

Cambridge University Press

0521530601 - Bilharzia: A History of Imperial Tropical Medicine - John Farley

Frontmatter/Prelims

[More information](#)

---

*Cambridge History of Medicine*

EDITORS: CHARLES WEBSTER AND CHARLES ROSENBERG

Bilharzia

Cambridge University Press

0521530601 - Bilharzia: A History of Imperial Tropical Medicine - John Farley

Frontmatter/Prelims

[More information](#)

## OTHER BOOKS IN THIS SERIES

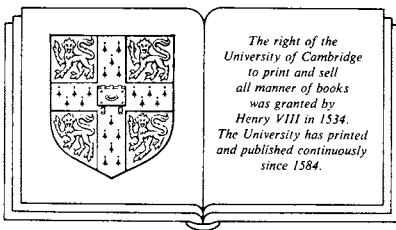
- Charles Webster, ed. *Health, medicine, and mortality in the sixteenth century*  
 Ian Maclean *The Renaissance notion of woman*  
 Michael MacDonald *Mystical Bedlam*  
 Robert E. Kohler *From medical chemistry to biochemistry*  
 Walter Pagel *Joan Baptista Van Helmont*  
 Nancy Tomes *A generous confidence*  
 Roger Cooter *The cultural meaning of popular science*  
 Anne Digby *Madness, morality and medicine*  
 Guenter B. Risse *Hospital life in Enlightenment Scotland*  
 Roy Porter, ed. *Patients and practitioners*  
 Ann G. Carmichael *Plague and the poor in Renaissance Florence*  
 S. E. D. Shortt *Victorian lunacy*  
 Hilary Marland *Medicine and society in Wakefield and Huddersfield 1780–1870*  
 Susan M. Reverby *Ordered to care*  
 Russell C. Maulitz *Morbid appearances*  
 Matthew Ramsey *Professional and popular medicine in France, 1770–1830*  
 John Keown *Abortion, doctors and the law*  
 Donald Denoon *Public health in Papua New Guinea*  
 Paul Weindling *Health, race and German politics between National Unification  
 and Nazism, 1870–1945*  
 Ornella Moscucci *The science of woman*  
 Jack D. Ellis *The physician-legislators of France*  
 William H. Schneider *Quality and quantity*

# Bilharzia

A HISTORY OF IMPERIAL TROPICAL MEDICINE

JOHN FARLEY

*Dalhousie University, Halifax, Nova Scotia*



CAMBRIDGE UNIVERSITY PRESS

CAMBRIDGE

NEW YORK PORT CHESTER MELBOURNE SYDNEY

Cambridge University Press  
 0521530601 - Bilharzia: A History of Imperial Tropical Medicine - John Farley  
 Frontmatter/Prelims  
[More information](#)

PUBLISHED BY THE PRESS SYNDICATE OF THE UNIVERSITY OF CAMBRIDGE  
 The Pitt Building, Trumpington Street, Cambridge, United Kingdom

CAMBRIDGE UNIVERSITY PRESS  
 The Edinburgh Building, Cambridge CB2 2RU, UK  
 40 West 20th Street, New York NY 10011-4211, USA  
 477 Williamstown Road, Port Melbourne, VIC 3207, Australia  
 Ruiz de Alarcón 13, 28014 Madrid, Spain  
 Dock House, The Waterfront, Cape Town 8001, South Africa

<http://www.cambridge.org>

© Cambridge University Press 1991

This book is in copyright. Subject to statutory exception  
 and to the provisions of relevant collective licensing agreements,  
 no reproduction of any part may take place without  
 the written permission of Cambridge University Press.

First published 1991  
 First paperback edition 2003

*A catalogue record for this book is available from the British Library*

*Library of Congress Cataloging-in-Publication Data*  
 Farley, John, 1936–  
 Bilharzia : a history of imperial tropical medicine / John Farley.  
 p. cm. – (Cambridge history of medicine)  
 Includes index.  
 ISBN 0 521 40086 4 (hardcover)  
 1. Schistosomiasis – Developing countries – History. 2. Medicine –  
 Great Britain – History. I. Title. II. Series.  
 [DNLM: 1. Schistosomiasis – history. WC 11.1 F231b]  
 RA644. S3F37 1991  
 614.5'53 – dc20  
 DNLM/DLC  
 for Library of Congress 90-2430  
 CIP

ISBN 0 521 40086 4 hardback  
 ISBN 0 521 53060 1 paperback

## CONTENTS

List of tables and figures	<i>page</i>	vi
Acknowledgments		ix
1 Introduction		1
<b>PART I: THE IMPERIAL APPROACH (1898–WORLD WAR II)</b>		
2 1898: A declaration of war		13
3 1898: Another war, another continent		31
4 Bilharzia (1850–1918): The Looss controversies		45
5 The International Health Board		72
6 Bilharzia: Optimism in Egypt (1918–1939)		97
7 Into the 1930s: Economics of disease		116
8 The 1930s: Empires in transition		141
9 Bilharzia: World War II		157
<b>PART II: A BRIEF INTERLUDE: SOCIAL MEDICINE</b>		
10 New ideas		173
11 Bilharzia: Pessimism in Egypt (1940–1955)		188
12 Bilharzia: Victory in China?		201
<b>PART III: THE PROFESSIONAL APPROACH (1950–1970s)</b>		
13 The new British Empire: Finding the experts		219
14 South Africa (1950–1960): Social medicine versus scientific research		233
15 Bilharzia: Second to only one		249
16 Bilharzia (1950–1970s): A strategic change		267
17 Conclusion: The imperial triad		291
Notes		305
Index		353

