

‘Salt meat [...] is prejudicial to the health of the troops’: the battles between doctors and the British Empire over army diet in the nineteenth-century Caribbean

Ilaria Berti

Università degli Studi di Firenze, Italy

e-mail: ib.ilariaberti@gmail.com

ORCID iD: <https://orcid.org/0000-0002-1501-4937>

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ABSTRACT: Nineteenth-century British and Caribbean sources show that European colonists were constantly struggling to maintain their health in a little-understood tropical climate; they engaged in frequent discussion and the exchange of advice on the preservation of their health. This article reveals that the maintenance of a specific group of temporary migrants, those in the armed forces, was a significant concern for the British authorities. It analyses medical reports and information in the contemporary press, which illustrate how heightened concerns about preservation of the army's health led to an alternation between two different diets, one based on preserved food imported from the British homeland and the other on fresh local food.

KEYWORDS: Colonial and Imperial history; Food history; Soldiers; Physicians; Nutrition; Preserved and fresh ingredients; Tropical climates.

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RESUMEN: “*La carne salada es perjudicial para la salud de la tropa*”: Las polémicas entre médicos y autoridades del Imperio británico sobre la dieta de las tropas destinadas en el Caribe en el siglo XIX.- Las fuentes históricas británicas y caribeñas del siglo XIX muestran cómo los colonos se esforzaban por mantener su salud en los desconocidos climas tropicales y la frecuencia de los debates sobre los consejos que los protagonistas daban sobre la manera más adecuada para conservar la salud de las tropas y de la población civil allí residente a través de una dieta equilibrada y fresca. El artículo analiza de qué manera la preocupación de médicos y autoridades por la salud del ejército y de los residentes en las colonias era de vital importancia para los intereses del propio imperio británico. Por lo tanto, se estudian los relatos, informes médicos e informaciones impresas de los periódicos de la época, que dan noticia de la política del Imperio para conservar la salud de las tropas en el Caribe, basada fundamentalmente en la alternancia entre dos diferentes modelos dietéticos. El primero de ellos basado en comida conservada (salada) e importada de la metrópoli, con el consiguiente negocio mercantil, y el segundo a partir de alimentos frescos locales.

PALABRAS CLAVE: Historia colonial e imperial; Historia de la alimentación; Soldados; Médicos; Nutrición; Ingredientes conservados y frescos; Climas tropicales.

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INTRODUCTION

From the Early Modern era onwards, European empires sent medical practitioners to the newly discovered American lands. On the basis of their professional observations, these doctors were able to put forward theories on how to survive in unfamiliar tropical environments: how to adapt to the climate, and how best to resist its many unknown illnesses. An early form of Tropical Medicine was thus emerging long before its codification as a specialty towards the end of the nineteenth century. This was part of a broader process in which the European powers sent cartographers, agronomists, zoologists and other scientists to extend their knowledge of conquered territories with the objective of subjugating their land and populations (Wesseling, 2004, p. 52). With the same purpose of bolstering imperial authority, from the eighteenth century onwards surgeons and other doctors were also sent to the colonies in order to perform the essential task of monitoring and safeguarding the health of the troops who were stationed there to maintain order (Vale and Edwards, 2011; Haycock and Archer, 2009). Examination of the relationship between food, health and the colonies throws light on some aspects of imperial history, such as the clashes between different ways of thinking, which would otherwise not have emerged. The specific purpose of this article is to explore how medical practitioners, posted to the Caribbean in the service of the British Empire, dealt with institutional norms and preconceptions about health and diet, and to show that different and conflicting opinions about food shared the aim of consolidating imperial power. Moreover, this article sheds light on how the “banal” (Billig, 1995) topic of food is of relevance for historical research and should be inserted into a wider framework of the importance of food and economic aspects in other institutions not only of the past but also in our contemporary era (Berti, 2016).

According to a recent article by the historian Ian Miller (2015, pp. 200-203), the phenomenon of “dietary knowledge” started to emerge towards the end of the eighteenth century. Employing this, doctors and scientists began to influence institutions with their theories about what constituted good and bad diets; at this point, diet and dietary knowledge became part of the medical and scientific debate.

This article is also concerned with dietary knowledge, and focuses on the medical demands for modifications in the diet of British soldiers in the West Indies in the final years of the eighteenth century and the first four decades of the nineteenth. I show how doctors in the service of the British government had to reach compromises between the need to give the British troops stationed in the Caribbean a more wholesome diet based on fresh food and the need to limit the direct costs of procuring provisions. The doctors’ struggles with these competing needs can be seen as early aspects of a process in which scientists attempted to influence the action taken by governments with their theories on wellbeing and illness. Moreover, at least in the cases of George Pinckard, William Lempriere

and Andrew Halliday, the medical officers given particular attention in this article, it would seem that doctors were acting as agents of the Empire in proposing a healthier military diet, even if this was at variance with the weekly provisions routinely issued in order to safeguard Britain’s short-term economic interests and imperial aims. I argue that these three doctors’ concerns about the health of the troops and their related proposals to improve the quality of food given to the British Army in the Caribbean were in fact indications of a more general process in which the lives and the bodies of the troops were shaped and organized, thereby increasing the power of the British Empire.¹

Like many others, Pinckard, Lempriere and Halliday were living and working in the West Indies because the British had developed a plantation economy in these colonies that was mainly based on sugar cane cultivation. British activities and interests in the West Indies therefore need to be located within the history of the expansion of trade, European conquests of new territories, and the establishment of European colonies and empires in the wider world. The first British settlers in the West Indies arrived in the 1620s; from the eighteenth century onwards, Britain was establishing colonies in various parts of the world with the objective of cultivating profitable goods such as sugar, cotton, tobacco and coffee (Dunn, 1972, p. 11). The particular climate and conditions of the West Indies could be exploited to meet the increasing demand for refined sugar; by the early eighteenth century, Jamaica and the Lesser Antilles had become the world’s leading sugar-production region (Paquette and Engerman, 1996, p. 5).² Because the plantation economy was based on the exploitation of often rebellious slaves, and in view of other external threats, the British sent troops to the West Indies to protect their economic interests (O’Shaughnessy, 1996, p. 105).³ During the Napoleonic Wars, British possessions in the region also needed to be protected from France. For a whole range of reasons directly or indirectly related to the development of sugar cane plantations, substantial numbers of British people, both military and civilian, thus departed or were sent to the Caribbean.

