earthquake sunk half of Port Royal into the sea, colonists responded by seeking a safer alternative site for settlement.

The founding of Kingston illustrates that the survivors adapted to their circumstances after experiencing the earthquake and its aftermath yet also retained fundamental English ideas about town design. Kingston was still founded on the notion of location, which consisted of a convenient site near valuable ocean trade routes. However, views of town planning were slightly modified to include the utilization of a gridded town plan with wider streets and a central square, which exemplified their new experiences in the Caribbean. In essence, the planning of Kingston was a mixture of English and Spanish influence despite the fact that the English were unimpressed with the design of Spanish Town. Kingston was designed to better suit the environment, and undoubtedly improved upon the design of Port Royal.

Historian Jack Greene notes that the new Caribbean societies were “bound together by little more than their common British heritage and their eagerness to exploit

---

<sup>98</sup> Charles Phythian-Adams, “Introduction: An Agenda for English Local History,” ed. *Societies, Cultures, and Kinship, 1580-1850: Cultural Provinces and English Local History* (Leicester, 1993), 6, quoted in Robertson “Late Seventeenth-Century Spanish Town,” 349.

their new environments.”<sup>99</sup> Greene’s argument that colonists remained English after inhabiting the New World remained evident in their establishment of another harbor side town, but the colonists also had to adapt at a faster rate after the earthquake. The establishment of Kingston in response to the 1692 earthquake accelerated its development in an orderly design and provided a more organized and permanent location for habitation. However, the fact that the English established a settlement in Kingston, and altered its design to incorporate a few of the Spanish design elements, points toward adaptation from their learned experiences along with an attitude toward improvement. Ultimately, the earthquake was a catalyst in the process toward replication of British society in Jamaica.

---

<sup>99</sup> Greene, 164-5.

## CHAPTER IV

### THE JAMAICAN COLONISTS' RESPONSE TO THE DECLINE OF BUCCANEERS AND SMALL PLANTERS

The English colony of Jamaica differed from other Caribbean colonies because the development of a sugar based economy did not progress as rapidly. For instance, the colony of Barbados was already accustomed to a plantation economy, not immediately after its founding, but by the time the English captured Jamaica in 1655. In the early years, Jamaica acquired a reputation as a colony that traded and plundered for its economic wealth and as a place where “few come particularly or only to plant, but to merchandize.”<sup>100</sup> Jamaica was viewed by many as an island filled with opportunity for both trade and agricultural pursuits, therefore, the colony’s economy grew in different sections along geographic lines. Port Royal in its strategic seaside location developed by interacting with various nations through trade, while Spanish Town was the center of Jamaica’s agricultural growth.<sup>101</sup> Historian Richard Dunn described Jamaica as a “dual development” and these opposing interests eventually collided which resulted in conflict for the new colony.<sup>102</sup> The inherited hatred of the Spanish and the desire for riches, along with the idea that the Caribbean islands held agricultural promise, resulted in Jamaica’s dual economy.

In Dr. Sloane’s account of his travels to Jamaica, he noted that “The Spaniards are very barbarous to all Nations in these parts where they are superior. They think they

---

<sup>100</sup> Zahedieh, “Trade,” 214-15.

<sup>101</sup> Robertson, “Jamaican Architectures,” 75.

<sup>102</sup> Dunn, 154.

have the only right to the West-Indies.”<sup>103</sup> This sentiment that existed between Spain and England, along with England’s desire for part of the riches that Spain had unearthed in the New World, led to England’s persistence in colonizing the Caribbean. Some of England’s attempts at colonization failed due to their close proximity to Spanish holdings and the strength of the Spanish forces, such as on Providence Island which was overtaken by the Spanish in 1641. Jamaica’s central geographic location in the Caribbean positioned the colony as an ideal springboard to the nearby Spanish holdings without being too close. Ultimately, this location was the most valuable aspect to the early development of the colony, because, according to Francis Hanson, they were able to “drain the benefits of [the Spaniards’] Gold and Silver Mines without their Labour and expences.”<sup>104</sup>

In contrast to the sugar colony of Barbados, English Jamaica, and, more specifically, Port Royal, initially became wealthy due to many of the illicit activities of the buccaneers. Several factors combined to feed the buccaneering culture that developed in Port Royal. Jamaica held great promise as an agricultural island due to its large size, so thousands of poor white settlers immigrated from Nevis and other islands in the Lesser Antilles. The reality of high death rates among newcomers provided colonists with an incentive to earn quick profits. Estimates indicate that, out of the 12,000 individuals who arrived in Jamaica during the first six years, only 3,470 remained in

---

<sup>103</sup> Sloane, *Voyage to the Islands*, 1:lxxxvii, quoted in Kriz, 56.

<sup>104</sup> Violet Barbour, “Privateers and Pirates of the West Indies,” *The American Historical Review* 16, no. 3 (Apr., 1911): 538; Dunn, 17; Hanson, The Preface.

1661. Planting was also difficult work, and many of these immigrants were attracted to the quick and lucrative returns of the buccaneering lifestyle and joined their ranks.<sup>105</sup>

Political factors also worked to create a hospitable environment for buccaneering. Governor Edward D'Oyley first encouraged the development of buccaneering by inviting 250 of the buccaneers inhabiting the island of Hispaniola to establish their raiding base at Port Royal in 1657. The need for protection, particularly against the Spanish, prompted this invitation to the buccaneers, because the new island colony suffered from a lack of manpower due to the recent ejection of the Spanish in 1655 and the decimation of English soldiers from tropical disease.<sup>106</sup>

Sir Thomas Modyford was another political figure who promoted the buccaneering lifestyle in Port Royal during his governorship of Jamaica from 1664-1671. Governor Modyford requested that the buccaneers openly attack the French, Dutch, and Spanish for the crown at various times throughout his leadership on the island and he did so legally by granting commissions to legitimize the buccaneers' activities. One of the most famous privateers was Sir Henry Morgan, who earned great recognition through his lucrative raids against Spanish cities and ships. Morgan's efforts resulted in the recovery of large amounts of booty, which found its way into the streets of Port Royal, leaving the entire island richer along with large amounts of coins to use as currency. Buccaneering was an attractive livelihood, because in one of Morgan's raids each of the three hundred men received £60, which was at least double the annual plantation wages. Not only was buccaneering profitable for the active participants, but it was also lucrative for Governor

---

<sup>105</sup> Dunn, 150, 153.

<sup>106</sup> Nuala Zahedieh, "'A Frugal, Prudential and Hopeful Trade'. Privateering in Jamaica, 1655-89," *Journal of Imperial and Commonwealth History* 18, no. 2 (1990): 151.



