

## **Weathering the Storms: Hurricanes and Plantation Agriculture in the British Greater Caribbean.**

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Henry Laurens had high hopes for his economic prospects in 1772. The wealthy South Carolina planter and merchant was in London at the time, but all reports from his several plantations along the coasts of Carolina and Georgia indicated that the rice and indigo crops were flourishing. Nevertheless, Laurens warned his correspondent that such reports should be treated with caution. “For my own part,” he wrote, “I never draw conclusions of the quantity of a Crop of Rice before Harvest is fairly over. A Hurricane in August or September & even so late as October in a backward Season will spoil half or two thirds of the whole quantity in Field.” Each year as summer turned to fall, concern about hurricanes and the economic devastation that accompanied them filled Laurens’s writings to correspondents throughout the British Atlantic world. “I hope you have escaped Fall Fevers & Fall Hurricanes,” he wrote to one. When news from South Carolina was slow to arrive in London, Laurens “fear[ed] that some disaster by Hurricanes” was the cause of delay. “We have exceeding fine harvest weather & the Hurricane Season steals off in smiles,” he reported in September 1764. “A fortnight more will secure a very large Crop of Rice, Corn, & pease & a tolerable good one of Indigo.”<sup>1</sup>

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<sup>1</sup> Laurens to Reynolds, Getly & Co., September 21, 1772, in Philip Hamer, et al, ed. *The Papers of Henry Laurens* (Columbia, 1968 -), 8:466; Laurens to Samuel Wainwright, September 23, 1772, in *The Papers of Henry Laurens*, 8:474; Laurens to Reynolds, Getly & Co., November 18, 1773, in *The Papers of Henry Laurens*, 9:149-50; Laurens to Mathias Holme, August 24, 1764, in *The Papers of Henry Laurens*, 4:376;

Hurricanes were only one of many ““Risques . . . Calamities, Losses, Inconviences, Labors and Fatigues” facing planters in the Greater Caribbean – a region stretching from Barbados through the Carolinas that can be defined by the presence of large-scale plantation agriculture and the routine occurrence of hurricanes – during the seventeenth and eighteenth centuries.<sup>2</sup> Drought, insects, war, and slave rebellions all posed risks and challenges to the profitable operation of sugar and rice plantations and contributed to a perception of economic life as especially volatile and risky. According to contemporaries, plantations in the region produced “infinite fatigues of body and mind,” and necessitated deep pockets (or strong credit) to survive its constant and rapid fluctuations. To succeed in the Greater Caribbean, Edmund Burke wrote during the eighteenth century, a colonist had to be someone who embraced “risk and hazard . . . and . . . put no medium between being great and being undone.” In the words of one absentee planter, “Whoever has a property in the West Indies must make up his mind to the sudden transition from good to indifferent news.”<sup>3</sup>

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Laurens to Devonsheir and Reeve, September 12, 1764, in *The Papers of Henry Laurens*, 4:419. For similar sentiments from a South Carolina merchant, see John Guerard to William Rock, July 20, 1753, Guerard Letterbook, South Carolina Historical Society [hereafter cited as SCHS].

<sup>2</sup> William Belgrove, *A Treatise Upon Husbandry or Planting* (Boston, 1755), 45; Dalby Thomas, *An Historical Account of the Rise and Growth of the West India Colonies* (London, 1690), 20; Edward Littleton, *The Groans of the Plantations: or a True Account of the Grievous and Extreme Sufferings . . . Relating more particularly to the Island of Barbados* (London, 1689), 17-20. See also *The Substance of the Evidence Presented by the West India Planters and Merchants to the House of Commons* (New York, 1775). The idea of an “extended Caribbean” comes from Immanuel Wallerstien. Peter Hulme suggests that the presence of hurricanes is a useful means of defining such a region. See Hulme, *Colonial Encounters: Europe and the Native Caribbean, 1492-1797* (London, 1986).

<sup>3</sup> Edmund Burke, *An Account of European Settlements in America* (London, 1755, 1777), 1:106; Mumbree Goulburn, quoted in David Ryden, “Producing a Peculiar Commodity: Jamaican Sugar Production, Slave Life, and Planter Profits on the Eve of Abolition, 1750-1807” (Ph. D. diss., University of Minnesota, 1999), 195-96. The theme of environmental volatility in the region is developed in S. Max Edelson, “Planting the Lowcountry: Agricultural Enterprise and Economic Experience in the Lower South, 1695-1785” (Ph.D. diss., Johns Hopkins University, 1998), especially chapter 1.

Nothing brought about such sudden transitions more dramatically and no natural risk produced greater anxiety among planters, however, than the hurricanes that routinely swept across the colonies. Drought, war, shipwrecks all caused concern, but hurricanes occupied a special place in the hierarchy of risk. “What is most to be feared,” wrote one seventeenth-century traveler, “is a general conspiracy of all the Winds . . . which is called a Hurricane.” An eighteenth-century Jamaican planter, William Beckford, noted that hurricanes were “the most formidable enemy” and “principle dread” of colonists in the region. After noting the danger of slave rebellions, Charles Leslie declared that “What terrifies a Jamaican man most are hurricanes . . . These generally ruin his Estate, and endanger or destroy his life; and for that reason he trembles at the thought of [them].”<sup>4</sup> Colonists everywhere in the overwhelmingly agricultural settlements of British America battled the vagaries of weather as they attempted to produce crops and generate profits from the fertile lands of the New World, but in no other region did colonists face such regular threats, not only to their crops but also to the larger social and economic infrastructure of the colonies. As one Barbadian planter wrote, “sometimes we suffer by extreme droughts, and sometimes by continual violent rains, . . . but if a hurricane comes, it puts us to begin the world anew.”<sup>5</sup>

That hurricanes caused a great deal of damage and anxiety in the plantation colonies of South Carolina and the West Indies is not a particularly original insight, but it is one that has been asserted more than demonstrated. Most historians note that hurricanes caused problems for planters, but few have gone beyond such generalization to investigate the specific risks

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<sup>4</sup> Charles de Rochefort, *The History of the Caribby-Islands*, trans. John Davies (London, 1666), 143-44; William Beckford, *A Descriptive Account of the Island of Jamaica* (London, 1790), 89; Charles Leslie, *A New and Exact History of Jamaica* (London, 1740), 40.

<sup>5</sup> [Edward Littleton], *The Groans of the Plantation; or a True Account of their Grievous and Extreme Sufferings* (London, 1689), 17.

associated with the storms, the level of damage or disruption they caused, or to consider their impact on the social, economic, and cultural development of the colonies.<sup>6</sup> I hope to begin to at least address some of the questions in this paper. The paper is divided into three parts. The first section briefly explores the risks posed by hurricanes to plantation operations and the degree of financial distress that resulted from the storms. The second section examines some of the ramifications of such losses for colonists and colonial society. The final section traces the steps taken by planters to mitigate the effects of hurricanes on their financial affairs. Henry Laurens's concerns about hurricanes, I want to suggest, were not idle speculations or planter hyperbole. Rather, they reflected the centrality of the storms to the mental and physical world of planters in the Greater Caribbean, who throughout the seventeenth and eighteenth centuries found themselves engaged in a Sisyphean struggle against nature in their quest for wealth.<sup>7</sup>

### **Part 1: Hurricanes and Risk**

Seventeenth and eighteenth century planters had no probability tables calculating the likelihood of a hurricane striking in the region and no means of long-term forecasting. As a

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<sup>6</sup> The standard histories of the region all discuss hurricanes, but most only offer passing reference to the risk the posed by hurricanes to colonial society. See Richard Dunn, *Sugar and Slave: The Rise of the Planter Class in the British West Indies, 1624-1713* (New York, 1972), 42-43; Carl and Roberta Bridenbaugh, *No Peace Beyond the Line: The English in the Caribbean, 1624-1690* (New York, 1972); Richard Sheridan, *Sugar and Slavery: The Economic History of the British West Indies, 1623-1775* (reprint, Kingston, 1994); David Watts, *The West Indies: Patterns of Development, Culture, and Environmental Change Since 1492* (Cambridge, 1987); Michael Craton, "Reluctant Creoles: The Planters' World in the British West Indies," in *Strangers Within the Realm: Cultural Margins on the First British Empire*, ed. Bernard Bailyn and Philip Morgan (Chapel Hill, 1991); Karen Kupperman, "The Fear of Hot Climate in the Anglo-American Colonial Experience," *WMQ* 41 (April 1984): 213-240; for South Carolina, see Robert Weir, *Colonial South Carolina: A History* (Millwood, NY, 1983); George Rogers, *Charleston in the Age of the Pinckneys* (Norman OK, 1980).