THE PERSPECTIVE OF MEDICAL SOURCES ON HEALTH IN THE WEST INDIES

Increased migration to the Caribbean brought with it issues of health and mortality. The historian Kenneth Kiple (1993, p. 500) observes that as the value of the West Indies grew for Britain, so did the health risks for its British colonizers. While the region’s colonies were perceived as wealthy areas that could contribute to increasing affluence in the British homeland, the colonists themselves were aware that their increased chances of greater prosperity were accompanied by increased risks to their lives (Goodman, 2018).

In order to examine the constant tension between two different needs, protection of the health of British troops in the West Indies and minimization of the Empire’s expenditure (and, of course, the parallel maximization of its

profits), this paper draws on an analysis of medical treatises written at the time. These sources can help us to investigate the structure and quality of life in hospitals, concepts of hygiene and dirt, and the development of medical thinking about health in the context of Britain's imperial possessions; they also provide information about the role of doctors and nurses in diet, the ideas doctors held about healthy food, and the contribution of diet to maintaining health. This article focuses on the reports, letters and treatises of doctors who had been sent to the West Indies from Britain, some specifically charged with investigating the inadequate health of British troops, and shows how medical sources can help us to reconstruct some lesser known aspects of imperial consolidation. In addition, it examines local newspapers, showing how often the nineteenth-century Caribbean press published notices from the authorities in relation to the supply of a healthy diet for the troops. While the medical reports are digitized, for some other documents I did an investigation at The National Archives (Richmond, Surrey, UK). To examine the medical reports I applied the methodology of close reading. The newspapers analysis has been carried out at the Reading Rooms of the British Library. The analysis of periodicals was carried out using some keywords such as "salt", "meat", "fish", "preserved" and "fresh" and the sources were used qualitatively. In the cases when non-medical actors are quoted, such as for Mrs Carmichael, the scarce sources available that describe the "everyday" life in the West Indies, make of Mrs Carmichael one representative witness of the local customs. My main objective is to evaluate the nature of the relationship between medical advice on food and the construction and maintenance of British imperial power.⁴ Analysis of the relationship between food and health in medical sources needs to be placed in the context of the "biopolitics" discussed by Michel Foucault (2008), who described the way that modern nation states have exercised increased power in regulating the lives of their citizens. From this perspective, an examination of doctors' notes, letters, reports, observations and advice may show that British medical officers in the Caribbean were acting as agents of the Empire when they engaged in a passionate debate about army health which had consequences for regulation of the lives, health and diet of the troops.⁵ I now turn to the three authors of the main medical sources referred to in this article.

George Pinckard (1768-1835), a distinguished member of the Royal College of Physicians from 1794, and later Deputy Inspector-General of Hospitals for the British forces, was born in England, studied medicine in London and Edinburgh, and graduated in Leyden in 1792. In November 1795, in his new role as "Physician to the Forces", Pinckard accompanied General Abercromby's expedition to the West Indies. After his Caribbean experience he published a three-volume medical guide to unhealthy climates, *Notes on the West Indies*, in 1806; a second edition, in two volumes, appeared in 1816. Originally written as letters to a friend, this work described Pinckard's stay in the West Indies and Guyana and his activity

there as superintendent of medical services to the British bases, which were noted for illness and disease.⁶

William Lempriere (1751-1834) was a military doctor, traveller and writer who entered the Army Medical Service when young; as a result, he travelled extensively in Europe, Africa and America. In 1789 he was attached to the British military garrison in Gibraltar, from where he went to Morocco to attend the son of Sultan Mahammed ben Abdallah; this led to publication of an account of his travels and experience there (1791). In 1790, Lempriere was appointed surgeon to the 20th (Jamaica) Regiment of Light Dragoons and spent five years in Jamaica. On his return to England he published a further volume, this time with a more specific focus on his experience as a doctor, *Practical Observations on the Diseases of the Army in Jamaica* (1799) (Moriarty, 1893).

Sir Andrew Halliday (1782-1839) was born in Scotland and graduated from the University of Edinburgh in medicine in 1806. The following year, he became a surgeon with the 13th Light Dragoons and was sent to the Iberian Peninsula during the Napoleonic Wars. By 1827 he had become a fellow of the Royal College of Physicians of Edinburgh, and in 1833 he was appointed as Inspector of Hospitals in the West Indies; his experience there led to him publishing *The West Indies: The Natural and Physical History of the Windward and Leeward Colonies* in 1837 (Moore, 1890).

In my examination of the agency of British medical officers in enforcing the Empire's dietary requirements, I am focusing on the conflicts and tensions that emerged between British imperial financial concerns and medical advice regarding a healthy diet for troops stationed in the West Indies. My analysis shows that while the doctors in British service undoubtedly acted in Britain's interests by proposing a healthy diet for its soldiers, their recommendations underlined the inadequacy of the weekly food provisions routinely issued to the armed forces. Moreover, these doctors were forced to reach a compromise between their professional beliefs about a nutritious diet and the economic interests of the Empire, the latter supposedly served by supplying cheaper food from the European homeland. Their proposals to adjust the balance and improve the quality of the food given to soldiers need to be understood as part of a wider process of reorganizing the lives and bodies of the army for the benefit of imperial power. To place this in context, I first provide a brief discussion of the colonists' perceptions of life, illness and death in the West Indies.

My investigations into food and the food perceptions of Europeans who lived in the Caribbean colonies during the nineteenth century have shown that there was a willingness to follow medical advice on diet because of very high death rates among the colonists, who were vulnerable to tropical diseases and illness.

