Force Projection in the Time of Scurvy: The Destruction of the 1740-42 West Indies Expedition

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The massive British West Indies expedition of 1740-42 during the War of Jenkins' Ear, launched with an ambitious goal, produced nothing beyond terrible losses. The enormous number of deaths from yellow fever has obscured the true reasons for the defeat at Cartagena de Indias that has often been blamed on the army's slow siege tactics. The author, following his research for Disaster on the Spanish Main: The Tragic British American Expedition to the West Indies during the War of Jenkins' Ear, has further developed evidence from British musters that upends common assumptions about yellow fever's impact and, instead, traces the cause of the expedition's failure to poor health management and misguided military leadership.

L'expédition massive des Antilles britanniques de 1740-1742 pendant la guerre de l'Oreille de Jenkins, lancée avec un objectif ambitieux, n'a rien produit d'autre que de pertes terribles. Le nombre énorme de décès dus à la fièvre jaune obscurcit les véritables raisons de la défaite à Carthagène des Indes, souvent imputée à la lenteur des tactiques de siège de l'armée. L'auteur, suite à ses recherches pour Disaster on the Spanish Main: The Tragic British American Expedition to the West Indies during the War of Jenkins' Ear, a étudié en profondeur les données probantes issues des registre militaire britanniques pour réfuter les hypothèses courantes sur l'impact de la fièvre jaune et attribuer plutôt l'échec de l'expédition à une mauvaise gestion de la santé et à un leadership militaire peu judicieux.

The West Indies expedition of 1740-42, Great Britain's main effort in the War of Jenkins' Ear, was unprecedented in its scope, its size of forces committed, its resulting loss of life, and its abysmal outcome. Responsibility for the failure can be imputed to the British leaders who, through misinformation and misguided assumptions, neglected both the health of their force and successful campaign tactics.

The government of Sir Robert Walpole began hostilities against Spain in June 1739 after diplomatic efforts to resolve trade disputes with the Spanish king collapsed. To achieve a major economic and strategic victory, the British tried to leverage their naval superiority to seize virtual control of the Spanish West Indies. A large contingent of soldiers, mostly newly recruited regiments from Britain and North America, and a massive fleet of fifty warships, descended on Cartagena de Indias, and later Cuba and Panama. Over the two-year campaign, the expeditionary force and its escorting fleet suffered 13-15,000 deaths due mainly to disease. These fatalities were all the more painful because Britain achieved nothing for all this human sacrifice – a tragic waste of life. The botched venture into the tropics, must go down as one of Britain's greatest military fiascos and a cautionary tale about the difficulties of mounting an overseas enterprise in the early modern era. How could this powerful British offensive have miscarried so dreadfully?

Historians' Assessments

2021), 334.

Historians have generated a long list of causal factors for the expedition's calamitous outcome. Problems often cited for the Cartagena debacle include inter-service squabbling, strategic blundering by the government, the approach of the rainy season, slack performance of the American troops, and ladders that were too short. All these factors have some basis in fact but fall short of explaining such a monumental failure. Nevertheless, over the last 280 years, most treatments of the expedition have coalesced around the following account: the Royal Navy succeeded in landing the British regiments near the entrance to Cartagena's outer bay and, later, on the mainland, but the army's slow proceedings dragged on too long, allowing tropical disease, mostly yellow

Herbert W. Richmond, *The Navy in the War of 1739-48*, vol. 1 (Aldershot, UK: Gregg Revivals, 1993), 19 and 32; Richard Harding, *The Emergence of Britain's Global Naval Supremacy: The War of 1739-1748* (Woodbridge, Suffolk, UK: Boydell Press, 2010), 103-104.