<sup>7</sup> Richard Pares, *A West-India Fortune* (London, 1950), 80.

result, the perceived risk from the storms was highly subjective. Contemporaries, for example, believed that hurricanes struck only in the West Indies and the Carolinas. Although colonists recognized that hurricanes occasionally struck other colonies, most agreed with the naturalist Mark Catesby that South Carolina represented the edge of the hurricane zone.<sup>8</sup> Within the region, many colonists believed the storms could be expected once every seven years; others thought they had become more frequent by the end of the seventeenth century. On both accounts, they were relatively accurate in their perceptions. Hurricanes do strike with greater frequency along the southern coast and among the Caribbean islands than they do further north along the eastern seaboard, although certain locations, such as Cape Cod, were more vulnerable than colonists believed. Moreover, once every seven years is a close approximation of current hurricane probability forecasts for the region broadly, again taking into account some regional variations.<sup>9</sup> Although sometimes more than a decade passed without a major storm, there were enough examples of frequent, even yearly, hurricanes to give all residents pause. South Carolina, for example, experienced two major storms in less than two weeks in September 1752. Jamaicans may have celebrated the absence of a major hurricane in the 1760s and 1770s, but they paid the price in the 1780s when five major storms hit the colony in less than seven years.

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<sup>8</sup> Mark Catesby, *The Natural History of Carolina, Florida, and the Bahama Islands* (London, 1731), 11; see also Burke, *Account of European Settlements in America*, 2: 234-35.

<sup>9</sup> Hurricane probabilities vary across the region [meaning the English Greater Caribbean]. They are highest in the Leeward Islands and Jamaica, and lowest at the edges, South Carolina and Barbados. For example, the probability of a hurricane passing within 75 miles of Antigua in any given year is 27% [or put another way, Antigua should experience 27 hurricanes in a 100-year period, roughly one every four years]. The number for Barbados is 11%, South Carolina 12% [based on Charleston and Myrtle Beach]. Atlantic City New Jersey, by contrast, is 6%. Parts of Cape Cod have the highest probability north of the Carolinas at 13-15%. Probabilities are given in Appendix D of Bob Sheets and Jack Williams, *Hurricane Watch: Forecasting the Deadliest Storms on Earth* (New York, 2001), 292-294. These numbers do not include tropical storms, which would push the probabilities for the Greater Caribbean even higher. Such numbers can be located at the website, "Caribbean Hurricane Network," [www.stormcarib.com](http://www.stormcarib.com).

Even if an individual colony managed to escape in any given year, rarely a year went by that some colony in the Greater Caribbean did not experience a hurricane. As one English observer noted toward the end of the seventeenth century, hurricanes had become major “subjects of our Gazets; and scarce a year passes but we have Accounts from the American Plantations, of the Damages they have sustain’d by Hurricanes.”<sup>10</sup>

The nature of the risk posed by hurricanes in the Greater Caribbean varied over time. As scholars of disasters have highlighted, the effects of any given disaster are shaped by the existing conditions in which it strikes.<sup>11</sup> Changing social, economic, and material circumstances in the colonies meant that the impact of hurricanes changed over time as well. Storms in the early years of settlement were terrifying and destructive, but the relative lack of physical development limited the overall economic damage. Colonists in St. Christopher, for example, had only managed to erect a few crude dwellings in 1624 before a hurricane struck the settlement, and although the storm destroyed the little tobacco that had been planted, agricultural operations were so minimal that the losses were slight. Finding provisions, rather than assessing property damage, was the major issue in the aftermath of the storm.<sup>12</sup>

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<sup>10</sup> Ralph Bohun, *A Discourse on the Origine and Properties of Wind, with an Historical Account of Hurricanes and other Tempestuous Winds* (Oxford, 1671), 295.

<sup>11</sup> Stuart Schwartz, “The Hurricane of Sao Ciraco: Disaster, Politics, and Society in Puerto Rico, 1899-1901,” *Hispanic American Historical Review* 72 (November 1992): 303-334. For broader, theoretical discussions of disasters and society, see Kenneth Hewitt, *Interpretations of Calamity from the Viewpoint of Human Ecology* (Boston, 1983); Anthony Oliver-Smith, “Disaster Context and Causation: An Overview of Changing Perspectives in Disaster Research,” *Natural Disasters and Cultural Responses in Third World Societies* 36 (June, 1986): 1-34; Susanna Hoffman and Anthony Oliver-Smith, eds., *Catastrophe and Culture: The Anthropology of Disaster* (Santa Fe, NM, 2002). For recent efforts at applying these insights to historical studies, see the essays in *Dreadful Visitations: Confronting Natural Catastrophe in the Age of Enlightenment*, ed. Alessa Johns (New York, 1999); *American Disasters*, ed. Steven Biel (New York, 2000);

<sup>12</sup> Philip Barbour, ed., *The Complete Works of Captain John Smith, 1580-1632*, Vol. 3 (Chapel Hill, 1986), 226-229

The level of economic destruction wrought by hurricanes, however, increased as colonists created more permanent and more valuable agricultural investments. The development of specialized plantation agriculture in particular created new economic and material conditions that generated great wealth, but also made the colonists' fortunes increasingly vulnerable to the storms. Both sugar and rice required tremendous amounts of labor and extensive (and expensive) infrastructure to grow and process. At the end of the seventeenth century, Sir Dalby Thomas estimated that £5,625 was required to establish a one-hundred acre sugar plantation, including £1,250 for 50 slaves, and almost £4,000 for "Land, Houses, Mills, Vessels &c., All other Tools and Implements."<sup>13</sup> Rice production was equally complex and expensive. The series of elaborate canals, dykes, and trunks used to control the flow of water on the fields required tremendous alterations to the environment. According to Philip Morgan, "Contemporaries did not exaggerate when they compared these undertakings [constructing tidal plantations] to building the pyramids." Such transformations came at great costs: one late eighteenth-century observer estimated that £2,476 was necessary to establish a two hundred acre lowcountry plantation, the bulk of which (£1,800) was spent on slave laborers to work the fields. Large-scale operations offered both sugar and rice planters higher returns on their investments, but such returns came at a cost; plantation operations were more vulnerable to disruption from hurricanes and other calamities and losses from them multiplied in value over the course of the seventeenth and early eighteenth centuries.<sup>14</sup>

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<sup>13</sup> Sir Dalby Thomas, *Historical Account of the Rise of the West-India Colonies* (London, 1690), 18; for mechanics of sugar production, see Dunn, *Sugar and Slaves*, 188-201; Sheridan, *Sugar and Slavery*, 107-118; J.R. Ward, *British West Indian Slavery, 1750-1834: The Process of Amelioration* (Oxford, 1988), 61-118; Robert Robertson, *A Detection of the State and Situation of the Present Sugar Planters of Barbados and the Leeward Islands* (London, 1732), 42.

<sup>14</sup> Philip Morgan, *Slave Counterpoint: Black Culture in the Eighteenth-Century Chesapeake & Lowcountry* (Chapel Hill, 1998), 157; Joyce Chaplin, *An Anxious Pursuit: Agricultural Innovation and*

Hurricanes posed several threats to plantation operations. Of greatest concern was the damage to crops. “Whole fields of sugar canes [were] whirled into the air, and scattered over the face of the country,” wrote one observer of a storm. “The cane fields appear as if a roller had passed over them,” noted another. Henry Laurens reported that one-third of his rice lands “suffer’d by Salt Water breaking over the Banks” and flooding the fields during a 1769 tempest. The crops themselves were the most valuable part of any plantation (aside from the capital represented by slaves), and the widespread destruction wrought by hurricanes left planters facing the prospect of a year (and often more than one) with very little, if any, output from the fields.<sup>15</sup>

In addition, the agricultural infrastructure used to process the crops was often demolished. “Windmills are swept away in a moment,” wrote one traveler. Planters’ “works, their fixtures, the ponderous copper boils, and stills of several hundred weight are wrenched from the ground and battered to pieces.” These buildings and equipment were expensive: one colonist from Nevis estimated that a windmill could cost £1,000 to erect from scratch and construction of a dwelling house, boiling house, curing house, and other assorted outbuildings required £1,500. Repairs to existing structures would obviously cost less, but the expense of rebuilding buildings damaged in the storms was still great.<sup>16</sup> Finally, the storms wrecked havoc on port facilities and

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*Modernity in the Lower South, 1730-1815* (Chapel Hill, 1993), 227-276. The 1772 estimate for capital required for a rice plantation in Georgia is from *De Brahm’s Report of the General Survey in the Southern District of North America*, ed., Louis De Vorsey (Columbia, 1971), 162; for a discussion of the increasing vulnerability of lowcountry plantations to a variety of natural forces, see Mart Stewart, *What Nature Suffers to Groe: Life, Labor, and Landscape on the Georgia Coast, 1680-1920* (Athens, 1996), 138-150.

