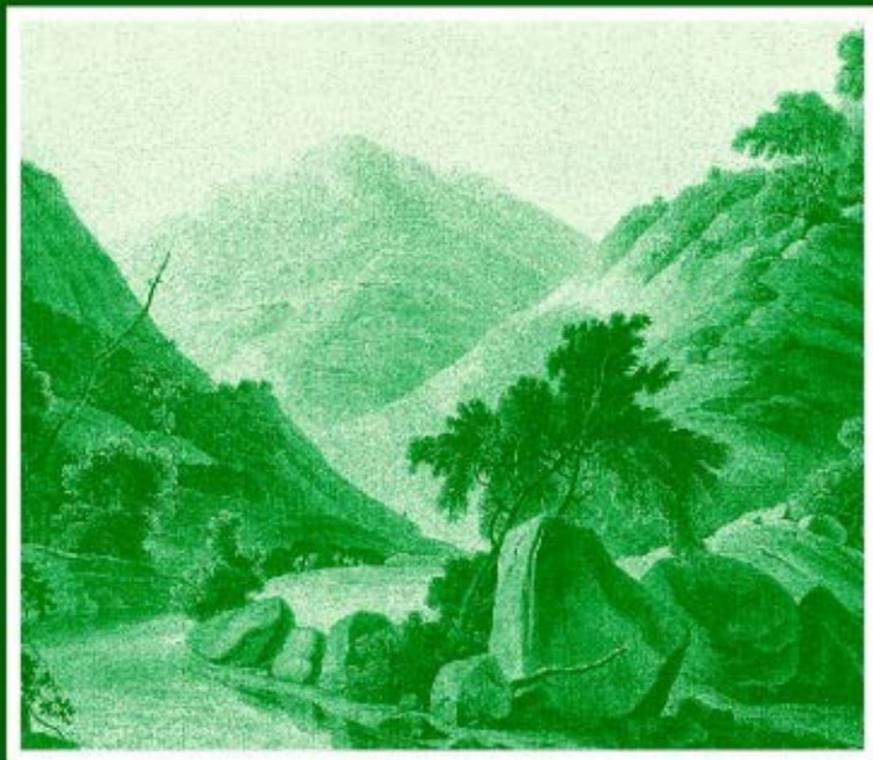


Cambridge Studies in Historical Geography

*Empire Forestry and
the Origins of
Environmentalism*

Gregory A. Barton



CAMBRIDGE

more information - www.cambridge.org/0521814170

This page intentionally left blank

EMPIRE FORESTRY AND THE ORIGINS OF ENVIRONMENTALISM

What we now know as environmentalism began with a series of land reservations in 1855 in British India, spreading during the second half of the nineteenth century until over 10 percent of the land surface of the earth became protected as a public trust. Sprawling forest reservations, many of them larger than modern nations, became revenue-producing forests that protected the whole “household of nature,” and Rudyard Kipling and Theodore Roosevelt were among those who celebrated a new class of government foresters as public heroes. These foresters warned of impending catastrophe, desertification, and global climate change if the reverse process of deforestation continued. The empire forestry movement spread through India, Africa, Australia, New Zealand, Canada, and then the United States to other parts of the globe, and Gregory Barton’s pioneering study is amongst the first to look at this movement, and thus the origins of environmentalism, in global perspective.

Born under imperialism, environmentalism today is as profound a global movement as that for democracy itself. Ironically it is in those former colonies where environmentalism took shape that its future, and the future of nature, seems least assured. *Empire Forestry and the Origins of Environmentalism* is a major contribution to the understanding of what is perhaps one of the most powerful political and social forces of modern times.

Raised in Oregon, Gregory Barton is Professor of British, Colonial and Environmental History at the University of Redlands, California. He is the editor of *American Environmentalism*. This is his first book.

Cambridge Studies in Historical Geography 34

Series editors

ALAN R. H. BAKER, RICHARD DENNIS, DERYCK HOLDSWORTH

Cambridge Studies in Historical Geography encourages exploration of the philosophies, methodologies and techniques of historical geography and publishes the results of new research within all branches of the subject. It endeavors to secure the marriage of traditional scholarship with innovative approaches to problems and to sources, aiming in this way to provide a focus for the discipline and to contribute towards its development. The series is an international forum for publication in historical geography which also promotes contact with workers in cognate disciplines.

For a full list of titles in the series, please see end of book.