Musters, Colonial Office Papers [CO] 5/42, Parts 1 & 2, The National Archives, Kew (TNA); Duncan Crewe, *Yellow Jack and the Worm: British Naval Administration in the West Indies, 1739-1748* (Liverpool: Liverpool University Press, 1993), 85. For an estimate of total British fatalities see Craig S. Chapman, *Disaster on the Spanish Main: The Tragic British-American Expedition to the West Indies during the War of Jenkins' Ear* (Lincoln, NE: Potomac Books,

fever, to ravage the ranks and force a withdrawal. Admiral Vernon, the naval component commander on the expedition, set the tone for such assessments through the release of self-serving pamphlets and his correspondence.³ He also received support from one of his subordinates, Captain, later Admiral, Charles Knowles.⁴ Later historians, Douglas Ford, J. W. Fortescue, Francis Russell Hart, Herbert Richmond, Reed Browning, and many others have echoed the argument that the army's lethargy and deliberate siege tactics piddled away the interval before tropical disease overwhelmed the force. William Ledyard Rodgers summed up the common judgment, "The general commanding failed to recognize that the climatic conditions were such that he could not save the lives of his troops by delaying for siege operations."

This generally accepted explanation overlooks the two most decisive factors in the British failure at Cartagena: misconceptions about tropical illnesses and poor military leadership.

The Campaign

A summary of the campaign is in order. Due to lack of prewar preparation, the Walpole government forfeited the advantage of early decisive action and was constrained to an initial policy of committing "all sorts of hostilities" against Spain's treasure ships and commerce.⁶ Mounting political pressure from the merchant class and the opposition party forced the government to consider a more aggressive strategy with broader goals.⁷ Britain's chief strategists, the secretary of state, the Duke of Newcastle, the first lord of the admiralty, Sir Charles Wager, and the admiral of the fleet, Sir John Norris,

³ Original Papers Relating to the Expedition to Carthagena (London: M. Cooper, 1744); Edward Vernon, A Second Genuine Speech, Deliver'd by Adm ... l V ... n, on Board the Carolina, to the Officers of the Navy, Immediately after the Salley from Fort St. Lazara (London: T. Cooper, 1741); Anonymous, The Conduct of Admiral Vernon Examin'd and Vindicated (London, 1741).

⁴ Anonymous, An Account of the Expedition to Carthagena: with Explanatory Notes and Observations (London: M. Cooper, 1743).

Douglas Ford, Admiral Vernon and the Navy: A Memoir and Vindication (London: Fisher, 1907); J. W. Fortescue, A History of the British Army, vol. 2 (London: MacMillan, 1910); Francis Russell Hart, Admirals of the Caribbean (New York: Houghton Mifflin, 1922); Richmond, The Navy in the War of 1739–48; Reed Browning, The War of the Austrian Succession (New York: St. Martin's Press, 1993), 61; and William Ledyard Rodgers, A Study of Attacks upon Fortified Harbors. Reprinted from the "Proceedings of the United States Naval institute," nos. 111, 112, 113, by kind permission of the Institute (Fort Monroe, VA: Artillery School Press, 1907), 20.

⁶ Richmond, *The Navy in the War of 1739–48*, 24-25; Philip Woodfine, *Britannia's Glories: the Walpole Ministry and the 1739 War with Spain* (Woodbridge, Suffolk, UK: Royal Historical Society & Boydell Press, 1998), 211.

Norris Journal, MS 28132, ff. 52-53, British Library (BL); Kathleen Wilson, "Empire, Trade and Popular Politics in Mid-Hanoverian Britain: The Case of Admiral Vernon," *Past & Present* 121 (1988): 97-99.

struggled to find the manpower to mount a large-scale operation capable of achieving a notable objective. It took until December 1739 for the duke and admirals to adopt a scheme of recruiting North American colonists to flesh out the land force for a major endeavor. They advanced a plan to send 10,000 soldiers and a large supporting fleet to capture a vital West Indies port while the rest of the Royal Navy bottled up the *Armada Española* in its home ports. The government designated Vice Admiral Edward Vernon to command the sea forces and Major General Charles Cathcart to command the regiments, though Vice Admiral Edward Vernon. Painting by neither would hold overall command Thomas Gainsborough. (National Portrait of the expedition. Major decisions Gallery, London) involving both services were to be settled in joint councils of war.8



The nation had the lift capacity and the logistical base to support a large overseas offensive, but its bureaucracies had difficulty managing the scale and complexity of the expedition. No one thought to transport draft animals to move the army's equipment and supplies in theater until Lord Cathcart made a last-minute appeal that fell through. The Victualling Board forgot to order rations for the 3500 troops coming from America. 10 Because of departure delays, the regiments from Britain spent two months in port confined aboard unsanitary transport ships and another three months in passage to Jamaica. As a result, many British troops arrived sick and eight percent died in transit, a death rate equivalent to shipments of convicts to the New World and half that for enslaved Africans on the Middle Passage. 11 These fatalities included the commanding general, Lord Cathcart.