<sup>15</sup> Pierre Charlevoix, *A Voyage to North America . . . and a Description and Natural History of the Islands of the West Indies* (London, 1746), 2:291. James Stewart, *A View of the Past and Present State of Jamaica* (Edinburgh, 1823), 44. Dunn, *Sugar and Slaves*, 197. Laurens to Henry Bright, September 21, 1769, *Papers of Henry Laurens*, 6:141; Laurens to John Rutherford, October 13, 1769, *Papers of Henry Laurens*, 6:159-60; Stewart, ‘*What Nature Suffers to Groe*,’ 138;

<sup>16</sup> Charlevoix, *A Voyage to North America*, 291; Robertson, *A Detection of the State and Situation of the Present Sugar Planters of Barbadoes*, 42; “State of Buildings,” January 12, 1781, FitzHerbert Papers, M/E 20756. Papers located in Derbyshire Record Office. I consulted a microfilm copy of these records

ships, which resulted in significant losses. Twelve ships in Bridgetown's harbor, "some laden with sugar, were driven ashore and broken to pieces" during a 1675 tempest. The 1712 hurricane decimated vessels in Kingston harbor, which was "full of shipping" prior to the storm, but afterwards was "full of wrecks . . . and great Quantities of Goods and Dead Bodies float[ed] from Place to Place, as the Wind blew." In Charleston, a 1728 storm destroyed or damaged twenty-three ships in Charleston harbor, and ruined over 2000 barrels of rice on ships or in city warehouses.<sup>17</sup> John Guerard informed one correspondent that a great deal of rice and other goods were destroyed when the roofs of warehouses along the Cooper River in Charleston were torn off in a 1752 hurricane.<sup>18</sup>

Some sense of the level of economic devastation that resulted from these losses can be glimpsed in the aggregate agricultural production statistics for various colonies. Sugar imports to England from the Leeward Islands dropped in the aftermath of the 1707 hurricanes from 132,000 hundredweight [cwt.] to 81,000 cwt. in 1708 and 97,000 cwt. in 1709 before recovering in 1710. Sugar exports from Jamaica plunged following the 1722 hurricane from 231,000 cwt. to 121,000 cwt. in 1723, rising to 187,000 cwt. in 1724 before returning to previous levels of production in 1725. Production dropped again in Jamaica for two years following the 1744

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at the Barbados Archives in Black Rock, St. Michaels, Barbados. [Hereafter cited as FitzHerbert Papers.] Stewart, *What Nature Suffers to Groe*, 149.

<sup>17</sup> Jonathan Atkins to Sir Joseph Williamson, October 3, 1675, in *Calendar of State Papers, Colonial Series* (London, 1860 -), 294 [hereafter cited as CSPC]; James Knight, "The Natural, Morall, and Political History of Jamaica," folio 198, unpublished manuscript, Additional Manuscripts 12418, British Museum; Lord Bellmount to Lords Admiralty, October 15, 1700, CSPC, 598; Alexander Hewitt, *An Historical Account of Rise and Progress of the Colonies of South Carolina and Georgia* (1779), reprinted in *Historical Collections of South Carolina*, ed., B.R. Carroll (London, 1836), 1:316; Ludlum, *Early American Hurricanes*, 42-44.

<sup>18</sup> Guerard to Thomas Rock, December 12, 1752, Guerard to William Jolliffe, October 21, 1752, Guerard Letterbook, SCHS; Minutes of the Vestry of St. Michaels, March 30, 1781, Barbados Archives, Black Rock.

hurricane. Rice production in South Carolina plummeted following two successive hurricanes in the fall of 1752. The number of barrels of rice shipped from the colony dropped from over 82,000 barrels in 1752 to 37,000 barrels in 1753. Planters, however, recovered quickly and produced over 93,000 barrels in 1754. Sugar exports from the Leeward Islands were cut almost in half following the 1772 hurricane, although planters recovered quickly and production reached record levels in 1774.<sup>19</sup> The devastating hurricanes of 1780 that struck Jamaica, Barbados, and some of the other English possessions in the region, left colonists struggling for several years to recover. Sugar production, which had already been declining as a result of the American Revolution, dropped even further in 1781, and sugar imports into England from the islands did not return to pre-hurricane levels until 1783. In Barbados, rum exports provide additional evidence for the loss of agricultural productivity. 2,527 hogsheads of rum were shipped from the island in 1780, but exports plunged to just over 500 hogsheads in 1781 and exports remained under 1,000 hogsheads until 1784 when the colony shipped 3,315 hogsheads to England.<sup>20</sup>

The significant drop in production was accompanied by a corresponding rise in the prices planters could charge for their crops. Depending on the extent of damage to individual colonies and the number of colonies struck during any given hurricane season, the storms had important short-term ramifications for the supply and price of sugar and rice in the British Atlantic

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<sup>19</sup> Sugar importations to England from the West Indies are calculated in Appendix I of Sheridan's *Sugar and Slavery*, 487-489; South Carolina statistics from R.C. Nash, "Trade and Business in Eighteenth-Century South Carolina: The Career of John Guerard, Merchant and Planter," *South Carolina Historical Magazine* 96 (1995): 6-29. On destruction to trees and naval stores production, see John Guerard to Thomas Rock, September 20, 1752 and Guerard to William Jolliffe, October 21, 1752, Guerard Letterbook, SCHS; *South Carolina Gazette*, October 10, 1752.

<sup>20</sup> Account of sugar imported to England is found in *Proceedings of the Honourable House of Assembly of Jamaica on the Sugar and Slave Trade* (St. Jago de Vega, 1792), appendix XII. (Microfilm from Goldsmith's Kress Library of Economic Literature, copy at University of Maryland). For Barbados rum exports, see CO 28/60/181, Public Record Office, Kew [hereafter cited as PRO]. Robert Schomburgk, *The History of Barbados* (London, 1848), 350.

marketplace. “I think there never was a fairer Chance for a good price for our Sugars all this year,” wrote the Antigua planter Dr. Walter Tullideph following a destructive hurricane in 1751. This was especially true, he continued, if “Jamaica should have suffered much in the storm,” further reducing sugar supplies. South Carolina planters “talk[ed] in a high Strain” of getting eighty shillings per cwt. of rice after the 1752 hurricane destroyed that year’s crop, and prices in Charleston rose to some of the highest levels for the eighteenth century.<sup>21</sup>

High prices for crops, however, did not always offset the losses wrought by the storms. Individual West Indian sugar planters often found they were unable to salvage enough sugar from a storm-damaged crop to provide much income, in spite of high prices, because costs for essential plantation supplies and provisions rose alongside prices for staples. This was particularly true in the West Indian colonies, which following the mid-seventeenth century sugar revolution became dependent on North American food supplies. The loss of provisions had important consequences for the islands’ slave population, who often faced famine-like conditions [an important topic, but one beyond the scope of this paper]; more importantly for discussion here, such losses meant high costs for essential supplies. John Blake complained that provisions were “very scarce and deare,” on Barbados in the aftermath of the 1675 tempest, with beef selling for 35 shillings per barrel, “and some new beefe lately come at 40 s per barr.” Kingston vestrymen reported that the price of flour had risen from 18s 9d per barrel to £5 a barrel in the city following the 1722 hurricane. The managers of the Codrington College plantations in

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<sup>21</sup> Tullideph quoted in Sheridan, *Sugar and Slavery*, 438; John Guerard to Thomas Rock, November 6, 1752, Guerard Letterbook, SCHS. For rice prices, see Coclanis, *Shadow of a Dream: Economic Life and Death in the South Carolina Lowcountry, 1670-1920* (New York, 1989), 106; R.C. Nash, “Trade and Business in Eighteenth-Century South Carolina: The Career of John Guerard, Merchant and Planter,” *South Carolina Historical Magazine* 96 (1995): 6-29. Nash notes that the high prices that offered some salvation to planters who obtained high prices in Charleston, but hit merchants like Guerard hard because European prices did not rise as quickly. For 1780 sugar prices, see BT 6/10/101, PRO.

