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978-0-521-67012-8 - Humanity's Burden: A Global History of Malaria

James L. A. Webb

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## HUMANITY'S BURDEN

*Humanity's Burden* provides a panoramic overview of the history of malaria. It traces the long arc of malaria out of tropical Africa into Eurasia, its transfer to the Americas during the early years of the Columbian exchange, and its retraction from the middle latitudes into the tropics since the late nineteenth century. Adopting a broadly comparative approach to historical patterns and processes, it synthesizes research findings from the natural and social sciences and weaves these understandings into a narrative that reaches from the earliest evidence of malarial infections in tropical Africa up to the present. Written in a style that is easily accessible to nonspecialists, it considers the significance of genetic mutations, diet, lifestyle, migration, warfare, palliative and curative treatment, and efforts to interrupt transmission on the global distribution of malaria.

James L.A. Webb Jr. is professor of history at Colby College where he teaches courses in world history, African history, ecological history, and historical epidemiology. He is the author of *Desert Frontier: Ecological and Economic Change along the Western Sahel, 1600–1850*, and *Tropical Pioneers: Human Agency and Ecological Change in the Highlands of Sri Lanka, 1800–1900*.

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Microphoto of mosquito © Alexey Romanov | Dreamstime.com

There is no single method of attack against malaria. Spraying equipment has to be constantly maintained and repaired. World Health Organization, PRINT-EURO-MALARIA, Photo No. 17939. © World Health Organization. Used by permission.

*Second row, left to right:*

A young patient being checked for possible enlargement of the spleen caused by malaria. Over much of Africa, there is so much malaria that present methods of vector control are inadequate to check the disease. World Health Organization, PRINT-AFRO-MALARIA, Photo No. 4931. © World Health Organization. Used by permission.

Anopheles mosquito by James Gathany.

A routine malaria survey on the island of Grande Comore to obtain the seasonal malaria parasite rate among schoolchildren. Under the eye of the schoolmaster, the children line up to have a blood slide taken. World Health Organization, PRINT-AFRO-MALARIA, Photo No. 18064. © World Health Organization. Used by permission.

*Bottom row, left to right:*

DDT spray operations by an antimalaria team in a village of Madras. World Health Organization, PRINT-SEARO-MALARIA, Photo No. 8521. © World Health Organization. Used by permission.

Child showing scars that resulted after local healers tried to eliminate the congestion caused by malaria. World Health Organization, PRINT-AFRO-MALARIA, Photo No. 11888. © World Health Organization. Used by permission.

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# Humanity's Burden

## *A Global History of Malaria*

JAMES L.A. WEBB Jr.

*Colby College*



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*For James and Jeanne  
and  
Margaret and Eugene*

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“If we take as our standard of importance the greatest harm to the greatest number, then there is no question that malaria is the most important of all infectious diseases.”

Sir Frank Macfarlane Burnet, *Natural History of Infectious Disease*, 3rd ed. (Cambridge: Cambridge University Press, 1962), 341.

“Just as the history of malarial disease shows it to have been a malady of all times, so the inquiry into its geography leads us to recognize in it a disease of all *races* and *nationalities*.”

August Hirsch, *Handbook of Geographical and Historical Pathology*, vol. I (London: New Sydenham Society, 1883), 243.

“I do not know another disease that so mimics other disorders or that kills so rapidly that we can see the patient literally slipping away under our eyes. No matter how much experience we have had or how widely we read about the disease we cannot be certain that we have mastered its recognition.”

Michael Gelfand, *Rivers of Death in Africa* (London: Oxford University Press, 1964), 3.

“The first axiom of malariology, that lessons learnt in one part of the world may not be applied to other parts of the world, without local verification, is as true as ever; it is unfortunately as often neglected as ever.”

D. Bagster Wilson, “Malaria in the African,” *Central African Journal of Medicine* vol. 4, no. 2 (1958), 73.

“Everything about malaria is so moulded and altered by local conditions that it becomes a thousand different diseases and epidemiological puzzles. Like chess, it is played with a few pieces, but is capable of an infinite variety of situations.”

Lewis Hackett, *Malaria in Europe* (London: Oxford University Press, 1937), 266.

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## Acknowledgments

Research for this book has taken me to a number of different archives and libraries, and I am grateful to the Social Science Grant Committee of Colby College for ongoing financial support for travel to the institutional collections. In the United States, I consulted the holdings of the Smithsonian Institution, the National Library of Medicine, and the National Museum of Health and Medicine in Washington, DC; Merck and Co. in White House, New Jersey; the Rockefeller Archive Center in Sleepy Hollow, New York; the New York Botanical Garden in the Bronx, New York; and the Historical Society of Pennsylvania in Philadelphia, Pennsylvania. In the United Kingdom, I consulted the archives of Howards and Sons, Ltd. (Ilford) at the London Borough of Redbridge Central Library; the London Metropolitan Archives; the National Science Museum; the British Library; the Public Record Office of the United Kingdom; the Wellcome Institute for the History and Understanding of Medicine in London; and the Wellcome Unit for the History of Medicine at the University of Oxford. In France, I consulted documents at the Archives du Pharo in Marseilles. In Switzerland, I carried out research in the archives of the World Health Organization in Geneva. Via the Internet, I have used the archival materials of the Historical Collection at the League of Nations.

This book is thus based in part on primary archival research on selected topics. But for the most part, owing to its scope as a global history, this is a project of synthesis. I have drawn on secondary literatures in regional histories and in world history and on scientific research articles and literature reviews for information about contemporary scientific knowledge. Most malaria research studies today are technical and disciplinarily bounded, and the volume of research is considerable. Over the years of researching and writing this book, the Institute for Scientific Information (ISI) Web of Science

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electronically forwarded to me abstracts for scores of scientific articles each week. This online access has been critical to this project.

I have presented versions of the first chapter of this book at the African Studies Seminar at Harvard University; the Science, Technology, and Society Colloquium and the Environmental Studies Colloquium at Colby College; the African Studies Seminar at Boston University; the History of Economic Development and Growth (HEDG) annual workshop at the School of Oriental and African Studies at the University of London; the biannual meetings of the Society for Africanist Archaeology in Bergen, Norway; the Health and Medicine in Africa Workshop at Bryn Mawr and Haverford Colleges; and at a seminar in the Department of Social Studies of Medicine at the University of McGill Medical School. An earlier version of chapter 1 was published in the *Journal of World History* and appears with the permission of the University of Hawai'i Press. I have presented versions of the third chapter at the York University conference on Disease and Global Environmental History and at an annual meeting of the American Society for Environmental History. I wish to thank Emmanuel Akyeampong, Jim Fleming, Tom Tietenberg, Jim McCann, Gareth Austin, Scott MacEachern, Paula Viterbo, Myron Echenberg, Richard Hoffman, and Stuart McCook for the invitations to make these presentations and for their stimulating conversations.

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