Modyford, who admitted to receiving £1,000 per year from the expeditions. Governor Modyford lorded over Jamaica like a colonial king with freedom unlike any governor possessed, until he was removed from the position due to the continual and significant buccaneering raids against the Spanish. These raids were not condoned by London, because the Treaty of Madrid established a formal peace agreement between the nations, including Spain's recognition of England's Caribbean land holdings.<sup>107</sup>

Sir Henry Morgan also became very rich from the Spanish raids, and he invested the funds that he acquired from buccaneering into a plantation that was worth over £5,000 at his death. The example of Henry Morgan's reinvestment from buccaneering proceeds illustrates that plundering the Spanish also provided the capital necessary to expand agricultural pursuits in Jamaica.<sup>108</sup> Ironically, when Sir Henry Morgan was appointed lieutenant governor of Jamaica, piracy was illegal, and he hanged buccaneers for the same activities that brought him fame and fortune.<sup>109</sup> It was obvious to those living in Port Royal that the island "chiefly advanced its wealth" with "vast sums of money and plate brought in hither by the English privateers...from the Spaniards."<sup>110</sup>

Port Royal was the place to be in Jamaica for bustling activity, and trade provided most of the stimulus for this activity. Francis Hanson described Port Royal as "the Storehouse or Treasury of the West-Indies" and likened it to "continual Mart or Fair where all sorts of choice Merchandizes" were imported and exported in exchange for

---

<sup>107</sup> Dunn, 156; Zahedieh, "Trade," 216; Pawson and Buisseret, 27; Barbour, 562.

<sup>108</sup> Zahedieh, "Trade," 221.

<sup>109</sup> Henry Morgan to William Blathwayt, 2 June 1681 and 8 March 1681/82, *The Blathwayt Papers of Colonial Williamsburg* 19, Jamaica, 1678-1800, quoted in L.J. Cappon, "The Blathwayt Papers of Colonial Williamsburg," *The William and Mary Quarterly* (1947), 323; Pawson and Buisseret, 31, 35.

<sup>110</sup> Taylor, ed. Buisseret, 89.

gold and silver in various forms.<sup>111</sup> Hanson's description highlights the central role of Jamaica and more specifically Port Royal in trading with other nations for precious metals to increase the colony's, and in turn, the empire's wealth. Port Royal was the center of trade for the island, which is evident by the wharves built almost the entire length of the town, next to the deep water harbor so that the large ships could easily load and unload cargo into and out of the storehouses.<sup>112</sup>

Additionally, merchants inhabited many of the choicest properties with ease of trade in mind.<sup>113</sup> Prior to the earthquake in 1687, contemporary observer John Taylor noted that Port Royal had developed to a level in which merchants lived "to the height of splendor, in full ease and plenty, being sumptuously arrayed, and attended on and served by their Negro slaves."<sup>114</sup> This observation illustrates that the wealth of merchants was a direct result of the healthy trade that existed, which was clearly evident to those inhabiting Port Royal. Not only were merchants wealthy citizens of Port Royal, but they were also quite numerous, with almost half of the probate inventories prior to the earthquake designating the deceased as a "merchant."<sup>115</sup>

Another source of revenue for merchants was the contraband trade carried on with the Spanish colonies in sparsely populated cays and harbors. However, England provided manufactured goods that the Spanish colonies needed, so this too became an active trade. For example, the Jamaica Naval Officer's returns from the 1680's recorded that half of the ships that entered Port Royal Harbor sailed on to Spanish holdings. All ships that

---

<sup>111</sup> Hanson, The Preface.

<sup>112</sup> Pawson and Buisseret, 83.

<sup>113</sup> Pawson and Buisseret, 97.

<sup>114</sup> Taylor, ed. Buisseret, 238.

<sup>115</sup> Zahedieh, "Merchants," 570.

entered the harbor were required to be recorded, but due to the Navigation Acts, only the ships traveling to English markets were required to be recorded upon exiting the harbor. The asiento trade was also an extremely lucrative trade in which the Spanish purchased African slaves from the English, who often charged an extra thirty-five percent for protection during delivery. Although the English government could not publicly voice their support of this trade with Spanish markets, it was very beneficial to the empire, but most especially to the merchants and those living in Port Royal.<sup>116</sup>

Upon its founding, Port Royal was also viewed as a place for second sons and lower class individuals, such as servants, who desired an opportunity for property ownership. In addition to Governor Thomas Modyford's support of the buccaneers, he also played a significant role in the expansion of plantation agriculture by issuing land patents to colonists as a way to encourage settlement. During the process, he also issued over 20,000 acres of land to himself and his family members.<sup>117</sup> Many of the men who received land patents also advanced their fortunes by engaging in trading operations. Governor Modyford was the only planter who immediately set up a successful plantation in Jamaica, because he acquired wealth from his sugar plantation in Barbados, and then transitioned to Jamaica.<sup>118</sup> Plantation agriculture was eventually dominated by mostly wealthy and affluent people, because they could afford to "weather" the bad times, such as poor crops or natural disasters and could afford to import numerous slaves to work the plantations. By the eighteenth-century, it became evident that the most successful

---

<sup>116</sup> Zahedieh, "Trade," 218; Zahedieh, "Merchants," 570, 572, 576-8, 589-91.

<sup>117</sup> Dunn, 154-6.

<sup>118</sup> Zahedieh, "Trade," 214.

plantations were those that began during the first decade after Jamaica's founding by the "chief and principal gentlemen" of the island.<sup>119</sup>

In the beginning, the English colonists were hesitant to make a large investment in agriculture, because enormous returns on sugar investments were not as prevalent as during the early days of Barbados sugar production. The business of plantation agriculture also required great capital to begin, along with an investor's ability to wait at least three years for profitable returns. Despite this daunting reality, many colonists invested in plantation agriculture, which is evident by the growth in Jamaican sugar plantations. In 1671, only 57 sugar plantations were established, but by 1685 over 246 sugar plantations existed. According to the records kept in Jamaica regarding legal exports to the English colonies, the rate of sugar exports increased from 1,000 hogsheads in 1672 to approximately 12,000 hogsheads by 1689.<sup>120</sup> Although many colonists were involved in the production of sugar and other commodities prior to the earthquake, the economic focus of the island was not centered on sugar profits, which was an industry still in its "infancy" at the time of the earthquake.<sup>121</sup>

Jamaica was a promising place for planters in addition to buccaneers and merchants, but great conflict existed between the groups. John Styles, an opponent to Governor Modyford's support of buccaneering efforts on the island, complained that "the settlement of Jamaica will never be in a better condition without a speedy supply from England of Christian planters, not merchants."<sup>122</sup> Planters focused on obtaining profit

---

<sup>119</sup> Dunn, 176; Taylor, ed. Buisseret, 127.

<sup>120</sup> Zahedieh, "Trade," 207, 209, 211-12.

<sup>121</sup> Zahedieh, "Merchants," 570.