Medical sources are naturally the most useful in evaluating the relationship between high mortality rates and diet. However, the connection between food and health is also touched on by Mrs. Carmichael, an anti-abolitionist

Scottish gentlewoman who lived with her family on St. Vincent and Trinidad from 1820 to 1826 (Williamson, 2008), illustrating how people who were not directly responsible for health issues were also concerned about finding the best possible diet. Towards the end of her account of her life in the West Indies, Mrs. Carmichael recalled the medical advice she had been given, before arrival, on a healthy diet in the region:

[E]at sparingly of all kinds of fruit; never eat two kinds of fruit in one day,—nor mix different wines. Avoid cocoa-nut water, and nuts of any kind; take no malt liquor or cider; eat a fair proportion of as good animal food or fish as you can get, daily; by no means lower your usual diet if you are in health, and take at least a couple of glasses of Madeira every day. (1833, II, pp. 314-315)

She had observed that the needs of colonists might change, the longer they resided in the hot and humid tropical climate:

Those who have been only a year or two from Europe, do not experience the intense thirst which those do who have been long resident between the tropics; the constitution becomes more and more relaxed, and the desire for liquids increases, while the appetite for solids diminishes; and thus, after a time, one is tempted only by highly seasoned and salted food, which is not only more agreeable to the palate, but apparently agrees better with the stomach; at times, indeed, fresh food, plainly dressed, is almost loathed. (pp. 313-314)

One gentleman who lived in the West Indies during the early nineteenth century, writing anonymously, described in his travel diary how during the two months of sea voyage between Portsmouth and Barbados the more experienced travellers gathered the first-time visitors together in order to tell them about the best ways of maintaining their health on arrival (Anon., 1828, pp. 2-3, 7).

Returning to those who were directly and professionally involved in health and illness, a number of doctors provided general comments on these issues in the West Indies. George Pinckard quoted his friends' description of death as "the hungry devourer of these regions" (1806, II, p. 3); William Lempriere wrote about the "dreadful mortality" of a tropical climate, the "unparalleled sickness" of the West Indies, and the "unusual mortality" of Jamaica specifically (1799, I, pp. 1-2). Similarly, Richard Madden, a doctor sent out to Jamaica as a magistrate (Madden, 1835, I, p. vi), highlighted the high mortality of Europeans in the Caribbean; writing to a friend, he said that Jamaica was a place where "the great majority of European visitors find their grave! We might get planted among the sugar-canes, or deposited in the Atlantic" (1835, I, p. 3).⁷ John Davy, a medical general inspector of army hospitals who served in the West Indies for three years, described these islands as "a dread and opprobrium second only to the Western Coast of Africa, 'the white man's grave'" (1854, p. 526). Many others referred to their worries about the unhealthiness of the region's hu-

mid climate. John Rollo, a Scot who served in the West Indies as a military surgeon in the latter half of the eighteenth century, declared that "[t]he Caribbee Islands have always proved unhealthy and fatal to the European constitution, but to none so peculiarly as to the soldier. [...] The extensive sickness and mortality in the army a little time after landing on [St. Lucia], did not fail to excite every medical effort" (1781, p. ix.).

The perceptions of the colonists, especially those whose field of expertise was health and sickness, are confirmed by the statistical data.⁸ The historian Philip Curtin (1989, pp. 8, 18) says that the death rate for European soldiers in Jamaica during the period 1817-36 was "exceptionally high", at 130 per thousand, as against only 15.2 per thousand in Great Britain during the same period.⁹ While it might initially seem strange to compare the death rates of soldiers with those of a civilian population not involved in war, Curtin points out that the former related primarily to sickness, not to armed conflict. The demographic data he retrieved (1989, pp. 27-28), covering the period up to 1825, shows that the mortality of soldiers in the West Indies was very high in periods of peace as well as war. According to Andrew O'Shaughnessy, "a soldier in the Caribbean, even as late as the 1830s, had a 450-750 percent greater chance of death than a soldier in Britain" (1996, p. 110). The British crown therefore sent doctors to investigate the causes and determine possible solutions. During the French Revolution and the Napoleonic Wars (1789-1815), an increasing number of British troops were stationed in the West Indies (Carrington, 1996, p. 157); however, during the 1820s and 1830s the British army was principally there to maintain order, and only engaged in minor skirmishes with rival European powers. The role of the substantial British forces included discouraging revolts by slaves, who greatly outnumbered the colonists (Bohls, 1994, p. 371).¹⁰

MEDICAL OPINION AND THE ARMY'S RESPONSE: FRESH AND DRIED FOOD IN COMPETITION

As we have seen, people who were not professionally involved in medicine discussed the vital need for a nourishing diet in the West Indies climate and were constantly concerned about the ever-present threats of illness and death. It is therefore no surprise that the same topic also emerges from the documents compiled by doctors who had been sent to the West Indies by Britain to monitor the health and sustenance of the troops. The connections made between military diet and the safeguarding of health are especially prominent in George Pinckard's letters, Andrew Halliday's descriptive account, and William Lempriere's tract on the health of British troops in the Caribbean. Lempriere dedicated his two-volume work on diseases in the British Army in Jamaica to the Duke of York, to tell him what could be done to protect and improve the health of the troops (1799, I, pp. v-vii). Halliday also put forward a potential solution to the mortality of soldiers in the West Indies (1837). Both Lempriere and

Halliday observed that the soldiers received fresh food provisions just twice a week. During Pinckard's time as a doctor in the West Indies, which coincided with the Napoleonic Wars and a series of smaller colonial battles, the British forces faced famine due to the increasing number of soldiers in a space with limited resources; by his account, in April 1796 there were simply not enough fresh animal provisions available in the British colonies, meaning that the army would have to resort to preserved and salted food (Pinckard, 1806, II, p. 177).