Norris Journal, MS 28132, f. 89, BL; and Richard Harding, Amphibious Warfare in the Eighteenth Century: The British Expedition to the West Indies 1740-1742 (Woodbridge, Suffolk, UK: Royal Historical Society & Boydell Press, 1991), 35-38.

Cathcart to Newcastle, 26 June 1740, CO 5/41, ff. 52-53, TNA.

¹⁰ Crewe, Yellow Jack and the Worm, 141-60.

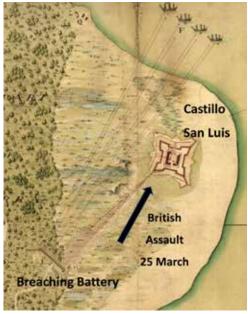
¹¹ Muster, CO 5/42, f. 25, TNA; and Herbert S. Klein, et al., "Transoceanic Mortality: The Slave Trade in Comparative Perspective," William & Mary Quarterly 58, no. 1 (January 2001): 93-118.



Map of Cartagena and its Outer Bay. (Courtesy of the Author)

The joint commanders, Admiral Vernon and Brigadier General Thomas Wentworth, Cathcart's replacement, selected Cartagena on the South American coast as the principal objective. 12 They launched a successful amphibious assault at the Bocachica entrance to Cartagena's outer bay on 9-10 March 1741, preceded by a naval bombardment. The next day Admiral Vernon sent the first of several messages to General Wentworth complaining about the time it was taking the army to reduce Castillo San Luis, the Spanish fortification guarding Bocachica. Vernon, anxious to get his ships into the protected waters of the outer bay, warned the general that Cartagena's hostile climate would soon strike down the troops with tropical illnesses unless the army sped up its proceedings. Over the next two weeks the admiral hounded the general about the time it was taking the army to execute its siege of San Luis, instead of

Edward Vernon, *The Vernon Papers*, ed. B. McL. Ranft (Navy Records Society, 1958), 173-74.



British Attack on Castillo San Luis de Bocachica. Detail of Bocachica Map by John Thomas. (Library of Congress)

storming the "paltry castle."13

While army mortars and navy ships bombarded the castillo, the army constructed an artillery breaching battery. The work required ten days to provide the battery's twenty demi-cannons with a stable firing platform. All the construction material, guns, powder, and bullets had to be hauled by hand because the army did not have a single mule team. Once in operation, the battery breached one of the castillo's bastions in four days. British grenadiers stormed through the opening on the evening of 25 March, propelling the Spanish garrison out the gate.¹⁴

The fall of San Luis accomplished two important objectives for the British: 1) it allowed the impatient Admiral Vernon to enter Cartagena's outer bay and spare his ships further damage from Caribbean winds and waves; and 2) the fleet's entry into the bay effectively cut off Cartagena's supplies from the Spanish mainland. This date marked a significant victory for the British but also had a downside. British soldiers endured their first exposure to the yellow fever virus once inside Castillo San Luis.¹⁵

¹³ Vernon to Wentworth, 11 and 16 March 1741, Vernon Papers, 185-91.

Vernon to Newcastle, 1 April 1741, Vernon Papers, 206-14; Elibank Journal, MS 30196, BL; Printed Ephemera: Three Centuries of Broadsides and Other Printed Ephemera, Library of Congress; An Account of Admiral Vernon's Attempt on Cartagena in the West Indies, Sloane Papers, MS 3970, BL; and Justly Watson Abstract of Our Proceedings, CO 5/41, ff. 273-77, TNA.

