

Review - Mosquito Empires: Ecology and War in the Greater Caribbean, 1620-1914

Written by Katherine Arner

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KATHERINE ARNER, SEP 17 2014

Mosquito Empires: Ecology and War in the Greater Caribbean, 1620-1914

By J.R McNeill

Cambridge: Cambridge University Press, 2010

J.R. McNeill's award-winning *Mosquito Empires: Ecology and War in the Greater Caribbean, 1620-1914* is creative book that straddles the disciplines of environmental science and political history. McNeill offers an ecological perspective on the geopolitical history of the Americas. The story of conquest, imperial contest and revolution in the Greater Caribbean is a well-trodden topic. However, it has primarily been a story about human drama. McNeill rewrites this history by recovering the agency of two mosquito-borne pathogens – yellow fever and malaria – in changing the course of international history. It is a significant contribution to the history of the Americas and, for that matter, the history of disease in world history.

McNeill begins his study with a fresh look at the environmental consequences of early imperial expansion. Europeans, as scholars like Alfred Crosby and Jared Diamond have famously argued, initially had an epidemiological advantage in the New World [1]. Old world diseases like smallpox and measles proved devastating for Native American societies, thereby aiding Europeans in their early conquests. McNeill's contribution is, in many respects, the sequel to this story about disease and empire. He shows us how settlers and practitioners unwittingly transformed this ecological order by creating the perfect conditions for yellow fever and malaria to “govern” the Caribbean prior to 1900.

McNeill argues that this came about through the development of the plantation economy in the late seventeenth century. The transatlantic slave trade introduced the *Anopheles* and *Aedes* mosquito genera, identified as the primary carriers of malaria and yellow fever. Those mosquitos in turn flourished in the marshy, predator-free environs that settlers created as they razed large forests to drive the local industries of sugar and rice. The population explosion that accompanied the institution of large-scale plantation operations also altered the dynamics of disease in the region. Because yellow fever and malaria were primarily deadly to newcomers, local long-term European settlers and those of African descent came to have the epidemiological advantage.

Medicine, McNeill adds, did nothing to impede the progress of these diseases. Prior to the late nineteenth century, European practitioners attributed the cause of the diseases to disturbances in the climate. McNeill argues that their choice interventions – copious bleeding, purging and confinement in crowded military hospitals – were bound to only hasten an already imminent death. Any terraforming measures like swamp drainage were haphazard at best.

After setting the stage in Part 1, McNeill carries us through a dramatic retelling of the history of international contests in the Americas. He looks at pivotal turning points with an eye to the agency of yellow fever and malaria in shaping their outcome. He begins with an ecological interpretation of the early experiences of the Dutch in Brazil between 1624 and 1654 and the English in Jamaica (1655-60). Yellow fever did not take hold in either of these places until the sugar revolution of the late seventeenth century. These ecological circumstances helped to foster the steady growth of European white populations in these colonial schemes. McNeill contrasts these moments with the failed efforts of

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the Scots at Darien (1698-1699) and the French at Guiana (1763). By the dawn of the seventeenth century, a new disease environment had emerged in the region. Outbreaks of yellow fever played a dramatic role in the plight of both schemes.

There is a much larger and more ambitious claim McNeill makes in this section of his book. He argues that yellow fever served as one of Spain's most effective weapons for defending their New World possessions. This had much to do with rival European powers' choice in military manpower. In contrast to the Spanish, the French, English and Dutch tended to rely on troops imported from Europe for large-scale conflict in the Caribbean. Those recruits, as McNeill wryly puts it, proved to be "luckless virus-fodder" (p. 143). Thus the French suffered terribly in their attack on Spanish Cartagena in 1697. English attempts at both Cartagena in 1741 and Havana in 1762 met disaster at the hands of yellow fever.

In Part 3 of *Mosquito Empires*, cleverly titled "Revolutionary Mosquitos," McNeill shows us how insurgents challenged the existing imperial order in the Americas with the aid of disease. According to McNeill, the ravages of malaria in the southern US did as much or more to defeat Lord Cornwallis during the American Revolution as did colonial political resistance. France's loss of St. Domingue to a slave revolt had much to do with local slaves' differential immunity to yellow fever. Massive yellow fever outbreaks destroyed both French and British armies sent to recover the colony. When Spanish America erupted in revolution in the early 1800s, many local disease-resistant troops sided with rebellion, leaving Spain no choice but to resort to European recruits. Like their British and French counterparts of the previous century, these recruits ultimately succumbed to disease, thus aiding the demise of the Spanish empire.