In the writings of these three doctors, the topic of military diet is always linked to discussion of ways to decrease the soldiers' death rate. This section looks specifically at recommendations about diet as a key component of these medical views on how to keep the soldiers alive and healthy. Pinckard, Lempriere and Halliday in fact constantly emphasized that good diet was of fundamental importance in a tropical climate, and just as essential as prescribed medicines (Pinckard, 1806, III, p. 57). For this reason, these British doctors initiated a debate, wrote essays on the Army's diet, and developed proposals for increasing the consumption of fresh food in the soldiers' weekly provisions. Moreover, as we will see below, in investigating the causes of the troops' high mortality and putting forward viable solutions, they sought to set aside the dietary norms imposed by the British Empire; imperial authority was challenged by their explanations of poor army health and proposals for resolving this by modifying the military diet. Lempriere (1799, II, pp. 268-270) observed that the standard rations for troops on Jamaica consisted of five days of salted provisions and only two days of fresh; such an insufficiency of fresh food in a tropical climate, he argued, would tend to "weaken the powers of life", and this "improper diet" would hinder the troops' easy recovery from their frequent health problems. Pinckard was monitoring the health of the British army during wartime, when both the survival of soldiers and the effective allocation of imperial resources were doubly important. Moreover, the scarcity of fresh provisions in a phase of conflict meant that the army had to be fed on less nutritious salted food, or to rely on sugar cane "planters" who "agreed to take it by turns to supply us with fresh provisions for two days in each week"; in consequence, Pinckard noted, "our diet-table at the hospital is of late very much improved" (1806, III, p. 86). When the planters were not able to provide fresh food, however, the soldiers were forced back into only eating salted and preserved provisions (Pinckard, 1806, III, p. 270).

More detailed medical observations on the problems related to a diet rich in salt are to be found in Halliday's account. He observed that it would be wise to stop buying salted beef and pork from England and Ireland in favour of local purchases of fresh meat and vegetables, because the latter "are required for the proper nourishment of the troops, and are so important as regards their health and efficiency" (1837, pp. 71-72). Basing his case on medical records and established knowledge, Halliday proposed a new kind of diet with a focus on fresh food; this clashed with the position of the authorities at the time, driven by

commercial interests, which he characterized by their assertion "*that salted meats were preferable to fresh, as an article of diet in the West Indies*" (p. 73). In particular, a third of all soldiers' deaths, he believed, were due to an "improper and unwholesome diet" (p. 72). By the mid 1830s, however, nothing had changed and the troops were still being fed salted meat five days a week (pp. 84-85).

Because the health of the troops was therefore still at risk, Halliday compiled a sort of history of advice from various doctors who had proposed increases in the amount of fresh food in the army diet. He reproduced in full a letter of October 1831 from Major-General Sir Benjamin D'Urban, addressed to the "Adjutant-General at Barbados for the information of the Commander in Chief" (p. 251), in which the problem of provisions of salted food for the troops was emphasized. This letter referred to various episodes, including the report of January 1829 by the principal Medical Officer in Barbados which had required a reduction in salted meat in favour of an increase in fresh produce. D'Urban's position had been clear:

I feel secure in stating my opinion [...] that a preponderance of the proportion of salt meat in the soldiers' diet (as directed by the present regulations,) over that of the fresh, is prejudicial to the health of the troops in this peculiar climate, inasmuch as it tends more, in the first instance, to predispose the habit to the diseases of the country, and, in the next, to render their character more obstinate and unmanageable. (Halliday, 1837, p. 253)

D'Urban concluded with his recommendation: "availing myself of many conferences with the medical officers, it has been my object to effect the desired purpose with the least possible increase of fresh-meat expenditure, [...] giving four days of fresh for every three days of salted food" (Halliday, 1837, p. 254).

Halliday went on to extract histories of the British army's 19th and 25th Regiments, which had both arrived in the Caribbean in 1826, from the official records. He observed that the diet of the soldiers of the 19th consisted of salted food for five days a week, and that the death rate was very high. Medical officers had been able to demonstrate the link between mortality and an unhealthy diet by comparing the incidence of sickness and death among the corporals and their men, who were on standard rations, with that among the sergeants, who "had a well-regulated private mess of their own, and had bought fresh meat daily from the time of their arrival in the colony" (p. 256). During a particular five-month period of widespread illness, the latter group suffered from fever like the others, but none of them died. It is unlikely that these soldiers had the requisite medical knowledge to prompt them to include more fresh food in their provisions, but a desire to eat the food that they most liked and that resembled what they ate at home, or curiosity about local produce, may have helped them to maintain their health. Those who increased the amount of fresh food they ate were unconsciously experimenting in a diet whose healthier nature was the subject of scientific observation by doctors and of

proposals to the British authorities. The new and better form of nutrition would have given the troops fresh meat every day, as opposed to the dietary norm of only twice a week. Even if Halliday did not provide any further information on how, from whom and where, the soldiers he mentioned bought their food, we can guess they purchased fresh ingredients from slaves that were the main producers of foodstuff, mostly vegetables and courtyard animals, selling the surplus of their provision grounds in their Sunday markets.¹¹ Unfortunately the sources do not provide more information on whether and to what extent physicians hybridized their medical knowledge with slaves' experiences. According to Halliday, the army only chose to follow this advice when there was widespread fever among the troops. The logic of mercantilism, whereby the colonies were supposed to be markets for metropolitan production, prevailed and any new, preventive and healthy approach to the army's diet did not last long.

The doctors with the British forces, Halliday made clear, were in agreement that the provision of more fresh food would help to prevent illness and fortify the troops' health. It would also have allowed money to be saved on the hospitalization of sick troops. In the case of the 25th Regiment, there had been a reduction in deaths when the provision of fresh meat was increased after an alarming outbreak of disease (probably including scurvy), and "the exertions of Sir Benjamin D'Urban procured a continuance of two days' extra [fresh] meat during the whole of 1830 and 1831, when it was stopped by a positive order from the Lords of the Treasury" (p. 257). After the army had reverted to the old system of provision with a predominance of salted meat, higher levels of sickness started to return. Halliday reported that in March 1834, when he took over responsibility for medical services to the regiment, "I found some men of the 25th afflicted with symptoms indicating scurvy, and I felt most miserable until I had procured for them the two days' extra [per week] fresh meat" (pp. 256-257). In Halliday's account, the military diet was thus a constant source of tension between two opposing ideas about consumption: one based on regulations for the provision of army food, which was mostly to consist of salted meat and fish shipped from Britain and Ireland; the other based on medical advice regarding the necessity of fresh food. Pinckard, Lempriere and Halliday were all of the view that although a diet based on three days of fresh food might initially appear more costly, in the medium term it would save money by creating a healthier army less prone to disease. However, as the sources discussed in this article show, despite the doctors' observations and expert advice, the army never consistently followed a policy of greater fresh food provision.