<sup>122</sup> "The survey of the island of Jamaica," 7 of 14 January 1669, *Calendar of State Papers, America and the West Indies, 1669-74*, quoted in Pawson and Buisseret, 32.

from their agricultural pursuits were very disgruntled when the Spanish refused to trade with them due to the buccaneer raids. The planters also had difficulty maintaining a labor force, because many of their indentured servants would vanish to the buccaneer ships. Not only were planters upset about the disruption in trade, but they also felt that the merchants in Port Royal charged exorbitant rates for shipping their products to other markets. In essence, the illegal activities of the buccaneers cost the planters money and a stable labor force, so their goal was to eliminate the buccaneers from the island and to find other shipping partners in England rather than employ the local Port Royal merchants. According to Governor Vaughan, the Port Royal merchants aligned themselves with the buccaneers and the planters sidestepped the Royal African Company to obtain slaves from other ships, so the groups were pitted against one another.<sup>123</sup>

Another source of political tension between the merchants and planters was Spanish Town's role as host for the courts and government. Planters desired the Spanish Town location, because travel was easier for them and this location helped to maintain the balance of power between the merchants and planters. The merchants insisted that the economic livelihood of the colony was based in Port Royal, and ultimately, that Spanish Town was not as important. After the Assembly held a meeting in Port Royal in 1664, the planters argued that "St. Jago de la Vega is in the heart of the country, and more easy for the planter to come at, whereas the other is situate on a point far out at sea." The accommodations were better suited in Spanish Town for holding large meetings, so the courts and the Assembly remained headquartered in the inland town and

---

<sup>123</sup> Dunn, 150-8.

thereby gave the planters more control.<sup>124</sup> The previous example indicates that continual strife existed between planters and those of the trading profession, including merchants and buccaneers, in the areas of both economics and politics. Thomas Doolittle noted, earthquakes make “no difference betwixt the Rich and the Poor, but swallows up all, and their Mony too, and this in a few Minutes,” which indicates that although tensions were high between the competing factions, the earthquake abruptly halted the power struggle.<sup>125</sup>

On June 7, 1692, the entire island of Jamaica felt the earthquake but only fifty people were killed throughout the island in comparison to the two thousand at Port Royal.<sup>126</sup> Plantations were also affected by the earthquake, and contemporary Edmund Edlyne observed that “all the buildings were thrown down in ye island, with the sugar- and indigo-works.”<sup>127</sup> Other areas such as Spanish Town were also damaged during the earthquake, which is evident from an account by the Quakers who left their meeting house because of the “ground waving like to a sea” and they “could not stand but beheld the walls and houses shake, as a man would shake a twig, till they were laid flat around us.”<sup>128</sup> These accounts illustrate that the destruction from the earthquake was not limited to Port Royal and was experienced by all of Jamaica’s inhabitants.

Port Royal, however, experienced the bulk of the damage from the earthquake resulting in the loss of over half of the town’s fifty-two acres, which sank into the sea.

---

<sup>124</sup> *Journals of the Assembly of Jamaica* 14 vols. (Spanish Town, 1795-1829), 1:2, 20 (October 1664), quoted in Robertson, “Late Seventeenth-Century Spanish Town,” 360; Robertson, “Late Seventeenth-Century Spanish Town,” 368.

<sup>125</sup> Doolittle, 48.

<sup>126</sup> Pawson and Buisseret, 120-21.

<sup>127</sup> Edmund Edlyne to William Blathwayt, 20 June 1692, In *The Blathwayt Papers of Colonial Williamsburg, The Jamaican Historical Review* (1971), 61.

<sup>128</sup> Joseph Norris to Richard Hawkins, 20 June 1692, ed. Henry J. Cadbury, “Quakers and the Earthquake at Port Royal, 1692,” *The Jamaican Historical Review* viii (1971): 21.

The earthquake was extremely devastating to the shipping and trading professions that used Port Royal as their chief port of call. One contemporary of the earthquake noted:

All those Streets which were next the Water, towards the harbor-side, where there were excellent Wharfs close to which Ships of 700 Tunn might lie and deliver their Loading, where were the best Store-houses and Conveniences for Merchants, where were brave stately Buildings, where the Chief men of the Place liv'd, and which were in all respects the principal parts of Port-Royal, now lie in Four, Six, or Eight Fathom Water.<sup>129</sup>

This account of the destruction to the principal streets and wharves for trade and shipping illustrates how the loss of prime real estate in Port Royal affected the economic livelihood of the colony, which was primarily based on trade and buccaneering.

The intense and devastating environmental effects of the earthquake presented the remaining inhabitants of Jamaica with numerous challenges for survival. Settlements and plantations were destroyed from the movements of the earth and mountains, while the shocks also disrupted the Rio Cobre River with debris that clogged the waterways. According to one observer, the fresh water that originated from the Blue Mountains failed to flow down the rivers for at least an entire day.<sup>130</sup> The destruction to the natural environment negatively affected the colonists and was one more challenge they faced in the race for survival after the earthquake.

The aftermath of the 1692 earthquake could be considered by many worse than the actual earthquake itself. One Port Royal survivor of the earthquake noted, “We have had a very great Mortality since the great Earthquake (for we have little ones daily)

---

<sup>129</sup> Sloane, 90.

<sup>130</sup> Sloane, 84.

almost half the People that escap'd upon Port-Royal are since dead of a Malignant Fever, from Change of Air, want of dry Houses, warm Lodging, proper Medicines, and other Conveniencies." This report regarding Port Royal describes the harsh living conditions present after the earthquake, including the colonists' lack of basic necessities. Disease and death were rampant after the earthquake due to unsanitary living conditions, which consisted of decomposing bodies and polluted water supplies. The shocks of the earthquake disturbed the graveyard at Port Royal and many bodies floated freely in the harbor and by some were "thought to add something to the Unhealthfulness of this Place."<sup>131</sup>

Government aid to earthquake ravaged areas at this time was practically non-existent due to delayed communication and travel, as well as a lack of infrastructure designed to assist with natural disasters. Another obstacle to obtaining relief from Britain in the colonies during the seventeenth-century included an emotional disconnect between the British people who lived an ocean apart from the colonists. Subjects who resided in London, for example, did not take great interest in the welfare of the colonists at this time. As a result of a lack of information, they did not have an understanding of the natural calamities the colonists experienced. Relief aid in the seventeenth-century came predominantly from local entities, such as churches, and charity briefs were a long-standing method used to petition donations for disaster victims.<sup>132</sup> Religious groups played a large role in providing local aid for their congregations. For instance, the colony of Jamaica was home to a group of Quakers, and after the earthquake struck, Quakers

---

<sup>131</sup> Sloane, 83, 100.

<sup>132</sup> Mulcahy, *Hurricanes*, 144, 151-161.



from London provided relief to their stricken counterparts.<sup>133</sup> The post-earthquake conditions were extremely difficult to overcome in 1692, because natural disaster aid was virtually non-existent compared to present-day standards.

The physical demise of Port Royal during the 1692 earthquake, also brought the demise of the buccaneering profession, which was one of the predominant and most lucrative professions in Jamaica prior to the earthquake. Buccaneering raids and illegal trade were the primary ways in which Port Royal prospered in its first few decades. The planter class was gaining political momentum prior to the earthquake, and they were trying to destroy the buccaneers' livelihood, as well as the buccaneers' reputation on the island. The reputation of the buccaneers was in a state of decline by the time the earthquake struck the island and destroyed their physical space at Port Royal. However, the sudden destruction of the buccaneers' base by the earthquake nailed the coffin shut on the buccaneering tradition at Port Royal, and resulted in the buccaneers' relocation to other islands in order to continue their illegal activities.<sup>134</sup> The transition to a society dominated by large sugar planters, with agriculture as the primary economic factor on the island, was accelerated by the removal of the buccaneers from Port Royal due to the earthquake.