EMPIRE FORESTRY
AND THE ORIGINS OF
ENVIRONMENTALISM

GREGORY ALLEN BARTON



CAMBRIDGE
UNIVERSITY PRESS

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>

© Gregory Barton 2004

First published in printed format 2002

ISBN 0-511-03030-4 eBook (Adobe Reader)

ISBN 0-521-81417-0 hardback

*For my mother,
Ina Mae Russell Barton*

Contents

| | |
|---|--------|
| <i>List of illustrations</i> | page x |
| <i>Acknowledgments</i> | xii |
| 1 Introduction | 1 |
| 2 The great interference | 9 |
| 3 Empire forestry and British India | 38 |
| 4 Environmental innovation in British India | 62 |
| 5 Empire forestry and the colonies | 94 |
| 6 Empire forestry and American environmentalism | 130 |
| 7 From empire forestry to Commonwealth forestry | 144 |
| <i>Bibliography</i> | 167 |
| <i>Index</i> | 187 |

Illustrations

| | | |
|----|--|---------------|
| 1 | Reserved teak forest in Burma, 1914 | <i>page 3</i> |
| 2 | Reserved teak and evergreen forest in Burma, 1902 | 22 |
| 3 | Teak tree in northeast India, 1898 | 24 |
| 4 | Reserved evergreen forest of deodar, spruce, and blue pine in the Punjab, India, looking toward the Himalayas: photo R. S. Troup, 1914 | 25 |
| 5 | Oxen pulling a log, Burma | 25 |
| 6 | Reserved pine forest in the Punjab, India | 51 |
| 7 | Reserved forest in the Gangetic delta, India | 52 |
| 8 | Transporting deodar sleepers for broad-gauge railway construction, Kashmir | 53 |
| 9 | A rare photograph of a forest rest house in Burma, with a woman standing in the forecorner: photo R. S. Troup | 53 |
| 10 | Reserved forest of deodar in the Punjab, India | 83 |
| 11 | A reserved forest in the foothills of the Himalayas in northwest India | 84 |
| 12 | Cart road used as a fire line through a sal forest in Oudh, India: photo R. S. Troup, 1910 | 85 |
| 13 | A 100-foot wide fire line protecting a reserved forest of pine in the United Provinces, India: photo R. S. Troup, 1909 | 86 |
| 14 | Teak logs placed in a dry stream, waiting for the rainy season to transport to the depot, upper Burma: photo R. S. Troup, 1899 | 87 |
| 15 | Dry slide for transporting deodar beams, Kashmir, 1911 | 88 |
| 16 | Former forest in Northern Rhodesia: an example of shifting cultivation | 99 |
| 17 | Crown land in Northern Rhodesia during a harvest for firewood, 1956 | 100 |

| | | |
|----|---|-----|
| 18 | Hills denuded by overcutting and goat grazing, Cyprus: photo R. S. Troup, 1929 | 105 |
| 19 | Pine forest after a forest fire, Cyprus: photo R. S. Troup, 1924 | 106 |
| 20 | Fire lookout in Western Australia, 1940 | 112 |
| 21 | Firewood cutter tractor, Victoria, Australia | 113 |
| 22 | Lumber mill in British Columbia | 141 |
| 23 | Douglas fir and western hemlock forest, British Columbia | 142 |
| 24 | Giant snails on a pometia tree in New Britain: photo H. G. Champion, 1957 | 155 |

Acknowledgments

Many people have helped me along the way to make this book possible. Richard Mills at the Oxford Forestry Institute guided me to much valuable material, particularly to early conservation photographs in the Plant Sciences Library collection. I am indebted to Gareth Griffiths and the archival volunteers at the new British Empire and Commonwealth Museum in Bristol, to the staff at the British Library, the Bibliothèque Nationale, the India Archives in New Delhi, the Library of Congress and the National Agricultural Library in Washington, DC. Generous funding from the Fulbright Commission enabled me to research in the subcontinent and to share my ideas at Dhaka University and the Asiatic Society of Bangladesh. The director, Sirajul Islam, gave me much helpful scholarly input. I also thank the director of the National Library of Bangladesh, Md. Shahabuddin Khan and the director of the National Archives of Bangladesh Mr. Chowdhury. I am also grateful to Shibbir Haq, a friend and colleague who provided much hospitality and care in Dhaka, and who guided me to many remote forest areas in northeast India, Nepal, Bangladesh, and Myanmar.