Barbados reported in 1781 that a hurricane the previous year had resulted in a small sugar crop that was “very insufficient to pay the current expenses,” despite the fact that it was sold on the island “at the enormous price of 40[s]/cwt.” A similar situation existed for building materials and supplies, which likewise had to be imported from the mainland.<sup>22</sup> Even in South Carolina, which produced some food for export (including, of course, rice), the devastation accompanying hurricanes often drove up the cost of provisions. In an effort to keep prices of essential goods down following the 1752 hurricane, the South Carolina Assembly passed a law forbidding the export of corn, peas, and other foodstuffs from the colony, and officials actively sought provisions from northern merchants to help keep supplies plentiful and prices reasonable.<sup>23</sup>

Aggregate totals of exports give some indication of the extent of damage caused by hurricanes on the economics of plantation agriculture in the Greater Caribbean, but the struggles of planters to respond to and recover from the devastation wrought by a storm is best viewed by attention to individual calamities and individual plantation operations. Of course the impact of storms varied, and the impact any one storm differed from plantation to plantation, but individual examples provide a useful means of exploring the economic effects of a storm and the numerous issues planters faced as they set about rebuilding and reestablishing their plantation operations. Good documentation exists for the “Great Hurricane” that struck Barbados in October 1780,

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<sup>22</sup> Henry Blake to John Blake, November, 1, 1675, in *Caribbeana: being Miscellaneous Papers Relating to the History, Geography, Topology and Antiquities of the British West Indies*, ed., Vere Langford Oliver (London, 1910), 1:56-57; “Petition of the Vestry of Kingston,” January 25, 1724, CO 140/18/n.p; Meeting of the Committee for Barbados, Society for the Propagation of the Gospel Records [hereafter cited as SPG], Series X, Vol. 28, folios 31, 35, 324, Rhodes House Library, Oxford University. “Autobiographical Manuscript of William Senhouse,” *Journal of the Barbados Museum and Historical Society* [hereafter cited as *JBMHS*], 3 (November, 1935): 3.

<sup>23</sup> *South Carolina Gazette*, October 9, 1752; *Journal of the Commons House of Assembly, 1752-54*, ed., Terry Lipscomb (Columbia, 1983), 15:125; Guerard to Harmington and Stritch, April 12, 1753, Guerard Letterbook, SCHS.

which allows for an examination of these issues. As its name indicates, the 1780 storm was particularly intense, but the kinds of damage that it caused and the issues facing planters were common to other storms, the impact differing in degree rather than kind.

The hurricane struck on Tuesday, October 10, 1780. The *Barbados Mercury* reported that “in most plantations all the buildings, the sugar mills excepted, are laid level with the earth, and that there is not a single estate on the island which has entirely escaped the violence of the tempest.” The island’s capital, Bridgetown, suffered even worse: “there are not above 30 swelling houses, stores, &c. in the town which have escaped without considerable damage, and of the remainder much the greater number are entirely thrown down, or left in such a situation as not to be repaired.” In the aftermath of the storm, officials ordered that a report of losses in each parish be compiled. The findings were staggering: over two thousand slaves were killed, over 6,000 head of cattle lost, and over £1,000,000 sterling of property damaged or destroyed.<sup>24</sup> [See Table 1]

At Turner’s Hall plantation in St. Andrews Parish – owned by the absentee planter Sir John FitzHerbert of Derbyshire, England – the crops were leveled and for the most part destroyed. The curing house, rum house, liquor house and trash house were demolished beyond repair. The boiling house was severally damaged and its roof blown away. Several of the “clarifying coppers” inside were “much injured,” as was the mills and as a result, “many inconveniences will attend their boiling the present crop short as it will be.” The total loss was over £4,000, the largest percentage of which came from ruined canes valued at £1,500.<sup>25</sup> [See Table 2]

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<sup>24</sup> *The Barbados Mercury*, October 28, 1780; “Official Account of the Losses in Barbados from the 1780 Hurricane,” CO 28/35/163.

When a new agent, Richard Gill, took over management of the estate in April 1781, he reported, “The melancholy appearance of every Person & thing, struck me with a degree of Terror not easily to be described.” He set to the task of replanting and rebuilding immediately, and he hoped to process whatever canes had survived, but numerous and serious obstacles remained. “We began to make sugar the first week of this month,” Gill wrote to FitzHerbert on April 23, “but the want of a sail to the mill, which could not be procured, and the difficult in getting the canes up the hill for want of stock, have prevented us from making more than 85 pots [of sugar] at this time.” He wrote to FitzHerbert that he did not anticipate producing much more that year. Moreover, he warned not “much more can be expected from the crop of 1782, as the 20<sup>th</sup> of January had passed before the Canes were put in the earth.” To further complicate matters, the destruction of large numbers of horses and cattle in the storm deprived the plantation of its best sources of dung for manure, “thereby totally injur[ing] the second crop, so that not much can be expected from them.”<sup>26</sup> Production on the plantation dropped for two years following the hurricane, as Gill anticipated. [See Table 3] Despite an increase in prices that followed the storm, the value of the crop remained small in both 1781 and 1782. While production fell, expenses rose. Expenses for the plantation increased by almost 1/3 during 1781. This extra money purchased timber, shingles, and thousands of nails to repair buildings, hired skilled workers to perform some of the work, and bought extra food to feed slaves, among other things. Although most repairs at Turners Hall were finished during 1781, damage to the crops meant that profits lagged for another year.

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<sup>25</sup> “State of the Buildings, the 12<sup>th</sup> January, 1781,” FitzHerbert Papers, M/E 20755-5 Charles de Rochefort, *The History of the Caribby-Islands*, trans. John Davies (London, 1666), 143-44; William Beckford, *A Descriptive Account of the Island of Jamaica*, 89;

<sup>26</sup> Richard Gill to William FitzHerbert, April 23, 1781, FitzHerbert Papers, M/E 20775.

Other planters suffered equally great losses. Emerging to survey the scene after the storm had abated, the planter William Senhouse was "sickened at the sight." All the buildings on his Grove plantation except the mills, the buttery, and the "distil" house were destroyed. Two horses, 19 sheep, and 29 cows were killed, and the corn and sugar cane "lay level almost with the ground." In addition, three slaves were dead (and three more would die in the coming weeks). Senhouse estimated the total damage at £1,749 sterling. The plantation's mills survived the storm, but little of the crop withstood the blasting winds, which also leveled the boiling house. Rebuilding the latter became Senhouse's top priority. The building was finished by early February, and Senhouse reported "we hanelled it by making 66 pots of sugar, the whole of our crop!"<sup>27</sup> His joy at having some sugar to process, however, faded quickly after the final calculations for the year were tallied. The year before the hurricane, Senhouse reported production of £923 worth of sugar, from which he cleared a profit of £331. With the sugar crops destroyed, production plummeted to £276 in 1780 and £100 in 1781, however, and his losses mounted to over £400 each year. Even as sugar production increased, the costs of supplying the plantation and rebuilding the agricultural buildings and his dwelling house kept the plantation account in the red. The Grove estate did not return a profit until 1785. [See Table 4].

The impact of a major hurricane, thus, often resulted in a significant drop in production and profits for at least two years, and sometimes longer. Even minor storms resulted in significant losses for one year's output. Obviously the impact of a specific storm on a particular plantation varied according to numerous factors. The key point is that the storms resulted in major disruptions to plantation affairs and profits and required significant outlays of new capital

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<sup>27</sup> "Autobiographical Manuscript of William Senhouse," *JBMHS* 2 (August, 1935): 201-09.

to rebuild operations. As one planter noted, “The Damage it does the Planter is sometimes so great, that the profit of diverse years must go to repay it.”<sup>28</sup>

## **Part 2: Social and Economic Consequences**

With little prospect of income from their mangled crops, planters in the Greater Caribbean were forced to seek outside credit to help maintain their plantation operations. Even in good years, plantations had a high rate of capital depreciation as equipment broke down and slaves, the most valuable investment on a plantation, died. Annual expenses on a sugar plantation could run as high as £1,900 (out of total revenue of £3,600), and the purchase of slaves, provisions, and equipment, to say nothing of expenditures on personal and luxury goods, required ready access to credit.<sup>29</sup> As early as the 1650s, Richard Ligon emphasized the importance of credit for sugar planters, writing that “if he [the planter] be not well friended, he can never entertain a hope to rise again” in the aftermath of various calamities.<sup>30</sup> The damage caused by hurricanes, as we have seen, multiplied those expenses while at the same time diminishing the income required to pay for them. No crop insurance existed in the seventeenth or eighteenth centuries, nor could planters insure their buildings and infrastructure against hurricanes. Instead planters had to rely on credit to finance repairs and cover ongoing expenses.<sup>31</sup>

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<sup>28</sup> Littleton, *The Groans of the Plantation*, 17.