Aside from their scientific observations, the doctors' understanding and actions, including the advice they gave, were influenced by patterns of Creole food consumption.¹² Halliday suggested (p. 259) that the diet offered to the British forces in the colonies should be modified by learning from the longer-term inhabitants, whose

experience had taught them what foods were most beneficial in the local climate and conditions. Another doctor, John Wurdemann, writing anonymously, discussed the Caribbean's variety of medicinal plants, which he said were "in common use among the Creoles" (Wurdemann, 1844, p. 316).

AN IRREGULAR PATTERN: FRESH VERSUS PRESERVED FOOD IN THE CONTEMPORARY PRESS

As well as using treatises, essays and letters written by doctors, this article draws on the analysis of 140 issues of a range of newspapers published on various West Indian islands between 1791 and 1857. These add to the picture provided by the medical accounts. Official announcements inviting bids for the supply of army provisions, including fresh and salted meat, appeared frequently in these publications. They provide further evidence of a continuing tension between the issues of health and finance; more importantly, they reveal that the Army intermittently tried to follow medical recommendations about the healthy food that should be distributed to the troops.

Notices in the earlier periodicals all show that the army diet was to be composed mainly of preserved food, with no additional specifications relating to the troops' health. In 1791 the Jamaican *Daily Advertiser*, for example, published an announcement by James Smith, Secretary to the Board in the Office of Public Accounts, dated December 20th, 1790, which specified the quantity and quality of food to be issued to "his Majesty's Troops". Every soldier had to receive a ration of "seven pounds of good flour, seven pounds of good salt mess beef, or in lieu thereof five pounds of good salt pork, and on two days of each week one pound of good fresh beef for each day, in lieu of a ration of salt provision, and seven gills of rum per week each man".¹³

Aside from further specifications regarding the provision of salted beef or pork for five days a week and fresh beef on the remaining two, over the years the announcements in the newspapers illustrated variations in requirements for the army diet, based on either fresh or preserved food according to the imperial need of the moment. In 1827, various newspapers published the advertisement by the Deputy Commissary-General "for the Supply of FRESH BEEF [bold capital letters in the text] to His Majesty's Troops in [...] the West Indies".¹⁴ The contract specified that the appointed person would have had to provide fresh beef "exclusively for the use and consumption of His Majesty's Troops" from 1827 to 1830.¹⁵ The same notice was published repeatedly for several months in several publications.¹⁶ Over time, many similar advertisements were published in many different newspapers. On August 2nd, 1850, *The Cornwall Chronicle and County Gazette of Montego Bay*, Jamaica, published an official announcement specifying that the meat was to be of "unexceptionable quality and subject to survey and approval" (p. 7) and should be delivered five days per week. A simi-

lar notice inviting the submission of tenders for the supply of fresh food appeared in another newspaper:

The fresh meat to be provided, is to be good and wholesome Ox Beef of unexceptionable quality, and in all respects fit for the use of Her Majesty's Army and Navy and shall be approved of by the Deputy Commissary General or other Officer acting for him [...] who have full power to reject any Meat which they may consider to be of improper quality, and not conformable to the conditions of the Contract. [...] The Contractor will not be permitted to supply Meat which shall be the Flesh of Bull, Bull Stag, or Cows; nor to issue more Heads of Animals than Carcasses; nor to distribute any liver or offal, except to such persons as may apply for them.¹⁷

Contracts that dealt with extending the supply of fresh meat from active soldiers to military hospitals and prisons became very common and were widely published in West Indian newspapers from the 1840s onwards. Lists of fresh food covered vegetables as well as meat, and other provisions specified included sugar, cocoa, rice, tea, milk, arrowroot, eggs, corn meal, porter, wine, brandy, salt, beer, oranges, limes, mustard, bread and biscuits; all these items were to be "genuine, and unadulterated; the milk not to be watered, nor the arrowroot mixed with a cheaper kind of flour".¹⁸ The newspapers make a particular contribution when they are cross-referenced with medical documentation: from a comparison of these two types of sources, we can see the impact that concerns about the health of the troops had on the official approach to procurement. Although the Caribbean colonies had lost their economic importance to Britain by the mid-nineteenth century, there was still concern that the British soldiers stationed there should receive a good amount of fresh, high-quality food approved by its officers. It can be seen from the announcements in the press, which gave considerable detail about potential supply contracts, that there was a very well-developed process protecting the army from the delivery of unacceptable provisions. While the army's Commissariat specified the quality and quantity of the food items, the military hospitals or the troops and their officers, as the end consumers, had the right to reject supplies that fell short of expectations; disputes could be referred to a "Board of Survey". Should the provisions be rejected, the supplier was obliged to replace them and assume the expense.¹⁹

However, the process of development from a diet composed mostly of preserved food towards a healthier one based on fresh food did not end well. As we have seen from the sources, the approach to provisions for the armed forces was in constant flux as it responded to competing needs: to give the troops a proper diet and to save money.

The analysis of different kinds of sources – medical treatises, doctors' letters, medical essays, official documents and newspapers – shows that there was a constant tension and repeated alternation between two contrasting models of food consumption: one determined and imposed by the British military authorities in which protein

was principally supplied by an inadequate diet of unhealthy salted meat and fish, and one recommended by doctors based on fresh food. This pattern of constant change was maintained throughout the period under examination. For economic, political, logistical and geographical reasons, the troops were often forced to eat, for the most part, the preserved food distributed by the army; at the same time, reasons of bodily health allowed the soldiers' weekly provisions to be varied so that they could consume greater amounts of healthier fresh food.