The earthquake not only destroyed the physical environment, but it affected every area of life in colonial Jamaica. Port Royal was the central trading hub for the colony, and the demise of this port affected the wealth of the colony, as well as the ability to import and export goods. Colonists involved in agriculture were negatively affected, particularly the small planters, who relied upon the Port Royal market place to sell their

---

<sup>133</sup> Cadbury, ed., "Quakers," 30.

<sup>134</sup> Pawson and Buisseret, 36.

provisions, such as cotton, indigo, and tobacco, along with other produce and livestock. The issue of declining markets for these products tremendously hurt the small planters.<sup>135</sup> Towns and trade were central to the identity of English colonists, and without a trading market in Port Royal, many of the small planters were unable to survive the aftermath of the earthquake. As a consequence, the earthquake led to instability, and many small planters were forced to sell their land holdings.

As previously mentioned, death and disease were persistent factors, which also led to instability within the family structure. The havoc that disease and shorter life spans had on the family structure is evident in James Horn's study of seventeenth-century Chesapeake society. Jamaica's already unhealthy tropical reputation was exacerbated by the earthquake, and therefore, like in the Chesapeake, the family structure suffered and inheritance issues abounded.<sup>136</sup> According to historian Trevor Burnard, the high mortality rate and lack of relatives who could inherit the small planters' land holdings, provided opportunities for large planters to purchase the available land and further expand their sugar estates. Additionally, Burnard proposes that the social changes regarding small versus large planters was accentuated by the population decline in white colonists. High mortality rates decreased the ability of white colonists to establish a settler society, because of their lack of immunity to deadly tropical diseases, such as malaria and yellow fever.<sup>137</sup> Ultimately, the 1692 earthquake, accompanied by the high mortality rates from disease in the aftermath, was the first monumental natural disaster

---

<sup>135</sup> William A. Claypole, "The Settlement of the Liguanea Plain Between 1655 and 1673," *The Jamaican Historical Review* 10 (1973): 15.

<sup>136</sup> James Horn, *Adapting to a New World: English Society in the Seventeenth-Century Chesapeake* (Chapel Hill: University of North Carolina Press, 1994), 222-34.

<sup>137</sup> Trevor Burnard, "A Failed Settler Society: Marriage and Demographic Failure in Early Jamaica," *Journal of Social History* 28, no. 1 (Autumn 1994): 69, 73.

that affected the agricultural community in the English colony. The livelihood of these small planters was eventually extinguished due to the earthquake and its effects, which led to their demise, and resulted in the expansion of the wealthy and influential large planters.

The earthquake was an event unique to Jamaica that increased the rate at which Jamaica was able to transition into a planter-dominated society. The large sugar planters prevailed, and with the most resources, they were best able to adapt and survive economically after the earthquake. Buccaneers were a competing force for power and disruption to trade, but the earthquake ended these activities as impediments to trade and progress. The dissolution of the small planters and buccaneers allowed the large planters to establish a supreme presence on the island with the economic focus on agriculture, and more specifically the expansion of sugar production.

In its early years, Jamaica was divided by a dual economy of plundering and planting. When the buccaneers initially arrived in Port Royal, they provided valuable protection, and their profession was the quickest way to earn a living for many inhabitants of the colony. Planting was an arduous process that required money and patience, because returns were not immediate. Experience living on the island revealed that after several decades the profession of buccaneering became a nuisance to other inhabitants attempting long-term work on the island, namely the establishment of plantations. Colonists' experiences also revealed that Jamaica's path to a successful future pointed toward agriculture. Without the earthquake, the large planters' domination of the island could have taken much longer, because the removal of obstacles, such as the

buccaneers and small planters, would not have occurred as quickly, which would have delayed Jamaica's path toward full sugar production.

The colonists' move toward sugar production showed an increased adaptation to their environment, because the buccaneering lifestyle was more dangerous and exemplified a much more unsettled culture, whereas, the dominance of agricultural production resulted in a more settled society. Although sugar planting was more cost-intensive, this endeavor was better suited for the tropical climate. Jamaica's future in sugar production is evidenced by the fact that it became England's richest colony in the eighteenth-century, which allowed the wealthy planters to further emulate the ideal British lifestyle.

The earthquake, high disease and death rates, and the French invasions of Jamaica in 1693 and 1694 were all factors that led to a difficult last decade of the seventeenth-century for British colonists. However, well-situated colonists prevailed against these harsh circumstances and became the largest producers of sugar in the eighteenth-century. Sugar was the commodity that filled the economic void previously filled by legal and illegal trade out of Port Royal. After the earthquake, Kingston residents actively participated in the sugar trade along with the importation of goods, including African slaves to work the plantations. Sugar as the "king of sweets" placed Jamaica on the map and solidified its significance within the colonial British Atlantic world.<sup>138</sup>

---

<sup>138</sup> Thomas Tryon, *Tryon's Letters, Domestick and Foreign to Several Persons of Quality Occasionally Distributed in Subjects* (1700), 221, quoted in Zahedieh, "Trade," 206.

## CHAPTER V

### CONCLUSION

Richard Blome resided in Jamaica prior to the earthquake and provided a report regarding the status of England's colonies and territories, which was published in 1687. In his review, Blome predicted that the island would "in all probability, within a few years become the richest, and the most populous, and potent Plantation in all the West-Indies."<sup>139</sup> Blome was correct in his prediction regarding Jamaica which became England's most profitable colony in the eighteenth-century. Jamaica's success in the early years of colonization was because Port Royal had the best harbor and trading location that "may compare with any in the known world."<sup>140</sup> By the time of the earthquake in 1692, Jamaica had evolved into a swashbuckling center of trade through its central location and strengthened England's presence in the Caribbean. The Port Royal earthquake holds the ranking as the deadliest disaster to ever strike the island. Historian, Matthew Mulcahy, goes as far as to denote the Port Royal earthquake as the "great disaster of the seventeenth-century British Atlantic World."<sup>141</sup>

The 1692 earthquake was a temporary obstacle for most of Jamaica's inhabitants and served as a stimulus for change in the slow and difficult journey toward adaptation. Although the earthquake in hindsight was helpful in many ways during the process of colonial adaptation, this event also began the downward spiral that brought Port Royal to but a shadow of its former glory. Jamaica in the seventeenth-century had the reputation

---

<sup>139</sup> Blome, 13.

<sup>140</sup> Hanson, To the Reader.

<sup>141</sup> Mulcahy, *Hurricanes*, 50.

of being safe from “those strange typhons, or huricanes” until the island was struck by hurricanes in 1712, 1722, 1726, 1744, and 1751.<sup>142</sup> In addition to the numerous hurricanes, a destructive fire in 1703 burned almost all of the buildings in Port Royal. As a result of these disasters, Port Royal never again achieved its population prior to the 1692 earthquake, and was primarily used as a naval station throughout the rest of the eighteenth-century.<sup>143</sup> Jamaica’s treacherous encounters with these disasters during the eighteenth-century further illustrate the precarious and unpredictable natural environment that British colonists living in Jamaica confronted in the Caribbean.