<sup>29</sup> Sheridan, *Sugar and Slavery*, 269. For a detailed contemporary discussion of the costs of running a plantation in the eighteenth century, see Bryan Edwards, *The History, Civil and Commercial of the British Colonies in the West Indies* (1793) 5<sup>th</sup> edition (London, 1819) 2:296-305.

<sup>30</sup> Ligon, *True and Exact History*, 117; Sheridan, *Sugar and Slavery*, 262-281.

British merchants were the principle source of credit for large planters in the Greater Caribbean, although local planters and merchants played a role in credit operations as well. Commission agents in England or the colonies advanced supplies or loans and charged planters interest (English merchants charged West Indian planters 5% interest for such advances; rates were higher in the colonies, usually 6% or 8%) until a new crop was harvested and the account was brought into balance, or at least some part of the old debt was retired and new loans were made. FitzHerbert's agent, for example, forwarded 200 bushels of beans and a supply of nails to the plantation to feed the slave population at Turner's Hall and to aid the recovery process following the 1780 tempest, although the plantation attorney requested that even more building materials be sent. Others made money available via bills of exchange to allow planters to purchase the necessary supplies to maintain plantation operations and to rebuild what had been destroyed.<sup>32</sup>

Without access to such credit and financial assistance, many planters and local merchants faced financial ruin and bankruptcy in the wake of major hurricanes. The Barbadian planter Edward Littleton reported that in the aftermath of the 1675 hurricane, "bankruptcies of merchants became frequent occurrences," and other accounts suggested that, "numerous families who had formerly lived in opulence were obliged to retire to escape their creditors."<sup>33</sup> The

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<sup>31</sup> Richard Pares found some evidence that West Indian planters were able to purchase insurance against losses that might result from a French invasion in the mid-eighteenth century, but he noted that this was a singular case, and concluded that "the practice must . . . have been rare." Richard Pares, *War and Trade in the West Indies*, 228.

<sup>32</sup> Sheridan, *Sugar and Slavery*, 290; Richard Pares, "A London West India Merchant House, 1740-1769," in *Essays Presented to Sir Lewis Namier*, ed. Richard Pares and Alan J.P. Taylor (Oxford, 1956); Richard Gill to William FitzHerbert, April 23, 1781, FitzHerbert Papers, D239 M/E 20755-56; Ragatz, *Fall of the Planter Class*, 134-35.

<sup>33</sup> Quoted in David Watts, *The West Indies: Patterns of Development, Culture, and Environmental Change*, (Cambridge, 1987), 270.

public treasurer of South Carolina, Jacob Motte, was forced to declare bankruptcy following the 1752 hurricane. The storm destroyed his wharf along the Cooper River and washed away the rice and naval stores that were housed there awaiting shipment. One contemporary estimated his loss at £10,000 currency. The disaster left Motte unable to pay back a number of loans he had made to himself from the public treasury to finance his own business dealings, and he was forced to transfer his entire estate – including plantations, slaves, and household furniture – to a board of trustees appointed by the Council and Assembly.<sup>34</sup>

The 1772 hurricane that struck the Leeward Islands created a panic in financial markets throughout the Atlantic World. News of the storm arrived in London following collapse of several banks in Britain, precipitating a major credit crisis, and the economic loss from the hurricane further exacerbated the situation. Henry Laurens, who was in London at the time, wrote that the “violent & destructive Hurricane . . . will produce new Bankruptcies in England. Very large Sums have been lent upon Mort[g]gages in those Islands & a vast Amount is due to England in the common course of commerce much of which will now be forever lost.” The governor of Grenada, one of the islands ceded to Britain at the end of the Seven Years War, complained that planters were unable to arrange for new credit from London merchants, and that many whose plantations and slaves were already mortgaged were fleeing to nearby French islands rather than have their slaves claimed in debt proceedings.<sup>35</sup> Even well established planters with good credit had trouble getting new advances following the hurricane. The Nevisian planter John Pinney, for example, had his bills of exchange rejected by his London

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<sup>34</sup> John Guerard to William Jolliffe, October 21, 1752, John Guerard Letterbook, SCHS; *Journal of the Commons House of Assembly, 1752-1754*, ed. Terry Lipscomb (Columbia, 1983), 17:xi-xii, 6-7, 46-48.

<sup>35</sup> On the 1772 crisis in England, see Richard Sheridan, “The British Credit Crisis of 1772 and the American Colonies,” *Journal of Economic History* 20 (June 1960): 161-186; Sheridan, *Sugar and Slavery*, 465-66; Henry Laurens to John Laurens, December 15, 1772, *Papers of Henry Laurens*, 8:502.

factor Thomas Lucas. Pinney was already in debt to Lucas and, as Richard Pares has suggested, the factor was concerned about granting more funds to Pinney “at a time [following a major hurricane] when all his correspondents would be drawing bills on him right and left.” Pinney was forced to seek loans from another merchant.<sup>36</sup>

The economic problems and bankruptcies created by hurricanes in turn had consequences for social and economic conditions in the colonies, particularly in the sugar islands of the West Indies. First, while large planters like John Pinney could turn to other English merchants to secure his bills of exchange and his credit in the wake of hurricanes, smaller farmers who lacked such connections often lost their properties. This was especially true in the seventeenth and early decades of the eighteenth century, and especially in Barbados and the Leeward Islands. Following the mid-seventeenth-century sugar revolution, small farmers in these islands had managed to carve out some space in the economic hierarchy by growing small amounts of sugar on their own or as tenants for larger planters. Gradually, many of these smaller planters were forced off their lands, often by credit arrangements that put them in debt to their larger planter neighbors. As one contemporary noted, “by giving credit . . . on severe terms, . . . [large planters] wormed out the greatest part of ye small proprietors.”<sup>37</sup>

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<sup>36</sup> Pares, *A West-India Fortune*, 83-85. Pinney reported damages totaling £3,000 from the storm. His need for bills of exchange from Lucas, however, was more complicated than simply covering his own losses. He had been in the process of acquiring title to a neighboring estate from John Pemberton, to whom he had lent money. The London firm of Mills and Swanston, however, held a prior mortgage, and Pinney was trying to get hold of that mortgage in 1772. As Pares notes, Pinney was afraid that as a result of losses from the hurricane, “Mills and Swanston would foreclose on their prior mortgage and so annihilate his subsequent investment in the Pemberton.” 83.

<sup>37</sup> Jeaffreson, ed., *A Young Squire of the Seventeenth Century*, 275-76; Russell Menard, “Law, Credit, The Supply of Labor, and the Organization of Sugar Production in the Colonial Greater Caribbean: A Comparison of Brazil and Barbados in the Seventeenth Century,” in *Transatlantic Enterprise: Essays in Early Modern Atlantic Economy presented to Jacob Price*, ed. John McCusker and Kenneth Morgan, (Cambridge, 2000), 154-163; Thomason Tracts, British Museum, quoted in V.T. Harlow, *A History of Barbados, 1625-1685* (Oxford, 1926; reprint, 1969), 43, n.2.

Hurricanes often played an important role in this process. Following the 1675 hurricane, the Governor of Barbados reported to London that many terrified residents initially were “resolved never to build again but to leave the island.” Although many changed their minds and started to rebuild, “a great many can never be able to do it.” Without access to credit, smaller farmers, many already in debt, were forced to sell their lands to wealthier and more secure planters, who thereby expanded their landholdings and production capabilities. Evidence for such transfers is difficult to document precisely, but Richard Dunn ingeniously employed a 1679-80 census from Barbados and a 1674 map listing individual plantations to highlight the transfer of land. Lacking actual deeds of sale or transfer, Dunn used the census and map to argue that in the aftermath of the hurricane, many of the small planters whose names appear on the map, but not in the census, “sold their property . . . to the big and middling planters.” The governor of Jamaica (at the time, a colony seemingly immune to hurricanes) prepared for a migration of “good numbers of families” from Barbados in late 1675 on account of the “late ravages by hurricanes.”<sup>38</sup>

This trend continued in the eighteenth century. When a major hurricane struck Barbados in 1731, officials again worried that the storm would lead to a further depopulation of the island. “So general has the calamity been,” Assembly leaders claimed, “that there is scarce a person throughout the whole Island but who has received a considerable loss by this dreadful storm.” Indeed, they continued, “so great is our present desolation that many of the poorer inhabitants, unable to rebuild their ruined houses, will be driven to quit the Island.” Such fears must to be treated with a degree of caution because island officials, seeking new legislation from Parliament