¹⁵ The yellow fever Flavivirus does not occur naturally in the wild but must be introduced.

The British followed up this success on 5 April with another amphibious landing on the mainland followed by an advance to the hamlet of la Quinta where they routed a Spanish force. The army's next objective called for the reduction of Castillo San Felipe de Barajas, the fortification guarding the landward approach to Cartagena. Intelligence and reconnaissance had identified an elevated position where a second breaching battery could dominate the castillo. 16 Wentworth landed the rest of his men and siege equipment over the next three days but his commitment to siege tactics began to wane. The rising number of sick troops limited how many men were available to construct a new battery to batter down San Felipe's walls. Wentworth worried that the battery could not be completed before Cartagena's wet season arrived, normally in late April, and exposed his soldiers to deadly fevers attending the tropical rains. Also, his request to Admiral Vernon for naval shelling of San Felipe went unfulfilled. Instead of proceeding with another lengthy siege, Wentworth decided to follow Vernon's advice and storm the castillo. 17 Here is a clear example of a tactical decision being driven by a general's fear of tropical disease.

Wentworth's lack of battle experience showed in his poorly crafted tactical plan. The general ordered a predawn assault to catch the Spaniards by surprise and prevent the city's guns from entering the action. He formed a two-pronged attack to storm the southwestern and northern faces of the triangular fortress, instead of concentrating his forces against a single side. Rather than advancing on the castillo and investing it closely before the attack, he chose to launch his attack from la Quinta, 1200 yards away. With no cavalry or advanced reconnaissance parties he relied on deserters to navigate his force in the dark. Because Wentworth wanted to achieve surprise, he relied solely on his infantry to capture San Felipe and did not request any supporting fire from the fleet's 2200 guns.¹⁸

In the early morning hours of 9 April, two British brigades supported by 500 North American pioneers launched their attack on Castillo San Felipe with terrible results. An overlooked Spanish outpost alerted the defenders to the

Castillo San Luis is the first location where British troops could have encountered mosquitoes infected by previously infected Spanish troops.

Anonymous, *Authentic Papers Relating to the Expedition Against Carthagena* (London: M. Raymond, 1744), 88; MacPherson Memorandum, *Vernon Papers*, 234.

¹⁷ Vernon to Wentworth, 6 April 1741, Authentic Papers, 63-64; Account of the Expedition, 39-40; Anonymous, A Journal of the Expedition to Carthagena, with Notes, in Answer to a Late Pamphlet; Entitled, An Account of the Expedition to Carthagena (London: Roberts, 1744), 30; and William Blakeney, Memoirs of the Life and Actions of General W. Blakeney (London: 1756), 11.

¹⁸ Elibank Journal, MS 30196, BL; and Watson Abstract, CO 5/41, ff. 273-77.

coming attack, costing the British the element of surprise. The deserters lost their way, and one brigade charged the wrong side of the castillo. Spanish soldiers and sailors in the outside trenches pinned down the attacking infantry until dawn when the city's guns blasted the exposed British troops. The Spaniards launched a counterattack from Cartagena over a bridge the British neglected to interdict and drove the attackers from the field, ending the misguided assault.¹⁹



Assault on Castillo San Felipe de Barajas. Arman Manookian. (Honolulu Academy of Arts)

The loss of 683 killed and wounded further depleted the army's already dwindling strength as more men turned sick.²⁰ The generals wanted to revert to siege operations but when they appealed to Admiral Vernon for reinforcements from the fleet, he turned them down, thus forcing an end to the siege and a withdrawal to Jamaica.²¹

¹⁹ Memorandum of what particularly related to...an attack and storm against Fort San Lazaro...April 9th 1741, MacKenzie Papers, MS 39200, ff. 45-7, BL; Elibank Journal, MS 30196, BL; Sebastián de Eslava, *Diario de Todo lo Ocurrido en la Expugnacion de los Fuertes de Bocachica, y Sitio de la Ciudad de Cartagena de las Indias* (Madrid, 1741), 16-19; Blas de Lezo, Diario de lo acaecido en Cartagena de Indias desde el 13 de marzo de 1741 hasta 20 de mayo del mismo año, Estado, 2335 exp. 2, ff. 14-69, Archivo Historico Nacional, Madrid, Spain.