The turn of the twentieth century marked a new era in the history of disease and empire in the Americas. Americans began to harness the new medical science of bacteriology and vectors to comprehend yellow fever and malaria. Military medical officers crafted efficient and wide-scale sanitary engineering schemes to control the disease in Latin America, thereby expanding US influence in Panama and Cuba. McNeill's final point about this new era is a very poignant one. In the wake of the "sanitary revolution" in the industrial world, the political significance of yellow fever and malaria changed. Differential protection from disease was no longer a matter of prior disease exposure. It increasingly became correlated with the wealth and industrial might of societies – the ability of human actors to mobilize extensive sanitation projects, DDT and vaccines.

On the whole, *Mosquito Empires* is a well-crafted and clever book that will appeal to a very broad audience. McNeill has packaged it nicely for non-specialists. One of his greatest gifts is his ability to handle large and complex events, weaving them together in a very lucid and engaging narrative. His summaries of key social and political events are detailed without being overbearing. His presentations of such topics as Latin American revolutions are also concise and to the point. The same may be said for his discussion of the mechanics of yellow fever, malaria and the behavior of their mosquito carriers.

McNeill also relates his study nicely to present-day global issues. He ends his book by emphasizing continuity in the diseases' political influence and warns of a potential return to their deadly capacity. McNeill's work is thus confined neither to the Greater Caribbean nor to the distant past. One could easily read it in relation to some of the more recent scholarship on international development and disease. James Webb's *Humanity's Burden: a Global History of Malaria* (2008) and Randall Packard's *The Making of a Tropical Disease: a Short History of Malaria* (2011) come to mind.

That said, the book is not without some major limitations. One is McNeill's tendency to favor bold arguments and narrative over caveats and subtle attention to limitations in argument and methods. While this approach makes his book a very accessible and engaging read, it also makes some of his arguments and methods very controversial. Even though he insists that his work avoids the problem of determinism (p. 6), military historians and political historians will question the weight he assigns two very specific diseases in the course of major events like both the Haitian and American Revolutions. And while McNeill acknowledges the limits of relying on primary sources to recover evidence of mosquito-borne pathogens, he makes liberal use of those documents throughout the book without attending to the problem of genre, author, audience and actors' categories. These are all factors that shape

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the reliability of sources.

As a materialist history of disease, *Mosquito Empires* is also not likely to appeal to readers interested in contemporaries' experience with ecological change and warfare in the Caribbean. By exploring international conflict through the lens of mosquito-borne pathogens, McNeill sacrifices historical empathy with the humans who feature in his study. He has little interest in human actors beyond their ability to help or hinder the progress of disease. And he can be casual verging on dismissive when he does explicitly consider people's perceptions.

His portrayal of medicine and disease control is a case in point. In the chapter on early modern medicine, McNeill does not guide readers through the logic of early modern practitioners. Rather, he invites readers to regard their efforts to fight disease "with amusement" and disdain (p. 63). And he goes out of his way to showcase the most outlandish of ideas and therapeutics rather than parse the norm. As a result, medical actors appear hapless and incapable of intelligent innovation until the end of the nineteenth century.

This interpretation may work for a strictly materialist study of ecology and warfare in the Greater Caribbean. However, it overshadows the very nuanced picture of innovation readers will find in very recent scholarship on science, medicine and international conflict in the Caribbean (none of which McNeill references). Europeans who fought yellow fever and malaria in the revolutionary Caribbean actually played an important role in reshaping Western medical practices and institutions. The high mortality from new diseases and large military hospitals created very novel opportunities for dissection, the creation of drug trials and new conceptions of disease pathology. Disease and warfare in the Caribbean also helped to stimulate the expansion of the British military medical corps in the early nineteenth century [2]. My point here is not to fault McNeill, only to point out the limits of his approach.

These limitations aside, *Mosquito Empires* is an innovative and important book. It assists an understanding of the intricacies of the history of the Americas. It raises a number of themes that could stimulate further research. It is, in sum, a "must read" that is sure to spark some necessary and lively debate about Caribbean history, American history and world environmental history.

Notes:

[1] Alfred Crosby, *The Columbian Exchange: Biological and Cultural Consequences of 1492* (Greenwood Publishing Group, 1972); Jared Diamond, *Guns, Germs and Steel: the Fates of Human Society* (W.W. Norton, 1998).

[2] For an extensive discussion of this, see Mark Harrison, *Medicine in an Age of Commerce and Empire: Britain and Its Tropical Colonies, 1660-1830* (Oxford University Press, 2010).

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About the author:

Dr. Katherine Arner is a postdoctoral fellow in the Department of the History of Medicine at Johns Hopkins School of Medicine. She is a historian of medicine and disease control, with particular interests in the history of the US and the Greater Caribbean. Her work has appeared in the *Journal of Atlantic Studies* and the *Journal of World History*.