CONCLUSIONS

The examination of medical sources and newspapers demonstrates that doctors in the service of the British government did not simply adhere to imperial regulations, which were based mainly on economic considerations, but instead exercised agency against government policy in attempts to modify military diet. Moreover, the sources that this article draws on show how the period under consideration was one of active scientific observation and experimentation. George Pinckard (Pinckard, 1806, III, pp. 237-238) recorded how on one occasion the military hospital ran out of fresh meat for a sustained period. It then received a large quantity of fresh supplies, which were passed on to the patients. In view of previous observations of the effects of changes in diet, the staff only allowed small portions of fresh meat to be distributed to the weak and convalescent soldiers, but despite this caution, the fresh meat had a marked "laxative effect" that counteracted the anticipated benefits. The doctors were constantly learning from their experiences and modifying their approach accordingly.

Scientific activity such as observation of the relationship between different patterns of food consumption and health, as well as new knowledge of local customs that resulted from the absence or shortage of the foods that were familiar to Europeans, thus played its part in the development of a healthy diet for European colonists in the Caribbean. This contributed to an improvement in the understanding of tropical diseases and how they could be treated.

Any discussion of the problems that medical officers faced in acting to subvert the official British Army diet is entirely absent in the sources examined. There is no sense of difficulty regarding the fact that they were proposing a different diet from the one approved by the authority they served. They may, however, have avoided stating openly that the British authorities were wrong in their approach, and sought to say this in a more subtle way by providing contrary advice, in order not to directly criticize their paymaster. However, it should also be noted that although the doctors were attempting to contravene imperial norms in proposing a healthier diet, they were in fact still acting as imperial agents, in that a more nutritious diet was of fundamental importance to an improvement in the health of soldiers and a reduction in their mortality.

Britain's principal objective of receiving information on the health of the troops – what Foucault (1976) termed

the “medical gaze” – seems to have had the effect of increasing its knowledge of tropical diseases and improving its understanding of the most suitable diet in hot climates, for both the resident population and the colonial troops stationed there.²⁰ Medical interest in the army’s nutrition should be examined through the lens of biopolitics. According to Foucault, the “medical gaze” helped to develop the ordered and disciplined armies that played a crucial role in the construction and consolidation of European empires.²¹ In biopolitical theory, every government needs to intervene in the private lives of its soldiers in order to have a well-organized army (Foucault, 1980, p. 177; Elden, 2007; Turner, 1992, pp. 177-195; Armstrong, 1994, p. 25). After all, Lempriere asserted that the reasons for writing his treatise were military and political. He gave precise descriptions of the various diseases suffered by soldiers in order to convince the British authorities that their approach to defending the West Indies was inadequate, in terms of both the troops’ health and the safety of the British colonies. The objective of the doctors’ advice on nutrition was thus to improve the health and lives of colonial populations and, as in the specific case examined here, the diet and health of the army, enabling the Empire to maintain and expand its power. What has emerged from this analysis, which should be of interest to studies in the history of tropical medicine, is the active part that doctors played in proposing a new military diet that went against the norms imposed by the British government. By recommending changes to army diet, however, they were promoting the consolidation of the British Empire through the strengthening of its military forces.

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NOTES

- 1 See also Chakrabarti (2014).
- 2 In this article with British West Indies the author means mainly Jamaica, Barbados and other bigger “sugar” islands because, due to the landscape of some smaller or mountainous island, in that islands the colonists did not grow sugar. The number of slaves in those islands was smaller than the ones in the plantation economies. Moreover, also because of the different landscapes, being some islands flats and some other mountainous, some of them rich of water and some others dry, the food production varied in a substantial way. This difference affected the same food production system because the more fertile islands such as Jamaica were able to produce their food while some others, such as Barbados, relied mainly on imported provisions. See Dunn (1972).

- 3 See, for example, the account by Lord Adam Gordon, who stated that the British Army only just had enough soldiers “to secure [the British colonists] from Intestine rebellions and Insurrections of their Negroes, who are daily increasing beyond the proportion of white people, the last being supposed not to exceed in all 25,000 Souls, and the Slaves and Mulattoes not under 160,000” (1916, p. 379).
- 4 Cosmacini (2011) argues that colonial wars provided heightened opportunities for the study of tropical diseases, contagion, and potential solutions to these problems. See also McNeill (2010); Curtin (1998). Although the connections between food and health are usually neglected, historians seem to have been showing a growing interest in tropical medicine. See, for instance, Digby et al. (2010). On the specific topic of food and war, see Zweiniger-Bargielowska et al. (2011).
- 5 Although it does not deal with tropical medicine, an essay by Isabelle von Bueltzingsloewen (2011) is the only piece of work to take an approach similar to that of this article; she examines the clashes of French doctors with the Vichy government over its statements about the health of the French population, which was in fact malnourished.
- 6 For biographical information, see Moore (1896), and Pinckard’s obituary in *The Gentleman’s Magazine* (London) Vol. 4 (New series) (July-December 1835), p. 96.
- 7 A good number of sources, apart from medical ones, include comments about illness and the high mortality among Europeans living in the West Indies. The author of the novel *Marly; or a Planter’s Life in Jamaica* wrote that “we are in Jamaica, the land emphatically denominated by Smollet, ‘the grave of Europeans’” (Anon., 1828, p. 5). According to the anti-abolitionist Cynric Williams, Jamaica “is a superb country for physicians; a customary fee is a doubloon [...], and the inhabitants are all sick in their turn, for there are very few who escape a seasoning; and a great proportion die, or, to use the metaphor of my Aesculapius, ‘go the grand tour’” (1823, p. 134).
- 8 According to Pratik Chakrabarti, “The wars took large numbers of European troops and seamen to the West Indies, Asia and North America. [...] One striking fact about European military mortality in the eighteenth century is that more people died from disease than from battle injuries” (2014, p. 40).
- 9 See also Curtin (1998, pp. ix, x, 12-31). In his view (quoted in Chakrabarti [2014, p. 51]) the mortality rate for European troops in the colonies only decreased in the period 1840-1870. Trevor Burnard (2002, pp. 80-81) asks why the island of Jamaica never became a settlement colony; he suggests that one reason was the high mortality rate.
- 10 According to Elizabeth Bohls, the population of the British West Indies during the 1780s was about 520,300: 455,000 slaves and 65,300 white Europeans.
- 11 Stanley Engerman 2000.
- 12 The term ‘Creole’ refers here to people who had been born and raised in the Caribbean but whose forebears had come from elsewhere. For an analysis of food creolization in the Caribbean, see Berti (2014).
- 13 James Smith’s announcement was published in *The Daily Advertiser* (Kingston, Jamaica), April 1st, 1791, p. 2.
- 14 See, for example, *St George’s Chronicle and Grenada Gazette* (St. George’s, Grenada), February 3rd, 1827, p. 2.
- 15 Ibid.
- 16 Apart from the *St George’s Chronicle and Grenada Gazette*, these included, for example, *The Weekly Register of Antigua and Barbuda*.
- 17 *Antigua Herald and Gazette*, April 1st, 1851, p. 4.
- 18 See, for example, *Weekly Register* (St. John’s, Antigua and Barbuda), October 24th, 1851, p.4.
- 19 “Government Contracts: LOCAL CONTRACTS at Grenada for the period from 1st of April 1844 to 31st of March 1845”, *Grenada Free Press* (St. George’s, Grenada), December 8th, 1843, p. 1.
- 20 For discussion of Foucault’s ‘gaze’, see Cometa and Vaccaro (2007).