²⁰ MacKenzie Papers, MS 39190, BL.

²¹ Authentic Papers, 73-82 and 84-86.

The expedition limped back to Jamaica, beginning on 27 April as yellow fever swept through the regiments and ships' crews, after the army brought the mosquitoes on board in their empty water barrels. The last acts in this sad play were half-hearted attempts to capture Santiago de Cuba and Panama City that accomplished nothing. By the time London recalled the muddled expedition, disease had whittled the army down to an ineffective state. The huge losses to tropical illnesses seemed to justify Admiral Vernon's frequent exhortations for the army to storm the Spanish forts before the unhealthy climate overwhelmed their ranks.

Tropical Disease

Why did Vernon and Wentworth feel they had to rush their siege operations? The answer goes back to eighteenth-century understanding – or misunderstanding – of tropical illnesses. Physicians of this time thought tropical fevers were endemic to the climate and Europeans were not adaptable to these unhealthy environments. They noticed fevers rose dramatically in the wet seasons, leading to speculation that the dews and vapors rising from the ground, the deadly tropical rains, and the wide variations in diurnal temperatures caused the fevers.²² Previous yellow fever outbreaks showed that within six weeks of arriving in a tropical climate any large group of Europeans would become consumed with fevers, hence Admiral Vernon's frequent missives to proceed quickly.²³ Commanders could not change the climate, so they assumed they had to take Cartagena before the deadline set by the rainy season and morbid environment. They were wrong.

The real killer is the *Aedes aegypti* mosquito that carries the yellow fever virus. The species is native to sub-Saharan Africa but came to the West Indies in the seventeenth century. The mosquito favors human habitations in warm climates for breeding, often in jars, pots, or puddles. Unlike the *Aedes anopheles* mosquito that carries malaria, the aegypti does not need rainy weather to reproduce, as long as people let water collect in buckets, calabashes or barrels.²⁴ We know the mosquito was present in Cartagena and that the virus had flared among Spanish reinforcements sent to the city prior to the British siege. Conditions were thus ripe for an epidemic when the British and

²² James Johnson, *The Influence of Tropical Climates...On European Constitutions* (London: J. J. Stockdale, 1813) 2; Julian de Zulueta, "Health and Military Factors in Vernon's Failure at Cartagena," *The Mariner's Mirror* 78, No. 2 (May 1992): 137.

²³ Vernon to Newcastle, 26 April 1741, Original Papers Carthagena, 110.

²⁴ S. Rickard Christophers, *Aedes Aegypti (L.) The Yellow Fever Mosquito: Its Life History, Bionomics and Structure* (London: Cambridge University Press, 1960), 54-57; Henry Rose Carter, *Yellow Fever: An Epidemiological and Historical Study of its Place of Origin* (Baltimore: Williams & Wilkins, 1931), 10-3.

Americans arrived

The progress of yellow fever in a patient is instructive. The infection starts with the bite of a mosquito previously infected with the virus. Three to six days later the victim comes down with the disease and experiences fever, pain, and excessive fatigue. Most patients recover after a few days, though fatigue remains for several more. Among the victims, fifteen percent fall into a toxic phase and exhibit more gruesome symptoms such as jaundice, bleeding, and *vomito negro* (black vomit). As many as half of these victims eventually die. Among an exposed population a 7.5% fatality rate is the norm over the course

Yellow Fever Symptoms. Drawing by Etienne Pariset and André Mazet, 1819. (Wikimedia Commons)



of an outbreak, although anecdotal evidence from that time shows deadlier mortality rates could occur.²⁵ Fortunately, survivors achieve lifetime immunity from a recurrence of yellow fever.