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<sup>38</sup> Jonathan Atkins to Sec. Sir Joseph Williamson, October 3, 1675, *CSPC*, 294; John Poyer, *The History of Barbados* (London, 1808), 102; Dunn, *Sugar and Slaves*, 93-95; Joseph Williamson to Lord Vaughan, December 6, 1675, *CSPC*, 311.

ensuring greater regulation of the supplies trade with the mainland colonies (redress that would be achieved with the passage of the Molasses Act in 1733) and greater military protection from French threats, had reason to emphasize the weakness of the island. Nevertheless, the destruction wrought by the storm was significant, and small farmers and planters faced difficult circumstances recovering from losses. The historian Frank Wesley Pitman concluded that throughout the colonial period the storms regularly forced smaller planters to sell their lands. “The frequency with which they are reported,” Pitman argued, “and the accounts of them indicate that every few years hundreds of weaker settlers were forced into bankruptcy and their estates amalgamated with those of the rich.”<sup>39</sup>

Local officials periodically debated the idea of halting debt collection after hurricanes to ensure that colonists, particularly small planters, were not forced into immediate bankruptcy by the storms, but there is little evidence that such plans were ever enacted. In Barbados, officials worried that “hasty” creditors seeking funds from debtors following the 1675 hurricane would drive the latter off the island, leaving the colony vulnerable to slave rebellions. That issue was of particular importance at the time, since the storm struck shortly after rumors of a slave conspiracy swept the island, but the bill never passed. A similar debate followed the 1780 hurricane, but again the measure was defeated. The Assembly rejected the idea of closing the courts (and thereby stopping debt collection) because it transferred the suffering wrought by the storm from one group to another. Supporters of the motion argued that it would protect “the honest and industrious” against the “rapacious claims of unfeeling creditors,” but opponents argued that closing the courts would punish creditors, including, one Assembly member noted,

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<sup>39</sup> Representation of the General Assembly of Barbados to the Council of Trade and Plantations, August 27, 1731, *CSPC*, 242-245; Frank Pitman, *The Development of the British West Indies, 170-1763* (New Haven, 1917), 91.

“young ladies with small fortunes from £500 to £1000 [who] shall be left destitute by a Law that is to deprive them of their little interest money to keep their bodies from the Cold.” Hurricanes affected the entire population, opponents of the measure argued, and the majority of the Assembly refused to intercede on behalf of some colonists at the expense of others.<sup>40</sup>

By the second half of the eighteenth century, the transfer of estates to owners outside the colonies rather than consolidation within became the major issue. As planters placed greater burdens on their estates (usually by establishing legacies that guaranteed set payments to heirs in England), many plantations proved incapable of meeting those obligations and current expenses. Debts in turn mounted to English merchants, who increasingly asked for mortgages and titles to land as security on loans. When events such as hurricanes disrupted plantation operations and colonists were unable to pay, colonial plantations were then transferred to British merchants. (Collection of such debts was facilitated by the passage of the Credit Act of 1732, which among other provisions, made slaves personal property in debt proceedings rather than tying them to the estate.)<sup>41</sup> The impact of hurricanes on such transfers is evident in Jamaica in the 1780s.

According to a report compiled by the island’s Assembly, forty-two percent of the total estates enumerated on the island in 1772 had been sold for debt, put into the hands of receivers, or “thrown up” (taken out of operation) by 1791. Again, hurricanes were not the only factor at work in these bankruptcies, but “debts contracted during a long series of public calamities,”

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<sup>40</sup> John Oldmixon, *The British Empire in America* (London, 1708), 2:36-37; Minutes of the Barbados Assembly, CO 31/41/50; see enclosures with letter from Lord George Germain to Board of Trade, November 23, 1780, CO 28/34/208-9.

<sup>41</sup> On increased planter indebtedness, especially after mid-century, see Sheridan, *Sugar and Slaves*, 290-94; Pares, *Merchants and Planters*, 42-47. An example of the process of land transfers to British merchants is discussed in David Hancock’s magisterial *Citizens of the World: London Merchants and the Integration of the British Atlantic Community, 1735-1785* (Cambridge, 1995), 147-49, especially n. 17; on Credit Act of 1732, see Sheridan, *Sugar and Slaves*, 288-89.

specifically the repeated destruction wrought by five storms in seven years on the island, exacerbated other forces – particularly disruptions caused by the American Revolution – and plunged many planters into financial ruin. How often hurricanes played a role in the transfer of property in the region, either from small farmer to large planter, from planter to planter, or from colonial planter to British merchant cannot be known with any certainty, but that they played an important role at various times and places in such transfers is certain.<sup>42</sup>

One result of such transfers was an increase in absentee ownership. In addition to transfers resulting from debt and bankruptcy, the potential threat to life and limb from hurricanes drove many planters away from the region and back to England. Christopher Jeaffreson of St. Christopher provides one example. Jeaffreson had come to the Leeward Islands to organize his plantation affairs and had planned to return to England, but his experience with two hurricanes in 1681 accelerated the process. After a second hurricane struck his plantation, Jeaffreson did his best to set his affairs in order and was safely on board a ship bound for England by the time the hurricane season rolled around the following year. Others did the same. Walter Pollard, the son of a prominent Barbadian planter, returned to his native Barbados in 1779 after finishing his education in England. He found Barbados “exhausted” from a number of factors: war, drought, fire, but most of all from the hurricane of 1780. “Lo! The fatal hurricane!” he wrote. “It lays our properties in the dust, the hard earnings of the past, the hopes of the rising generation.” It was all too much for young Pollard, who quickly fled “with his hopes and industry” back to England, a “more favored climate.” A visitor to Jamaica in the latter part of the eighteenth century found

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<sup>42</sup> *Proceedings of the Honourable House of Assembly of Jamaica on the Sugar and Slave Trade* (St. Jago de Vega, 1792), appendix XII. Frank Pitman, “The Settlement and Financing of British West India Plantations in the Eighteenth Century,” in *Essays in Colonial History Presented to Charles M. Andrews by his Students* (New Haven, 1931), 252-283.

that hurricanes and earthquakes “emaciated” many merchants and forced them to return to England to recover.<sup>43</sup>

### Part 3: Reducing the Risk

Many colonists may have fled the Greater Caribbean physically, but they retained their interest in property in the region. Despite repeated destruction from hurricanes (and other calamities), the rewards of a good crop were tremendous and successful sugar and rice planters became among the wealthiest of all colonists in the British Empire.<sup>44</sup> “If this island were not troubled with great thunders and lightnings, hurricanes and earthquakes,” one traveler wrote about Jamaica, “the fertility and beauty of this country would make it as desirable a situation for pleasure, as it is for profits, which in spite of these disadvantages, draw hither such a number of people.”<sup>45</sup>

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<sup>43</sup> Jeaffreson, *A Young Squire of the Seventeenth Century*, 274-80; Pollard, quoted in Karl Watson, *The Civilized Island Barbados: A Social History, 1750-1816* (Bridgetown, 1979), 46; Peter Mardsen, *An Account of the Island of Jamaica* (Newcastle, 1788), 44; Andrew O’Shaughnessy, *An Empire Divided: The American Revolution and the British Caribbean* (Philadelphia, 2000), 5; Douglas Hall, “Absentee-Proprietorship in the British West Indies to about 1850,” *Jamaican Historical Review* 4 (1964): 15-31, and Trevor Burnard, “‘The grand mart of the island’: Kingston, Jamaica in the mid-eighteenth century and the Problem of urbanization in plantation societies,” in *Jamaica in Slavery and Freedom*, ed. K. Monteith and G. Richards (Kingston, forthcoming). Absenteeism was less an issue in South Carolina, in part because rice did not generate fortunes great enough to support absentee ownership. Nevertheless, by the 1770s, at least fifty Carolinians were residing in London. See Jack Greene, “Colonial South Carolina and the Caribbean Connection,” in Greene, *Imperatives, Behaviors, and Identities: Essays in Early American Cultural History* (Charlottesville, VA, 1992), 84.

<sup>44</sup> On the wealth of sugar and rice planters, see John McCusker and Russell Menard, *The Economy of British America, 1607-1789*, 2<sup>d</sup> ed. (Chapel Hill, 1991), 144-88.

<sup>45</sup> Charlevoix, *A Voyage to North America*, 305; Barbot, *A Description of the Coasts of North and South Guinea* (London, 1746), 579. See also An American, *American Husbandry: Containing an Account of the Soil, Climate, Production and Agriculture of the British Colonies* (London, 1775), 113-14.