## TABLES AND FIGURES

## TABLES

6.1	Results of Barlow's snail clearance experiments	<i>page</i> 111
8.1	British expenditure on the colonies, 1918–39	142
10.1	Prevalence of disease in the Masai and Akikuyu tribes	177
10.2	Personal and nonpersonal health services in South Africa, 1945	183
13.1	Hierarchy of medical personnel in Uganda, 1926	221
13.2	Priority research items presented to the first meeting of the Colonial Medical Research Committee, May 29, 1945	232
14.1	Relationship between infant mortality and the Gross National Product	244
14.2	Effect of bilharzia on mortality in mice fed a low-protein diet	247
15.1	The number of human helminth infections	256
15.2	Some major dams in Africa	263
15.3	List of British medical research projects in order of money allocated, 1940–50	266
16.1	Colonial Development and Welfare Act budget allocations, 1940–60	275
17.1	Concept of disease according to pre- and post-germ theory	293

## FIGURES

1.1	Distribution of the human schistosome species	7
1.2	Life cycle of the human schistosome worms	9
2.1	The British Empire	16
2.2	Patrick Manson	21
2.3	The Royal Victoria Military Hospital and Army Medical School at Netley	22

<i>Tables and figures</i>		vii
2.4	London School of Tropical Medicine, Royal Albert Docks, Greenwich	24
2.5	Alfred Jones	24
2.6	Rudolf Leuckart and assistants	26
3.1	Hookworm victims, Puerto Rico	40
4.1	Bilharzia and the Egyptian <i>fellaheen</i>	46
4.2	Theodor Bilharz	48
4.3	<i>Distomum haematobium</i>	49
4.4	Arthur Looss	52
4.5	Robert Leiper	53
4.6	Eggs of the three human schistosome species	55
4.7	Endemic sites of <i>Schistosoma japonicum</i> in Japan	62
4.8	The forked-tail schistosome cercaria	68
5.1	Wickliffe Rose	73
5.2	The International Health Commission's field of operations	76
5.3	The four geographical areas of the International Health Commission	77
5.4	Traveling tent hospital and thymol treatment for hookworm	79
5.5	The Johns Hopkins School of Hygiene and Public Health, 1918–25	84
5.6	William W. Cort	85
5.7	H. B. Ward, A. Looss, and C. Stiles at the International Zoological Congress, Bern, 1904	86
5.8	The London School of Hygiene and Tropical Medicine	89
5.9	Peking Union Medical College	92
5.10	Ernest Faust	94
6.1	Egyptian propaganda posters showing victims of bilharzia and hookworm	99
6.2	Mohammed Khalil	101
6.3	J. Allen Scott	103
6.4	Claude Barlow	104
6.5	Swimmers' itch	106
6.6	Spreading copper sulfate	108
6.7	Barlow's canal clearing operations, 1937–8	112
6.8	The distribution and prevalence of the two human schistosome species in Egypt	114
7.1	Puerto Rico	123
7.2	Creighton Wellman	126
7.3	Distribution of bilharzia in South Africa	138

viii	<i>Tables and figures</i>	
8.1	Lord Hailey	148
8.2	E. Barton Worthington	149
8.3	Sam Zmuri or Zemurray	155
9.1	The Battle of Leyte	160
9.2	U.S. Army poster warning of bilharzia in Leyte	162
9.3	Laboratory work in Leyte, I	164
9.4	Laboratory work in Leyte, II	166
10.1	John Black Grant	179
10.2	Organization of a South African community health center	185
11.1	John M. Weir	195
11.2	Installing latrines in Sindbis village	197
12.1	Bilharzia victims in China	202
12.2	The mass campaign against bilharzia in China, I	207
12.3	The mass campaign against bilharzia in China, II	208
12.4	The mass campaign against bilharzia in China, III	209
13.1	East and West African students attending the London School of Hygiene and Tropical Medicine, 1930–60	228
14.1	The South African “homelands”	237
14.2	Housing in the “homelands”	242
15.1	How bilharzia spreads: East Africa, 1960s	262
16.1	George Macdonald	276
16.2	The British team at Mwanza	278
16.3	Egypt-49 project, WHO	280
16.4	Distribution of <i>S. japonicum</i> in the Philippines	282
16.5	Spraying with Bayer 73, Egypt-49 project	283



## ACKNOWLEDGMENTS

This book has been a labor of love, bringing together many things that have long interested me: a professional fascination with parasites, a love of history, and a longtime interest in imperialism, whether of the Roman variety (I grew up in Britain in what was once an important Roman town), or of the more recent British vintage, which was already decaying when I became conscious of it.