The typical progress of a yellow fever outbreak also starts with a mosquito bite followed three to six days later with the onset of symptoms. At this point an infected human can pass the virus back to a mosquito. It takes at least twelve days for the disease to incubate before the mosquito can transmit the

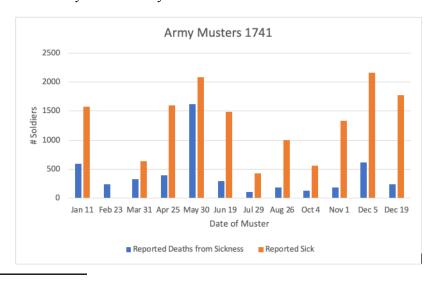
²⁵ Center for Disease Control, "Yellow Fever Virus," www.cdc.gov/yellow fever/, 12 July 2022.

virus to a new victim. In other words, a few infected mosquitoes bite a dozen people who in turn infect dozens of mosquitoes that spread the infection to hundreds. Soon the whole population gets exposed. Six to eight weeks after the initial infection, an outbreak will reach its peak. Thereafter, the disease declines as immunity sets in and the virus encounters fewer fresh victims until it finally disappears.²⁶

British Losses to Disease

British surgeons did not specify causes of death other than distinguishing those killed in action from deaths by disease. Nevertheless, muster records, usually conducted once a month for pay purposes, allow historians to chart the incidence of non-battle deaths and sickness during the 1741 campaign. The data have several limitations. The February and July musters for all but the American regiment were lost. Also, the intervals between musters were inconsistent, ranging from fourteen to thirty-nine days. Throughout the campaign, hundreds of American troops remained in the hospital in Jamaica but were still carried on the payroll. Also, American soldiers kept aboard Vernon's warships who suffered illness were not reported to the army's adjutants. Even with these anomalies the musters shed light on the devastating effects disease had on the land force.²⁷

The chart below displays the numbers of deaths and reported illnesses suffered by the regiments from the time they arrived in the West Indies until the end of the year when they returned from Cuba.



²⁶ Carter, Yellow Fever, 3-5.

²⁷ Musters, CO 5/42, TNA.

One immediate conclusion – the January muster proves that the British troops were already a sickly lot when they debarked in Jamaica. The March muster, taken two months after the convoys ended and three weeks after landing the troops at Bocachica, showed a stubbornly high 328 non-battle deaths with double that number on sick call, without counting the number of sick Americans aboard the warships. The British troops had only been exposed to infected mosquitoes six days before the March muster and too recently for yellow fever to have had a material impact. Clearly, health issues unrelated to tropical illness were bothering the British force in the early stages of the siege. A slight uptick in deaths reported in April suggests that yellow fever was just beginning to kill off British troops but only by the end of the month.

The huge surge in sickness between April and June and the skyrocketing deaths in May correspond with what could be anticipated from a yellow fever outbreak. The horrific effects of the outbreak were also confirmed by eyewitness accounts. What does not match is the aggregate number of deaths. The army lost 1,617 men to disease in May alone, a 21.4% mortality rate, far more than would be expected. Spanish reinforcements sent to Cartagena in 1740 also suffered outbreaks of yellow fever, leading to several hundred deaths among the soldiers and sailors, yet their percentage of deaths was much less than what the British force lost. 29

Deaths dropped off after the outbreak had run its course, but another 185 soldiers died in August while encamped in Cuba, a disturbingly high 3.5% fatality rate that suggests other troubles at work. Deaths and sickness jumped again in November and December after the troops had acquired immunity from yellow fever. Evidence clearly attributes these losses to an outbreak of malaria, what the surgeons then identified as intermittent fevers.³⁰

The yellow fever onslaught illustrates how misguided Wentworth and Vernon were in their understanding of tropical illnesses. The general abandoned the slow but sure method of reducing Castillo San Felipe through siegecraft because he worried Cartagena's climate would soon overwhelm his thinning ranks. However, the yellow fever outbreak was only in its early stages and could not have been a significant factor by the time he made the disastrous decision to storm the castillo. The soaring death toll in May, after the army had escaped the supposedly malignant climate, highlights the futility of Wentworth's hastiness at Cartagena, which cost him the victory yet still

²⁸ Tobias Smollett, "Expedition to Carthagena," in *The Miscellaneous Works of Tobias Smollett* (London: Henry G. Bohn, 1844), 610.