There was, of course, nothing colonists could do to lessen the frequency and ferocity of the storms, and as a result a sense of fatalism developed among planters in the region. Letters, plantation accounts, and travelers' descriptions routinely qualified any discussion of social and economic circumstances and conditions with the phrase, "if a hurricane comes."<sup>46</sup> Hurricanes were "the most terrible calamity to which they are subject in this climate" according to one colonist, because the storms "destroy at a stroke" all improvements "and prostrates the most exalted hopes of the planter, and often just at the moment when he thinks himself out of the reach of fortune."<sup>47</sup> Planters like Henry Laurens learned to accept that risk and uncertainty characterized their economic prospects. When the governor of Barbados reported in 1677 that, "we have escaped the hurricane this year, to the great encouragement of the people," he articulated the recognition among all colonists that economic improvement and development in the Greater Caribbean were contingent on powerful forces of nature that threatened beyond their control.<sup>48</sup>

Nevertheless, colonists did not completely resign themselves to the whims of nature and fortune. Instead they took what steps they could to decrease their vulnerability and to facilitate recovery efforts. Regarding the former, colonists altered the built environment in hopes of lessening the damage to plantation infrastructure. Brick and stone became the building materials

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<sup>46</sup> Thomas Lynch to Sec. Lord Arlington, June 7, 1671, *CSPC*, 223; for examples of the hurricanes and uncertainty, see Littleton, *The Groans of the Plantations*, 19; Sir Gilbert and Josiah Heathcote to the Council of Trade and Plantations, April 26, 1703, *CSPC*, 378; Governor Hamilton to Council of Trade and Plantations, August 26, 1717, *CSPC*, 13; Governor Hart to the Council of Trade and Plantations, July 12, 1724, *CSPC*, 143; Henry Laurens to Mathias Holmes, August 24, 1764, in *The Papers of Henry Laurens*, 4:376; Walter Tullideph to Richard Oliver, March 4, 1752, quoted in Sheridan, *Sugar and Slavery*, 439.

<sup>47</sup> Pierre Charlevoix, *A Voyage to North America . . . and a Description and Natural History of the Islands of the West Indies* (Dublin, 1766), 291.

<sup>48</sup> Jonathan Atkins to Lords of Trade and Plantations, October 8, 1677, *CSPC*, 160-61; see also, Thomas Lynch to Sec. Lord Arlington, June 7, 1671, *ibid*, 224.

of choice for plantation structures in most of the region. Colonists also lowered the height of their dwellings so that one-story buildings became the norm in rural and urban areas. “We must not look for Beauties of Architecture here,” Charles Leslie declared in his *History of Jamaica*, published in 1740. “The Gentlemen’s Houses are generally built low, of one Story.” There were in the island’s towns, Leslie continued, “several houses which are two Stories; but that way of building is generally disapproved of, because they seldom are known to stand the Shock of an Earthquake, or the Fury of a Storm.”<sup>49</sup> William Senhouse completely redesigned his estate house following the 1780 tempest; he altered the roof, lowered the height of the building, and constructed the windward part of the house in a “circular form,” to help “resist with more effect any future hurricanes.” Hurricanes continued to destroy buildings throughout the region, but changing architecture helped limit the damage, even in only minimally. A survivor of the 1772 hurricane on Antigua, for example, reported that despite widespread damage to his plantation, “the new stone building, containing the Offices, stood it very well & was of great service.”<sup>50</sup>

Planters could do nothing to protect the crops while they remained in the fields, but they did have some control once the crops had been harvested and processed, and they made efforts to minimize the risks associated with shipping. A well-defined shipping season developed in the region designed to avoid the worst of the hurricane months (August and September). Colonial officials often complained that they were “abandoned by all shipping about the hurricane season,” and ships that did arrive were often sent elsewhere until the season passed. Governor Stapleton of the Leeward Islands advised captains to “sail for some secure port until after

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<sup>49</sup> Leslie, *A New and Exact History of Jamaica*, 30.

<sup>50</sup> D. Walsh to James Scott, September 18, 1772, reprinted in *Caribbeana: Being Miscellaneous Papers Relating to the History, Geography, Topography, and Antiquities of the British West Indies*, 2: 322-23; “Autobiography of William Senhouse,” 206-209.

hurricane time.”<sup>51</sup> Most went to English Harbor at Antigua, a port ringed by mountains and thus seemingly more secure during tempests. Others moved south for the entire hurricane season, believing that the waters off the coast of South America were safer. Such a location provided the added bonus of an opportunity to raid Spanish ships. Vessels stranded in South Carolina either moved north or laid anchor upriver from Charleston.<sup>52</sup>

In addition, colonists could insure their crops as cargoes on ships returning to Britain. Marine insurance was well established in England by the end of the seventeenth century for both the cargoes of rice and sugar, and increasingly, for the ships themselves. Insurance was purchased in London by merchants, usually on specific orders from the planters, although some planters left it to the discretion of merchants who had better access to news about affairs in Europe that might influence shipping. The most secure firms were London Assurance and Royal Exchange Insurance, and prominent West India Merchant houses such as Lascelles and Maxwell only took out policies with them. Others found underwriters for their voyages at Lloyds’ coffeehouse.<sup>53</sup> Insurance rates were relatively stable during the eighteenth century

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<sup>51</sup> Sir Charles Wheler to Council for Foreign Plantations, December 9, 1671, *CSPC*, 289; Jonathan Atkins to Lords of Trade and Plantations, July 4, 1676, *CSPC*, 419; Governor Stapleton to Sir Robert Southwell, June 20, 1676, *CSPC*, 410; Governor Stapleton to Lords of Trade and Plantations, August 8, 1678, *CSPC*, 281; Governor Hamilton to Mr. Popple, September 10, 1718, *CSPC*, 349. On the shipping season generally, and a caution regarding the complaints of colonial governors, see Ian Steele, *The English Atlantic, 1675-1740: An Exploration of Communication and Community* (Oxford, 1986), chapter 12 in particular.

<sup>52</sup> Governor Hamilton to Council of Trade and Plantations, August 26, 1717, *CSPC*, 13; also Letter from Admiral Hughes, August 10, 1785, ADM 1/312/481. *Considerations Concerning the Proper Method of Carrying on the South-Sea Company’s Trade to Caracas* (London, 1734?); Robert Pringle to Andrew Pringle, September 7, 1742, in *The Letterbook of Robert Pringle*, 1:407; *State of the Island of Jamaica* (London, 1726), 30-31.

<sup>53</sup> On insurance generally, see Richard Pares, “A London West-India Merchant House, 1740-1769,” in *Essays Presented to Sir Lewis Namier*, eds., Richard Pares and Alan J.P. Taylor (1956, reprint Freeport NY, 1971), 75-107; Davis, *The Rise of the English Shipping Industry*, 87-89. Charles Royster provides a fascinating portrayal of the operations of the London insurance markets in *The Fabulous History of the*

(except during war, when rates increased dramatically). The average rate for trade to Jamaica during peacetime was 6%, while the rate to other parts of the West Indies was about 4%. The cost of insurance often doubled for those ships that sailed during the hurricane season. As a result, planters and merchants were anxious to see ships laden with sugars depart the Caribbean before the beginning of August and the most serious threats from storms. The owners of the *Kingston Packet*, for example, informed the ship's captain in 1775 that they hoped he could purchase sugars as quickly as possible and be sailing to Bristol by August to avoid the doubling of insurance premiums.<sup>54</sup> Insurance offered security to planters that their crops would bring payment even if they did not make it to market, but it also added to the cost, and some choose to avoid the extra expense, particularly during times of peace. The percentage of ships that were insured is unknown, but it is clear that not all ships were insured, or not insured for the full value of their cargoes. The Charleston merchant Robert Pringle, for example, could only "hope you are fully Insur'd" when he learned that one of his brother's ships had been lost in a hurricane on its return from Jamaica."<sup>55</sup>

Finally, colonists increasingly looked to outside financial assistance to help ease the economic despair and burdens wrought by major storms. Disaster relief was not a new

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*Dismal Swamp Company: A Story of George Washington's Times* (New York, 1999), 111-15, 141-145. Richard Pares notes that London insurers were often reluctant to insure ships trading between North America and the Indies because they could not assess the seaworthy-ness of an individual ship. As a result, mainland merchants tended to insure one another. Pares, *Yankees and Creoles: The Trade Between North America and the West Indies Before the American Revolution* (Cambridge, MA, 1956), 23-24.