Curiously, however, this study began and ended in the United States. It started one afternoon in the Harvard University office of Barbara Rosenkrantz, who told me that the period of procrastination was over; I had to start. The first notes were taken in the magnificent archives of the Rockefeller Foundation situated, I am glad to say, some miles away from New York, and the final chapters were tied together while I was a Scholar in Residence in that idyllic Italian enclave of the Rockefeller Foundation on the Bellagio promontory overlooking Lake Como. To Barbara, the archivists in Tarrytown, and the staff of the Villa Serbelloni I extend my sincere thanks.

My mecca, however, had to be in London, which even the Rockefellers admitted was the seat of empire and whose benevolence helped build what has been for many years the center of my world – the library of the London School of Hygiene and Tropical Medicine and particularly its vertiginous mezzanine balcony. I would like to thank Ms. Gibson and her staff for their help over the years, and David Bradley for providing space in the Ross Institute that I was able to call my own. I wish also to thank Bill Bynum, in whose department at University College I spent part of a sabbatical, and Shula Marks who made me realize how important South Africa was to my story and allowed me to attend one of her seminars in South African history at the Institute for Commonwealth Studies. I would also like to thank Sheila Willmott and the staff at Winches Farm field station in St. Albans, the very helpful staff at the Public Record Office, and the unknown gentleman in the British Foreign Office who took pity on me and allowed me access to some very recent medical documents. But my work on the British scene would have been impossible without the initial help of John Flint, my colleague in

x *Acknowledgments*

Dalhousie University's History Department. Under his guidance, I took the first serious steps into British imperialism, discovering not only where to start but, more significantly, where to find it and how to find it.

Finding information about a London-centered empire was child's play in comparison to such activity in the United States, where the search provided an excuse to indulge my love of train rides. (Like Paul Theroux, I have never heard the whistle of a train without wishing I was on it.) In particular, I would like to thank Linda Brink at the Harvard Medical School, who manages the records of the American Society of Tropical Medicine; the staff at the Tulane University Library and Archives in New Orleans; the archivists at the Chesney Archives at Johns Hopkins University Medical School; Mary Pritchard at the Harold Manter Laboratory at the University of Nebraska, where American parasitology began and where, today, the records of the American Society of Parasitology are housed; the archivists at the University of Illinois at Urbana, where the H. B. Ward Papers are located; librarians at the Walter Reed Army Institute of Research in Washington, D.C., and at the Naval Medical Research Institute in Bethesda; and, closer to home, the archivists at McGill University, where one could, until recently, earn a Diploma in Tropical Medicine (fieldwork in the Caribbean!).

My very warmest thanks go to "Chip" Burkhardt at the University of Illinois not only for arranging access to its magnificent library (a feat that took him only seconds to arrange) and providing much needed comfort on the statistical probability of being struck by tornadoes (which always seemed to occur when I was there) but, more especially, for beating down the forces of athletic law-and-order to gain access to the swimming pool – a feat that took much, much longer! I would also like to thank Gert Brieger for his hospitality during my numerous visits to the Johns Hopkins Institute of the History of Medicine, and neither shall I forget the welcome I always received in Baltimore from the late Lloyd Stevenson and his wife; he continued over the years to take a fatherly interest in what I was about. Thanks go also to J. Allen Scott and John Weir, whom I interviewed and who read over those parts of the text relevant to their involvement in the bilharzia story; and Elizabeth Fee, who read over my material on the Johns Hopkins School of Hygiene and Public Health. I would also like to thank Sheila Penney and Elizabeth Haigh, who read over early drafts of the manuscript; Joe Harvey and David Patriguin, for helpful advice; and Kenneth Mott and Paulette Duchesne, for their great help during a wonderful couple of weeks rummaging around the library of the Parasitic Diseases Programme at the WHO in Geneva.

But I owe my greatest debt to three very special people: Sheila Zurbrigg, from the perspective of her experiences in working in India and her present historical interest in malarial epidemiology, prodded me to move in new directions and reminded me constantly that there was much more to bilharzia than worms and snails. Robert Joy, of the Uniformed Services University of

*Acknowledgments*

xi

the Health Sciences in Bethesda, always gave a helping hand when asked, always seemed to know where American documents were located, and took considerable pains to read over the almost-final draft of the manuscript. And finally, Peter Jordan, now retired but still active after a lifetime of medical service in British Africa and after directing the famous St. Lucia Project, also read over the draft manuscript and, over pub lunches in St. Albans, told me his likes and dislikes and made many helpful suggestions and comments about the disease.

I am naturally very grateful to those who have provided funds for travel and research. CUSO took me to Africa many years ago, the Rockefeller Foundation provided numerous summer grants that enabled me to spend time at their archives, and the Toronto-based Hannah Institute for the History of Medicine kindly provided a small grant for that all-important final visit to the WHO library in Geneva. Finally, and most important of all, I would like to acknowledge the Social Sciences and Humanities Research Council of Canada which, with much appreciated civility, has supported this project from its inception far too many years ago.

J. F.

*Halifax, Nova Scotia*