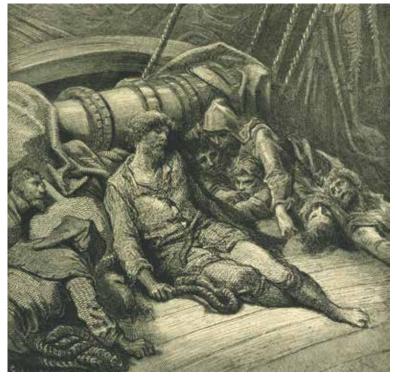
²⁹ Blas de Lezo to Quintana, 1 September and 1 December 1740, Santa Fe, Archivo General de Simancas, Valladolid, Spain.

Malie et al to Wentworth, 6 November 1741, CO 5/42, ff.161-62, TNA.

failed to spare his men from the torment of tropical disease.

Looking over all the musters, it becomes apparent that Wentworth's command was in ill health throughout 1741. The number of non-battle deaths and men reported sick never dipped below ten percent of the force (July's figures do not include British sick and dead). Another disturbing conclusion can be drawn from these observations – yes, tropical disease caused most of the deaths but by itself cannot explain the extreme mortality suffered by the expedition's forces. What accounts for the horrid and disproportionate British losses? The musters and anecdotal evidence point to familiar culprits.

The soldiers' months-long confinement to the ships in the Atlantic passage led to sanitation issues that led, in turn, to dysentery. Naval inspectors in Britain commented on the unhealthy conditions aboard the transports before they even departed, "It is certain where men are kept so very close, either in ships or sick-quarters, where they live in so much filth and nastiness, and are so badly attended, it is not to be wondered at that so many have died."³¹



Men Dying Aboard Ship. Illustration by Gustave Dore. (Der Alte Matrose)

³¹ Christopher Lloyd and Jack L. S. Coulter, *Medicine and the Navy, 1200-1900*, vol. 3, 1714-1815 (London: E. & S. Livingstone, 1961), 109.

Soldiers sailing from North American ports reported similar troubles with their food and sanitation. "We are kept in such a manner we can bare it no longer, for Wee lye more like Hogs than Men, as for our provisions it stinks, so that we can't eat it."³² Dysentery accounts for the early deaths but should have abated once the men got ashore and could use latrines instead of slop buckets. By that time another debilitating illness roared through the ranks.

The steady diet of salted meat and bread could not maintain the soldiers' health. Lack of fresh food eventually caused a vitamin deficiency and scurvy took hold. One incident sheds light on the tragic ignorance of scurvy at that time. During the inbound voyage, one ship stopped at Dominica. The crew brought several ill troops ashore to give them some fresh air and were astonished when the men on the verge of death from scurvy came back to life. The surgeons could not explain these miraculous recoveries because, as they noted, the island did not have a salutary climate and "produced no other refreshments, although the soil is fertile, and naturally abounds with lime, lemon, and orange trees." Unfortunately, the surgeons drew no conclusions, the men went back on ship, the troops continued to eat the prepacked rations, and scurvy persisted throughout the expedition. Scurvy has another effect that should be noted – it exacerbates the lethality of other illnesses, specifically yellow fever and malaria.

The malady the troops complained about the most is one often overlooked by historians – dehydration. When the men hit the ground, water had to be rationed to keep from running out because the British had no source of fresh water.³⁶ The work could not be delayed, so the men accustomed to temperate climates labored and sweated in tropical swelter. Heat exhaustion and heat stroke wore down the ranks and likely accounted for many, if not most, of the 643 British soldiers reported sick at the end of March.³⁷ By the time the operation moved to the mainland, the only thing remaining in the water barrels were breeding colonies of mosquitoes.³⁸

Taken together dysentery, scurvy, and dehydration had ruined the health of the British and American troops before the yellow fever outbreak and,

³² R. H. Harding, "America, the War of 1739-48 and the Development of British Global Power," *Journal of Maritime Research* 6, no. 1 (Dec 2004): 9-10.