As a way to process these disasters, colonists declared fast days after experiencing a wondrous event that they interpreted as a divine judgment, which also generated conversations regarding repentance.<sup>144</sup> William Corbin preached a sermon on June 7, 1703, in order to commemorate the ruinous earthquake eleven years earlier. Corbin’s sermon also warned the colonists that earthquakes continued to occur on the island because “God hath still a Controversie with us, and loudly calls upon us to Repent of our sins and amend our Lives.”<sup>145</sup> This statement from Corbin’s sermon illustrates how sermons regarding the earthquake focused on the wrath of God for the sinfulness of Jamaica’s colonists and on the need for repentance.

Charles Leslie visited Jamaica during the first half of the eighteenth century and published his experiences in *A New and Exact Account of Jamaica* in 1740. Leslie described how the fasts held on June 7 to observe the Port Royal earthquake were “most devoutly kept.” Leslie further noted that the inhabitants of Port Royal “have at least on

---

<sup>142</sup> Taylor, ed. Buisseret, 119; Mulcahy, *Hurricanes*, 17-18.

<sup>143</sup> Pawson and Buisseret, 123-4.

<sup>144</sup> Hall, 170-1.

<sup>145</sup> Corbin, 2.

these Days the exterior Shew of Religion...for on Sundays, there's little difference to be observed." Leslie's observations indicate that the colonists often considered fast days to be more important than normal Sabbath days. Even almost a century later, individuals were still writing and commenting upon the Port Royal earthquake. For example, William Beckford in his *Descriptive Account of Jamaica* compared the devastating 1780 hurricane to the 1692 earthquake, and observed "there is something tremendously sublime" in considering the devastation caused by both of these disasters.<sup>146</sup> The fact that Beckford is writing about the earthquake in these terms almost a century later indicates the severity of this disaster and how this event impacted the survivors who had passed this information through the generations.

The severity of the earthquake undoubtedly left a lasting impression on the survivors, and unfortunately, questions will remain unanswered about how individual colonists or slaves felt after losing loved ones and family members, or about how their personal grief may have changed them. In many ways, the earthquake epitomized the expectations and life experiences of seventeenth-century English colonists in Jamaica, and propelled the 1690's into a first place ranking for the decade with the highest mortality rate. The rapid destruction caused by the earthquake exemplified the transient nature of life in the Caribbean, because just as quickly as the shocks of the earthquake came and went, so too did colonists' lives change and end. Colonists did not expect anything more of their lives in Jamaica than a fleeting experience characterized by hard living, disease, and ultimately, a premature death. One theory is that colonists'

---

<sup>146</sup> Charles Leslie, *A New and Exact Account of Jamaica* (1740), 306-7, quoted in Mulcahy, *Hurricanes*, 56; William Beckford, *A Descriptive Account of the Island of Jamaica* (London, 1790) 1: 136, quoted in Mulcahy, *Hurricanes*, 60.

realization of their life circumstances may have caused them to lead reckless lives and be callous toward the circumstances of those around them, most notably African slaves who suffered brutal treatment at their hands.<sup>147</sup>

Family structures were undoubtedly broken apart after the earthquake. For instance, family structures were more fluid and expansive with extended kinship networks in the Chesapeake area due to premature death as indicated by Horn.<sup>148</sup> This same theory can be applied to post-earthquake Jamaica and the effect that death had upon the family. For example, Isaac Norris arrived in Jamaica after the earthquake in September 1692 to visit family members who resided there. The day after Isaac Norris arrived in Jamaica, his brother died and several of his other family members had already perished. In a letter to a fellow Quaker, Norris wrote:

I am stript of whatsoever was near to me, my father, brother and sister and of a large family there is now none left of the name but myself. I am as one alone in a wide world though it is uncertain how long I shall continue, for the judgments of God are still against us and multitudes do daily die.<sup>149</sup>

Isaac Norris' story is not unusual and many other accounts exist in which almost entire families were killed in the earthquake and its aftermath. Although Isaac Norris' account illustrates his despair and loneliness regarding the deaths of his family members, the effects of premature death cannot be fully measured due to the difficulty in adapting to

---

<sup>147</sup> Trevor Burnard, "'The Countrie Continues Sicklie': White Mortality in Jamaica, 1655-1780," *The Society for the Social History of Medicine* 12, no. 1 (1999): 52, 68, 70; Burnard, "Failed Settler Society," 77.

<sup>148</sup> Horn, 216.

<sup>149</sup> Isaac Norris to Sarah Eckley, September 1692, ed. Henry J. Cadbury, "Quakers and the Earthquake at Port Royal, 1692," *The Jamaican Historical Review* viii (1971): 27.



the loss of loved ones. However, it is evident that “living with death” was a normal part of life in the seventeenth-century.<sup>150</sup>

Richard Dunn cites the colonists’ unwillingness to change their food, clothing, and shelter as well as their desire to return to England after earning their fortunes on the backs of slaves.<sup>151</sup> Although the British transplants to Jamaica ate familiar food and clung to their layers of clothing does not mean that adaptation did not occur in other areas of their daily lives. Social replication of English customs in Caribbean colonies as a whole may not have occurred for at least a century after colonization. However, colonists also gradually changed their mindsets about the Caribbean environment and began to view many events such as minor earthquakes as a natural process, which also illustrates adaptation. Circumstances unique to a specific location had the ability to increase the rate of adaptation in that particular area.

The traumatic earthquake in Jamaica provided a severe experience for the colonists that forced them to change their normal ways of living. After the earthquake, colonists realized that the familiar English style of building was impractical to withstand natural disasters such as earthquakes, so they incorporated the use of Spanish building materials and styles in order to better withstand the potential environmental threats. Many survivors in Port Royal also learned from their experience in the earthquake that the location of their major port town was unsuitable for surviving the earthquake or other potential natural disasters, and as an alternative, founded the new town of Kingston across the harbor on more solid ground. Also, as a result of the earthquake, the decline of the buccaneers and small planters shifted Jamaica’s previous economic focus from illicit

---

<sup>150</sup> Horn, 217.

<sup>151</sup> Dunn, 263-4.

trade and buccaneering. The decline of these groups positioned larger planters to assume their power and resources, which placed Jamaica in a position to begin large scale production of sugar. The previous changes incorporated by English colonists after the earthquake indicate that their experiences prompted them to adapt to their environment out of necessity, and at a much faster rate due to the severity of their experience.

Unfortunately, disasters of Port Royal's caliber still continue today. One recent example includes the devastating 2010 earthquake in Haiti, a poor nation ill-equipped for handling such a natural disaster. Richard Olson, who is a professor at Florida International University and directs the Disaster Risk Reduction in the Americas project, stated that "Catastrophic disasters open a window of opportunity to fundamentally change how cities are rebuilt."<sup>152</sup> Olson's statement is regarding the twenty-first century Haiti earthquake, but this statement also applies to the seismic event in Jamaica. The earthquake led to changes in the structural design of buildings, the establishment of Kingston as a competing town, and the transition toward a dominant planter culture devoted to agriculture, which highlights the resiliency of the seventeenth-century English colonists, as well as the grueling process of adaptation in Jamaica. The earthquake in Haiti occurred over three hundred years after the Port Royal catastrophe and indicates that the process of adaptation still continues today in the Caribbean as environments are changed by uncontrollable natural disasters, such as earthquakes and hurricanes. Port Royal doctor Christopher Love Morley, remarked that the 1692 earthquake was "so fatal to this place, and to the whole Island, which for its Violence and strange Effects, may perhaps be compared with the greatest, that ever yet happened in the World, and may as

---

<sup>152</sup> Seth Borenstein, "Why Haiti Keeps Getting Hammered by Disasters," *AP Science Writer* (14 January 2010), 3.

well deserve the memory of future Ages.”<sup>153</sup> The Port Royal earthquake and the responses of English colonists to this disaster are undeniably well deserving of our memory for their contribution to future studies of colonial adaptation.