21 A further interesting issue that emerged from my analysis of the sources was the relationship between the troops' consumption of salted food and their recourse to alcohol. The focus of the medical discussion was the need to maintain a disciplined army. Doctors were aware that a nutritious diet would reduce rebelliousness among the soldiers; Halliday said that they were more uncooperative on a diet mostly consisting of salted and preserved food. In his analysis (1837, pp. 215-217), the soldiers' behaviour was more orderly when they were given fresh food because it led to a reduction in their alcohol consumption. When they ate salted food in a hot tropical climate the British troops needed to drink a substantial quantity of liquid, and it was their custom to add alcoholic beverages to their water. More salted food therefore meant more water mixed with alcohol, which led to insubordination. Because it is very difficult to modify an established habit, then as now, the British medical officers preferred to minimize the troops' thirst rather than try to impose a reduction in the amount of alcohol they added to water. Another topic worth of further investigation could also be the comparison between the British and other powers in the Caribbean, such as, for instance, the Spanish empire or the US army.

REFERENCES

- Anon. (1828) *Marly; Or, A Planter's Life in Jamaica*. Glasgow: Griffin and Co.
- Anon. (1828) *Sketches and Recollections of the West Indies, by a Resident*. London: Smith, Elder, and Co.
- Armstrong, D. (1994) 'Bodies of Knowledge/Knowledge of Bodies'. In Jones, C. and Porter, R. *Reassessing Foucault: Power, Medicine and the Body*. Abingdon: Routledge, pp. 17-27.
- Berti, I. (2016) "Feeding the sick upon stewed fish and pork. Slaves' Health and Food in a Jamaican Sugarcane Plantation Hospital". *Food and History*, 14, pp. 81-106. doi: 101484/j.food.5.113856
- Berti, I. (2014) "Curiosity, Appreciation, and Old Habits. Creolization of Colonizers' Food Consumption Patterns in Three English Travelogues on the Caribbean". In: Beushausen, W. Brüske, A., Commichau, A., Helber, P. and Kloß, S., ed. *Caribbean Food Cultures: Culinary Practices and Consumption in the Caribbean and Its Diasporas*. Bielefeld: Transcript, pp. 115-132.
- Billig, M. (1995) "Banal Nationalism". London: SAGE Publication.
- Bohls, E. A. (1994) "The Aesthetics of Colonialism: Janet Schaw in the West Indies, 1774-1775". *Eighteenth-Century Studies*, 27: 363-390. doi: 10.2307/2739361
- Burnard, T. (2002) "Not a Place for Whites? Demographic Failure and Settlement in Comparative Context: Jamaica, 1655-1780". In Monteith, K. E. A. and Richards, G., (ed.) *Jamaica in Slavery and Freedom: History, Heritage and Culture*. Kingston: University of the West Indies Press, pp. 73-88.
- Carmichael, Mrs [A.C.] (1833) *Domestic Manners and Social Condition of the White, Coloured, and Negro Population of the West Indies*, 2 vols. London: Whittaker, Treacher, and Co.
- Carrington, S. H. H. (1996) "The United States and the British West Indian Trade, 1783-1807". In: McDonald, R. A. (ed.) *West Indies Accounts: Essays on the History of the British Caribbean and the Atlantic Economy, in Honour of Richard Sheridan*. Kingston: University of the West Indies Press, pp. 149-168.
- Chakrabarti, P. (2014) *Medicine and Empire, 1600-1960*. Basingstoke: Palgrave Macmillan.
- Cometa, M. and Vaccaro, S., ed. (2007). *Lo sguardo di Foucault*. Rome: Meltemi.
- Cosmacini, G. (2011) *Guerra e medicina. Dall'antichità a oggi*. Bari-Rome: Laterza.
- Curtin, P. D. (1989) *Death by Migration: Europe's Encounter with the Tropical World in the Nineteenth Century*. Cambridge: Cambridge University Press.
- Curtin, P. D. (1998) *Disease and Empire: The Health of European Troops in the Conquest of Africa*. Cambridge: Cambridge University Press.
- Davy, J. (1854) *The West Indies, before and since Slave Emancipation*. London: W. & F. G. Cash.
- Digby, A., Waltraud, E. and Mukharji, P. B., ed. (2010). *Crossing Colonial Historiographies: Histories of Colonial and Indigenous Medicines in Transnational Perspective*. Newcastle upon Tyne: Cambridge Scholars.
- Dunn, R. S. (1972) *Sugar and Slaves: The Rise of the Planter Class in the English West Indies, 1624-1713*. Chapel Hill: University of North Carolina Press.
- Elden, S. (2007) "Sorveglianza, sicurezza, spazio". In Cometa, M. and Vaccaro, S., ed. *Lo sguardo di Foucault*. Rome: Meltemi, pp. 109-134.
- Engerman, S. L. (2000) "A Population History of the Caribbean". In: Haines, M. R. and Steckel, R. H. (eds.) *A Population History of North America*, Cambridge: Cambridge University Press, pp. 483-528.