³³ Smollett, "Expedition to Carthagena," 604.

³⁴ Council of War, 19 July 1741, CO 5/42, f. 119, TNA.

³⁵ Carter, Yellow Fever, 62; Lloyd and Coulter, Medicine and the Navy, 103.

³⁶ Smollett, "Expedition to Carthagena," 606-7.

³⁷ Muster, CO 5/42, f. 34, TNA.

³⁸ Journal of Expedition, 40-3; Account of Expedition, 41 and 45n1; and Richard Rolt, An Impartial Representation of the Conduct of the Several Powers of Europe Engaged in the Late General War, vol. 1 (London: S. Birt, 1754), 154.

unquestionably, made the fever much deadlier than it otherwise would have been.

The commanders could not change the climate, but they could influence sanitation, diet, and water supply. The idea that fevers were endemic to the tropical climate diverted their attention from steps they could have taken to improve the soldiers' well-being. Alas, the leadership failures at Cartagena go beyond neglecting prudent health measures. After entering Cartagena's outer harbor, the navy discovered a freshwater spring. Admiral Vernon ordered his water casks refilled then redistributed only within his fleet. He ignored the needs of soldiers laboring in the tropical heat who were falling to heat exhaustion. Likewise, he sent sloops and tenders to collect fresh turtle and local provisions along the coast to feed his sailors, yet he offered nothing to the troops ashore who suffered from scurvy.³⁹ Once Vernon could moor his ships inside Cartagena's harbor, he did not respond to the army's request to bombard Castillo San Felipe as he had Castillo San Luis. 40 Also, his interference in the army's operations and insistence on hasty assaults can best be described as unhelpful. Vernon's refusal to reinforce the troops with sailors from the fleet effectively ended the Cartagena siege.

Admiral Vernon is not solely to blame for the defeat. General Wentworth did not plan for replenishing his army's supplies after landing at Cartagena, though he did complain about lack of water and rations after the fact. He took no active steps to mitigate the effects of scurvy, heat exhaustion, and the initial stages of yellow fever. The general did a decent job of managing the siege and assault on Castillo San Luis, but he bungled the operation to take San Felipe. He made no attempt to invest or isolate the castillo. He kept several hundreds of troops on guard duty then



Brigadier General Thomas Wentworth. Etching by Allan Ramsay and Alexander Van Haecken. (Wikimedia Commons)

³⁹ Vernon Papers, 212; Robert Beatson, Naval and Military Memoirs of Great Britain from 1727 to 1783, vol. 1 (London: Longman Hurst, 1804), 97-98; Thomas Southey, Chronological history of the West Indies vol. 2 (London: Longman, Rees, Orme, Brown and Green, 1827), 280; and Rodgers, Fortified Harbors, 16-17.

⁴⁰ Generals to Vernon, 7 April 1741, Authentic Papers, 68-69; and Journal of Expedition, 609.

complained that he did not have enough men to build a breaching battery.⁴¹ He listened to Vernon's badgering while worrying about his thinning ranks. His decision to forgo a siege and assault Castillo San Felipe was rash and his execution of the attack awful.

The evidence is there to see. British forces had the opportunity to triumph at Cartagena – they just failed to deliver. Better leaders would have stuck to their siege and taken Cartagena without suffering any more losses than Vernon and Wentworth did by withdrawing. The admirals and generals can be excused for misunderstanding tropical disease but not for allowing dysentery, scurvy, and dehydration to weaken their men before it struck.

Force projection would become easier a few years later when navies and armies started supplementing rations with fresh fruits and vegetables to forestall scurvy, but it would not be until the twentieth century that the world learned how to manage tropical diseases like yellow fever and malaria. To achieve success in the early modern era, military leaders needed to focus on the health of their soldiers and sailors with as much care as they did their siege works, especially in the tropics. Sadly, the British leaders at Cartagena were not up to the task in 1741.

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Elibank Journal, MS 30196, BL; and Account of Expedition, 39.