---

<sup>153</sup> Sloane, 89.

## BIBLIOGRAPHY

- Ashcroft, M T. "Tercentenary of the First English Book on Tropical Medicine, by Thomas Trapham of Jamaica." *British Medical Journal*. (August 25, 1979): 475-77.
- Barbour, Violet. "Privateers and Pirates of the West Indies." *The American Historical Review* 16, no. 3 (Apr., 1911): 529-66.
- Blome, Richard. *The Present State of His Majesties Isles and Territories in America*. Printed by H. Clark, 1687.
- Boer, Jelle Zeilinga de, and Donald Theodore Sanders. *Earthquakes in Human History: The Far-reaching Effects of Seismic Disruptions*. Princeton: Princeton University Press, 2005.
- Borenstein, Seth. "Why Haiti Keeps Getting Hammered by Disasters." *AP Science Writer*. <[http://news.yahoo.com/s/ap/cb\\_haiti\\_disasters](http://news.yahoo.com/s/ap/cb_haiti_disasters)> (14 January 2010), 1-3.
- Bridenbaugh, Carl. *Cities in the Wilderness: The First Century of Urban Life in America 1625-1742*. New York: The Ronald Press Company, 1960.
- Burnard, Trevor. "'The Countrie Continues Sicklie': White Mortality in Jamaica, 1655-1780." *The Society for the Social History of Medicine* 12, no. 1 (1999): 45-72.
- \_\_\_\_\_. "A Failed Settler Society: Marriage and Demographic Failure in Early Jamaica," *Journal of Social History* 28, no. 1 (Autumn 1994): 63-82.
- Butler, Jon. "Magic, Astrology, and the Early American Religious Heritage, 1600-1760." *The American Historical Review* 84, no. 2 (Apr. 1979): 317-46.
- Cadbury, Henry J. "Quakers and the Earthquake at Port Royal, 1692." *The Jamaican Historical Review* 8 (1971): 19-31.
- Calendar of State Papers, Colonial Series, America and West Indies, 1689-1692*. Vol. 13. Public Record Office. London: Mackie and Co., 1901.
- Calendar of State Papers, Colonial Series, America and West Indies, January 1693-14 May 1696*. Vol. 14. Public Record Office. London: Mackie and Co., 1903.
- Cappon, L. J. "The Blathwayt Papers of Colonial Williamsburg," *The William and Mary Quarterly* (1947): 321-331.

- Clarke, Colin G. *Kingston Jamaica: Urban Growth and Social Change, 1692-1962*. Berkeley: University of California Press, 1975.
- Claypole, William A. "The Settlement of the Liguanea Plain Between 1655 and 1673." *The Jamaican Historical Review*, vol. 10 (1973): 7-15.
- Corbin, William. *A Sermon Preached at Kings Town in Jamaica Upon the 7<sup>th</sup> of June, Being the Anniversary FAST for that Dreadful Earth-Quake which happened there in the Year 1692*. Printed and sold by William Bradford at the Bible in New York, 1703.
- Crosby, Alfred W. "The Past and Present of Environmental History." *The American Historical Review* 100, no. 4 (Oct. 1995): 1177-89.
- Crow, Francis. Letter to Giles Firmin, 7 March 1687. In "Conditions in Jamaica in 1687," ed. Henry J. Cadbury, *The Jamaican Historical Review* 3 (March 1959): 52-57.
- Cundall, Frank. *Historic Jamaica*. London: West India Committee, 1915.
- Doolittle, Thomas. *Earthquakes Explained and Practically Improved: Occasioned by the late Earthquake on Sept. 8, 1692 in London, many other parts in England, and beyond the Sea*. Boston: Benjamin, Harris, 1693.
- Dunn, Richard. *Sugar and Slaves: The Rise of the Planter Class in the English West Indies, 1624-1713*. Chapel Hill: University of North Carolina Press, 1972.
- Edlyne, Edmund. Letter to William Blathwayt, 20 June 1692. In *The Blathwayt Papers of Colonial Williamsburg*, *The Jamaican Historical Review* (1971): 60-62.
- Gragg, Larry. "The Port Royal Earthquake." *History Today* (September 2000): 28-34.
- Greene, Jack P. *Pursuits of Happiness: The Social Development of Early Modern British Colonies and the Formation of American Culture*. Chapel Hill: University of North Carolina Press, 1988.
- Hall, David D. *Worlds of Wonder, Days of Judgment: Popular Religious Belief in Early New England*. New York: Alfred A. Knopf, 1989.
- Hanson, Francis. *The Laws of Jamaica, Passed by the Assembly, and Confirmed by his Majesty in Council, February 23, 1683*. London: H. Hills, 1683.
- Heath, Emmanuel. *A Full Account of the Late Dreadful Earthquake at Port Royal in Jamaica*. June 22, 1692 and June 28, 1692, 1-2.

- Horn, James. *Adapting to a New World: English Society in the Seventeenth-Century Chesapeake*. Chapel Hill: University of North Carolina Press, 1994.
- Kriz, Kay Dian. "Curiosities, Commodities, and Transplanted Bodies in Hans Sloane's 'Natural History of Jamaica,'" *The William and Mary Quarterly* LVII, no. 1 (January 2000): 35-78.
- Leech, Roger H. "The Prospect From Rugman's Row: The Row House in Late Sixteenth- and Early Seventeenth-Century London." *The Archaeological Journal* 153 (1996): 201-242.
- Link, Marion Clayton. "Exploring the Drowned City of Port Royal." *The National Geographic Magazine* 117, no. 2 (February 1960): 151-82.
- Marx, Robert F. *Port Royal Rediscovered*. New York: Doubleday & Company, Inc., 1973.
- Mulcahy, Matthew. *Hurricanes and Society in the British Greater Caribbean, 1624-1783*. Baltimore: Johns Hopkins University Press, 2006.
- \_\_\_\_\_. "The Port Royal Earthquake and the World of Wonders in Seventeenth-Century Jamaica." *Early American Studies* (Fall 2008): 391-421.
- Norris, Isaac. Letter to Sarah Eckley, September 1692. In "Quakers and the Earthquake at Port Royal, 1692," edited by Henry J. Cadbury, *The Jamaican Historical Review* 8 (1971): 27-8.
- Norris, Joseph. Letter to Richard Hawkins, 20 June 1692. In "Quakers and the Earthquake at Port Royal, 1692," edited by Henry J. Cadbury, *The Jamaican Historical Review* 8 (1971): 21.
- Parkhurst, Thomas. *The Truest and Largest Account of the Late Earthquake in Jamaica, June the 7<sup>th</sup>, 1692*. London, 1693.
- Pawson, Michael and David Buisseret. *Port Royal, Jamaica*. Oxford: Clarendon Press, 1975.
- Pike, John. Letter to unnamed brother, 19 June 1692. In "Quakers and the Earthquake at Port Royal, 1692," edited by Henry J. Cadbury, *The Jamaican Historical Review* 8 (1971): 19-20.
- Reps, John W. *Town Planning in Frontier America*. New Jersey: Princeton University Press, 1965.