- Foucault, M. (1976 [1963]) *The Birth of the Clinic: An Archaeology of Medical Perception*, A.M. Sheridan (trans.). London: Tavistock.
- Foucault, M. (1980) "The Politics of Health in the Eighteenth Century". In Gordon, C. (ed.) *Power/Knowledge: Selected Interviews and Other Writings, 1972-1977*. Brighton: Harvester, pp. 166-182.
- Foucault, M. (2008) *The Birth of Biopolitics: Lectures at the Collège de France, 1978-79*, G. Burchell trans. Basingstoke: Palgrave Macmillan.
- Goodman, S. (2018) "Unpalatable Truths: Food and Medicine in Colonial British India". *Journal of the History of Medicine and Allied Sciences*, 73: 205-222. doi: 10.1093/jhmas/jry011
- Gordon, A. (1916) "Journal of an Officer's Travels in America and the West Indies, 1764-1765". In: Mereness, N. D. (ed.) *Travels in the American Colonies, 1690-1783*. New York: Macmillan, pp. 367-456.
- Halliday, A. (1837) *The West Indies: The Natural and Physical History of the Windward and Leeward Colonies*. London: Parker.
- Haycock, D. B. and Archer, S., ed. (2009) *Health and Medicine at Sea, 1700-1900*. Woodbridge: Boydell.
- Kiple, K. F. (1993) "Disease Ecologies of the Caribbean". In: Kiple, K. F. (ed.) *The Cambridge World History of Human Disease*. Cambridge: Cambridge University Press, pp. 497-503.
- Lempriere, W. (1791) *A Tour from Gibraltar to Tangier, Sallee, Mogodora, Santa Cruz, Tarudant; and thence over Mount Atlas, to Morocco, etc.* London: Walter.
- Lempriere, W. (1799) *Practical Observations on the Diseases of the Army in Jamaica, as they Occurred Between the Years 1792 and 1797; on the Situation, Climate, and Diseases of that Island; and on the Most Probable Means of Lessening Mortality among the Troops, and among Europeans in Tropical Climates*, 2 vols. London: Longman and Rees.
- Madden, R. R. (1835) *A Twelvemonth's Residence in the West Indies during the Transition from Slavery to Apprenticeship; with Incidental Notices of the State of Society, Prospects, and Natural Resources of Jamaica and Other Islands*, 2 vols. London: James Cochran.
- McNeill, J. R. (2010) *Mosquito Empires: Ecology and War in the Greater Caribbean, 1620-1914*. New York: Cambridge University Press.
- Miller, I. (2015) "Food, Medicine and Institutional Life in the British Isles, c.1790-1900". In: Helstosky, C. (ed.) *The Routledge History of Food*. London: Routledge, pp. 200-219.
- Moore, N. (1890) "Halliday, Andrew (1781-1839)". In *Dictionary of National Biography*, vol. 24. London: Smith, Elder and Co., pp. 110-111.
- Moore, N. (1896) "Pinckard, George". In *Dictionary of National Biography*, vol. 45. London: Smith, Elder and Co., p. 310.
- Moriarty, G. P. (1893) "Lempriere, William". In *Dictionary of National Biography*, vol. 33. London: Smith, Elder and Co., p. 34.
- O'Shaughnessy, A. (1996) "Redcoats and Slaves in the British Caribbean". In: Paquette, R. L. and Engerman, S. L. (eds.) *The Lesser Antilles in the Age of European Expansion*. Gainesville: University Press of Florida, pp. 105-128.

- Paquette, R. L. and Engerman, S. L., ed. (1996) *The Lesser Antilles in the Age of European Expansion*. Gainesville: University Press of Florida.
- Pinckard, G. (1806) *Notes on the West Indies*, 3 vols. London: Longman, Hurst, Rees, and Orme (2nd ed. published in 1816). London: Baldwin, Cradock, and Joy.
- Rollo, J. (1781) *Observations on the Diseases which Appeared in the Army on St. Lucia, in December, 1778; January, February, March, April, and May, 1779*. London: Charles Dilly.
- Turner, B. S. (1992) *Regulating Bodies: Essays in Medical Sociology*. London: Routledge.
- Vale, B. and Edwards, G. (2011) *Physician to the Fleet: The Life and Times of Thomas Trotter, 1760-1832*. Woodbridge: Boydell.
- von Bueltzingsloewen, I. (2011) "Rationing and Politics: The French Academy of Medicine and Food Shortages during the German Occupation and the Vichy Regime". In: Zweiniger-Bargielowska, I., Duffett, R. and Drouard, A. (eds.) *Food and War in Twentieth Century Europe*. Farnham: Ashgate, pp. 155-168.
- Wesseling, H. L. (2004) *The European Colonial Empires, 1815-1919*. D. Webb trans. London: Pearson.
- Williams, C. R. (1826) *A Tour through the Island of Jamaica, from the Western to the Eastern End, in the Year 1823*. London: Hunt and Clarke.
- Williamson, K. (2008) "Mrs Carmichael: A Scotswoman in the West Indies, 1820-1826". *International Journal of Scottish Literature*, 4, pp. 1-17.
- [Wurde mann, J. G.] (1844) *Notes on Cuba*. Boston: James Munroe.
- Zweiniger-Bargielowska, I., Duffett, R. and Drouard, A. (eds.) (2011). *Food and War in Twentieth Century Europe*. Farnham: Ashgate.