<sup>54</sup> Richard Pares, *War and Trade in the West Indies, 1739-1763* (Oxford, 1936), 495; J.R. Ward, "The Profitability of Sugar Planting in the British West Indies," *Economic History Review* 31 (May 1978): 197-213; Kenneth Morgan, *Bristol and the Atlantic Trade in the Eighteenth Century* (Cambridge, 1993), 202; David Watts, *The West Indies: Patterns of Development, Culture, and Environmental Change* (Cambridge, 1987), 266.

<sup>55</sup> Robert Pringle to Andrew Pringle, November 14, 1743, in *Letterbook of Robert Pringle*, 2:606-07. Ward, "Profitability of Sugar Planting," 197-213. Ralph Davis notes that payment for losses increased

phenomenon in the eighteenth century – victims of floods, storms, and particularly fires in Britain and the colonies had long been recipients of voluntary donations collected in local parishes and communities – but the eighteenth century witnessed two new developments.<sup>56</sup> First, private humanitarian assistance expanded in geographic reach, and the devastation of societies in the Greater Caribbean became emotional and financial concerns for residents throughout the British Atlantic world. There were several reasons for this development that need not detain us here. The key point is that significant sums of money began to flow across the Atlantic and up and down the coast to aid victims of calamities. Boston received over £13,000 following the 1760 fire, for example. Britons, led by the King, donated thousands of pounds to victims of a 1776 fire in Basseterre St. Kitts.<sup>57</sup> The largest relief effort followed the 1780 hurricanes in Jamaica and Barbados. The West India Committee in London raised over £15,000, and a separate campaigning in Ireland raised an additional £20,000. The exact total of donations was never compiled, but it appears that at least £40,000 was collected in Britain to aid victims in the West Indies during the three or four years following the calamity. Such assistance had become so important and so expected by the second half of the eighteenth century that following the 1780 hurricane colonists in Barbados wrote to England and suggested that calls for aid through

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from about 75% of the total value to closer to 99% during the early eighteenth century, which increased the value of the policies, and thus their use. Davis, *The Rise of the English Shipping Industry*, 377.

<sup>56</sup> For older traditions of relief, see Lilian Ping, “Raising Fund for ‘Good Causes’ During the Reformation,” *Hibbert Journal* 35 (1936): 53-66; Mark Harris, “‘Inky Blots and Rotten Parchment Bonds’: London, Charity Briefs, and the Guildhall Library,” *Historical Research* 66 (February 1993): 99-110; David Underdown, *Fire from Heaven: Life in an English Town in the Seventeenth Century* (New Haven, 1992), 37, 125-129.

<sup>57</sup> *A Volume of Records Relating to the Early History of Boston Containing Miscellaneous Papers* (Boston, 1900), 100-101; *Public Advertiser*, January 1, 1777.

charity sermons in churches and newspaper advertisements were “not only usual on such occasions, but the most probable means to procure us sufficient relief in our great necessity.”<sup>58</sup>

In addition to private relief, colonists also increasingly sought, and sometimes received, disaster relief from the government. Following the 1780 hurricanes, Parliament granted £120,000 to victims in Jamaica and Barbados. In Barbados, over half the funds were used to pay off the island’s debt, which allowed for a suspension of tax payments, a “boon” to wealthy sugar planters, in the words of one nineteenth-century historian. In Jamaica, £20,000 was set aside to help the largest sugar planters recover. While such amount paled in comparison with the actual losses, payments of £750 to £1,000 nonetheless provided significant income to planters reeling from the destruction of crops and plantations, particularly given the absence of any property insurance.<sup>59</sup> Parliament again provided financial assistance to hurricane victims in the Caribbean in 1831. British officials appropriated £100,000 in humanitarian aid to victims in Barbados and the Windward Islands following a major hurricane that year. In addition, the government made available £1,000,000 for loans to help rebuild estates in the islands. The money was granted interest-free for the first three years, and thereafter at a rate of 4% per year.<sup>60</sup>

Government disaster relief was not a routine event; indeed, it was not until the second half of the twentieth century that formal government agencies and structures dedicated to disaster

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<sup>58</sup> Minutes of the Vestry of St. Michael’s, November 2, 1780, Barbados Archive, Black Rock, St. Michael’s; on 1780 subscriptions and briefs, see *St. James Chronicle*, February 13, 1781.

<sup>59</sup> John Fowler, *A General Account of the Calamities Occasioned by the Late Tremendous Hurricanes and Earthquakes in the West India Islands* (London, 1781); John Poyer, *History of Barbados* (London, 1808), 522-23; *Journals of the Assembly of Jamaica* (Kingston, 1805), 568-69

<sup>60</sup> Robert Schomburgk, *The History of Barbados* (London, 1848), 439-443. For another example of British disaster relief in this period, see Alan Taylor, “The Hungry Year: 1789 on the Northern Border of Revolutionary America,” in Steven Biel, ed., *American Disasters* (New York, 2002), 39-71.

relief were created. However, victims of various disasters – both colonists who remained in the British Empire and those who broke away to form the United States – increasingly looked to the government for help during the latter part of the eighteenth and into the nineteenth century. Barbadians cited the 1780 grant as precedent when they again sought aid following the 1831 hurricane. In the newly created United States, residents routinely petitioned Congress for assistance, and often received it. Victims of the New Madrid earthquakes received free federal land to compensate for their losses. Congress allocated \$20,000 in 1827 for residents of Alexandria, VA, who had property destroyed in a fire. An 1836 fire in New York, likewise, resulted in a Congressional allocation of disaster relief funds.<sup>61</sup> Not all disasters would result in relief allocations, and requests for relief were often the source of intense debate over the role of the federal government; nonetheless many people increasingly viewed government as a potential source of aid and compensation in the wake of major calamities. More importantly, regardless of whether it came from public or private sources, humanitarian disaster relief offered essential assistance to victims and facilitated recovery efforts during the eighteenth and nineteenth centuries.

### **Conclusion**

Hurricanes were central forces helping shape the economic experience of colonists in the Greater Caribbean and creating a climate of risk that appeared distinct even in the uncertain economic world of the eighteenth century. Although years, even decades, might pass with only

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<sup>61</sup> Michele Landis, ““Let Me Next Time be ‘Tried by Fire’”: Disaster Relief and the Origins of the American Welfare State 1789-1874,” *Northwestern University Law Review* (Spring 1998): 967-1034; Theodore Steinberg, *Acts of God: The Unnatural History of Natural Disasters in America* (New York, 1999).

minor disruptions and financial losses from summer tropical storms, the threat of complete devastation, of “beginning the world anew,” remained a constant concern. The possibility of violent destruction and chaos hovered over the region every year, and as June turned to July, “colonists dreadfully apprehend the hurricanes” in the words of one official.<sup>62</sup> And when that potential was realized, the consequences were tremendous. Colonists everywhere in British America worried about the weather and its effects on crops in the fields and cargoes at sea, but the risk from hurricanes was distinct because the destruction was so complete, so sudden, and so frequent. Bad weather elsewhere was problematic and resulted in short-term economic hardships, but houses remained standing, the overall economic infrastructure remained intact, and lives were not lost. Hurricanes, on the other hand, leveled the social and economic order of the colonies; they caused widespread death and destruction and resulted in severe economic distress for many in the region.

What kept colonists rebuilding was, as Edmund Burke suggested, the possibility for “being great.” The demand for plantation staples, and the protected market for sugar (and to a lesser extent, rice) in Great Britain meant that the potential profits from these crops were enough to ensure that colonists weathered the risks involved in production. As one visitor to the West Indies noted, “It is easy to conceive how uncomfortable it is to live in those parts, where men’s lives and estates are in continual danger, but want and covetousness put men upon exposing themselves to the utmost extremities.”<sup>63</sup> Planters had no choice about where they could grow these two staples; sugar and rice both required a tropical and semi-tropical climate, and the climate that allowed for production of these crops also gave rise to natural forces capable of

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<sup>62</sup> Thomas Lynch to Sec. Lord Arlington, June 7, 1671, *CSPC*, 223

destroying them and everything associated with their cultivation. Seeking wealth, colonists had to learn to live with the danger, and the mangled fields and shattered buildings that routinely littered the landscape provided potent reminders of the power of nature in the New World and fragility of colonists' efforts to settle and prosper there.

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<sup>63</sup> Jean Barbot, *A Description of the Coasts of North and South Guinea* (London, 1746), 579. See also An American, *American Husbandry: Containing an Account of the Soil, Climate, Production and Agriculture of the British Colonies* (London, 1775), 113-14.