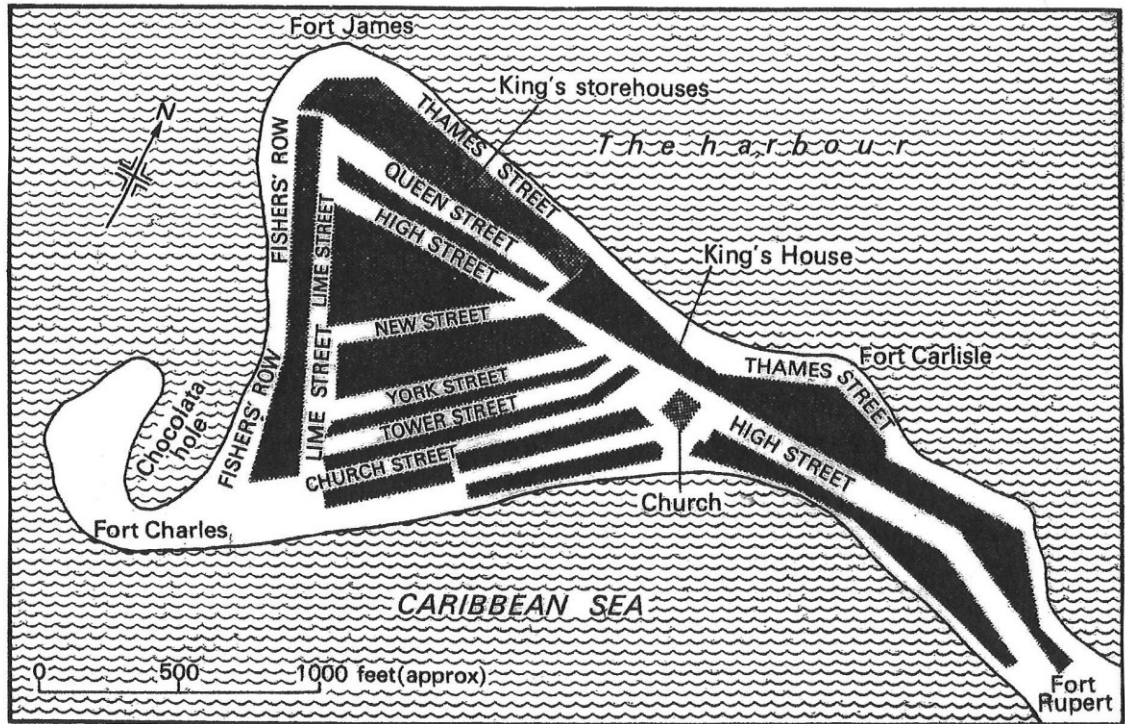
- Robertson, James. "Jamaican Architectures Before Georgian." *Winterthur Portfolio* 36, no. 2/3 (Summer-Autumn, 2001): 73-95.
- \_\_\_\_\_. "Late Seventeenth-Century Spanish Town, Jamaica: Building an English City on Spanish Foundation." *Early American Studies* (Fall 2008): 346-90.
- A Sad and Terrible Relations of Two Dreadful Earth-quakes that Happened in England and at Jamaica*. Printed for P. Brooksby, J. Deacon, J. Blare, and J. Back, 1692.
- Sloane, Hans. "A Letter from Hans Sloane, M.D. and S. R. S with Several Accounts of the Earthquakes in Peru October the 20<sup>th</sup> 1687. And at Jamaica, February 19<sup>th</sup>. 1687/8 and June the 7<sup>th</sup>. 1692." *Philosophical Transactions* 18 (1694): 78-100.
- Steinburg, Ted. *Acts of God: The Unnatural History of Natural Disaster in America*. Oxford: Oxford University Press, 2000.
- Taylor, John. *Jamaica in 1687: The Taylor Manuscript at the National Library of Jamaica*. Edited by David Buisseret. Kingston: University of the West Indies Press, 2008.
- Thomas, Keith. *Religion and the Decline of Magic*. New York: Charles Scribner's Sons, 1971.
- Van De Wetering, Maxine. "Moralizing in Puritan Natural Science: Mysteriousness in Earthquake Sermons." *Journal of the History of Ideas*, vol. 43, no. 3 (Jul.-Sep., 1982): 417-38.
- Young, J. G. "Who Planned Kingston?" *Jamaican Historical Review* 1 (1946): 144-53.
- Zahediah, Nuala. "'A Frugal, Prudential and Hopeful Trade'. Privateering in Jamaica, 1655-89." *Journal of Imperial and Commonwealth History* 18, no. 2 (1991): 145-68.
- \_\_\_\_\_. "The Merchants of Port Royal, Jamaica, and the Spanish Contraband Trade, 1655-1692." *The William and Mary Quarterly* 43, no. 4 (Oct. 1986): 570-93.
- \_\_\_\_\_. "Trade, Plunder, and Economic Development in Early English Jamaica, 1655-89." *Economic History Review* 39, no. 2 (May 1986): 205-22.

APPENDIX A:

Figure 1



Figure 1: Street plan of Port Royal before 1692

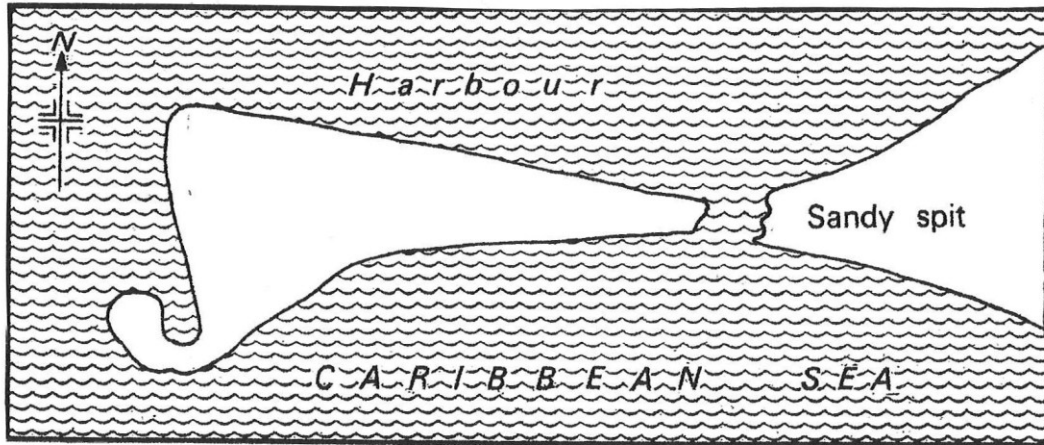


Source: Michael Pawson and David Buisseret, *Port Royal Jamaica* (Oxford: Clarendon Press, 1975), 82.

APPENDIX B:

Figure 2

Figure 2: Port Royal site approximately 1655

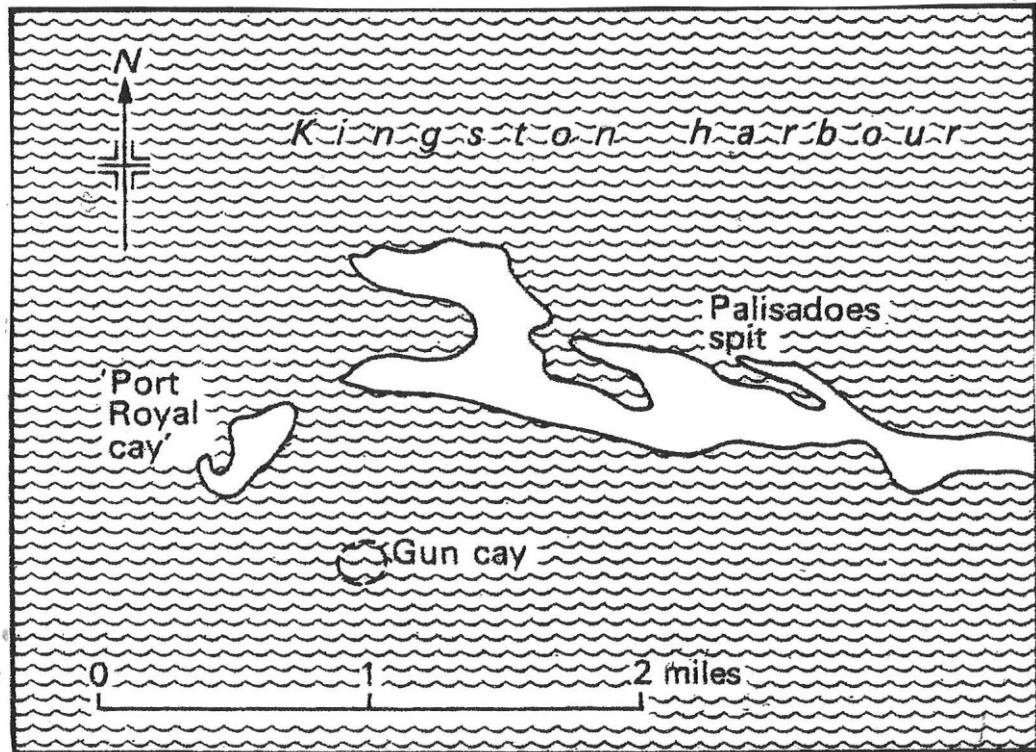


Source: Michael Pawson and David Buisseret, *Port Royal Jamaica* (Oxford: Clarendon Press, 1975), 2.

APPENDIX C:

Figure 3

Figure 3: Port Royal after 1692 earthquake

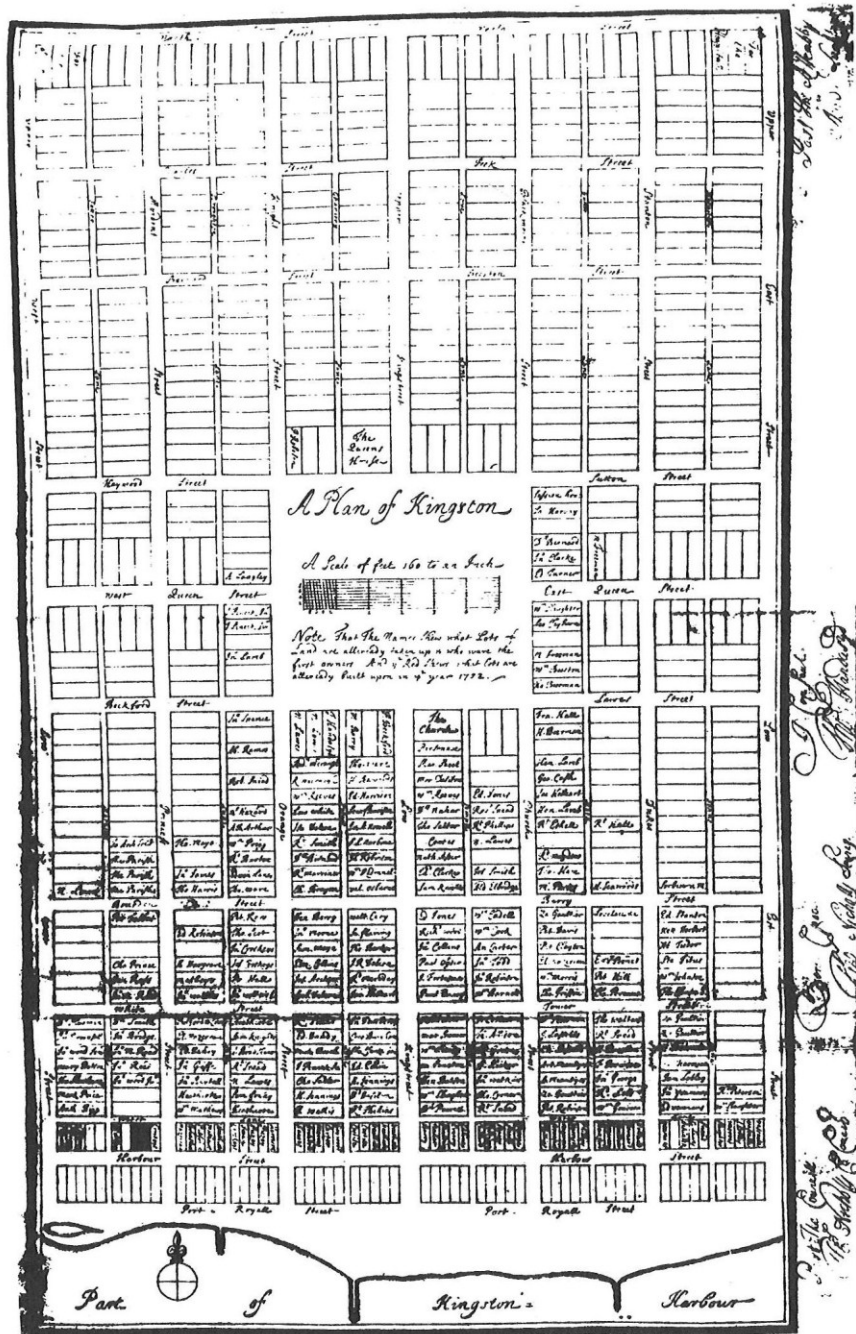


Source: Michael Pawson and David Buisseret, *Port Royal Jamaica* (Oxford: Clarendon Press, 1975), 3.

APPENDIX D:

Figure 4

Figure 4: 1702 map of Kingston drawn by Christian Lilly



Source: Colin G. Clarke, *Kingston, Jamaica: Urban Development and Social Change, 1692-1962* (Berkeley: University of California Press, 1975), 159.