At Northwestern University, where this book began, I benefited from the help and advice of John Bushnell, Paul Friesema, T. W. Heyck, my dissertation advisor, and Harold Perkin. To Harold Perkin I owe a great debt and special thanks. From him I learned the love of writing “big picture” history and observed first hand the habits of mind that a great historian brings to his craft. He read many drafts of the manuscript, suggesting ideas and improvements throughout, and never ceased to make himself available at every stage from dissertation to book. To Michael Williams I also owe much. As the world’s leading forest historian, he reviewed early drafts of articles that explored the themes of this work, and despite their many flaws recommended them for publication. He also selflessly aided my efforts to bring to publication an argument that he concurrently formed. I am grateful for the advice of Michael Heffernan, Alan Baker, Richard Grove, and the editors at Cambridge University Press. Matthew Carrell aided me with the conservation photographs in this book, providing much-needed technical expertise. Dr. Elias Stinson generously shared his brilliant ideas on nature, religion, and empire. Mary Curry, cited in this

book as Mary Ledzion, became an invaluable friend who, born in India and raised with the Indian Forest Department, explained much that cannot be found in books. Ben Longrigg, also raised in the lap of the Indian Forest Department, generously provided travel funds to Britain and access to his father's control journal, along with his valuable advice and friendship. My mother laboriously read and corrected countless drafts in her forest cabin in Zigzag, Oregon, while my partner T. Neal patiently encouraged me as I traveled and wrote. I am grateful to them all. The faults of this book, are, needless to say, entirely my own.

1

Introduction

When and where did the environmental movement begin? Stepping back from the limitations of national history, this book examines the question of environmental origins on a global scale. In the late nineteenth and early twentieth century the most sweeping environmental initiatives emerged under the auspices of British imperialism. As the following study will show, hard-headed environmentalists and legislators found in empire forestry a ready-made model to persuade the public that the reservation of vast areas of the public domain would serve settlers, industrial development, governmental revenue, *and* environmental purposes. Empire forestry resolved the tension between romantic preservationist notions and *laissez-faire* policies. This book traces the international trail of environmentalism from India, under Lord Dalhousie's Forest Charter, to the British colonies in Africa and Australasia where it matured and, finally, to Canada, the United States, and other parts of the globe where environmentalism permanently entered the pantheon of political creeds.

By the First World War a large area of forested land around the globe lay in the public trust, managed by a professional cadre of government foresters. In the British colonies alone the crown had environmentally protected a land mass equal to ten times the size of Great Britain. Concurrently in the United States, after transferring 1 billion acres of public land into private hands in the early and mid 1800s (approximately one-half of the land mass of the continental United States) a change suddenly occurred. Congress authorized the president to set aside forest lands by proclamation and began America's process of environmental protection that would lead eventually to setting aside 15 percent of its land mass for various forms of protection and public use.

By 1928 British foresters managed environmentally every major forest type in the world. By 1936 the British Empire included a quarter of the land surface of the world, and of this, forests constituted one fourth. Fifty separate forest services protected not only trees but also soil, water, and – so foresters believed – the climate of entire continents and regions. Empire forestry triumphantly claimed credit for this achievement and served as an example for much of the reserved

forest areas outside the British colonies. Out of a total empire of 9,737,660 square miles, Whitehall approved 2,465,530 miles as classified governmental forests, approximately 25 percent of British possessions and 8 percent of the land surface of the world.¹ Add to this the protected areas of the Republic of China and the United States, which consciously mimicked empire forestry, the figure rose to over 10 percent of the land area of the planet. Only the Neolithic and industrial revolutions compared to the impact of this third global revolution in land use.²

Imperial forestry experts promoted the very modern-sounding proposition that deforestation led to devastating changes in climate.³ Forests in India, Australia, New Zealand, Canada, and the far-flung colonial empire in Africa, Latin America, and the West Indies constituted a global environmental laboratory with innovative strategies and new management techniques, watched attentively throughout the world. In India the forest department regulated a timber industry that employed over 5 million people, managing tropical rain forests, mangrove trees, tropical deciduous trees, dessert scrub, temperate broad-leaved woods, various conifer species, and European-like forests that grew on the foothills of the Himalayas. Burma in 1928 had fully one-half of its total area under forest canopy and profitably managed.⁴

In Canada the forest industry employed 244,000 people, the forests stretching in a great emerald belt from the seaboard of Quebec to the islands of British Columbia. In this colossal domain, Douglas fir led the volume of trees, followed by cedar and hemlock. South of Georgian Bay to eastern Quebec lay great reserves of maples, oaks, and hickories.⁵ In Australia, though forests covered only 3.3 percent of the land area, empire foresters saved broad-leaved eucalyptus woods composed of several hundred species. In New Zealand the government preserved the kauri forests for soil, water, and climate protection, taxing the proceeds of timber sales to pay for the program. The government supplemented natural forests with commercial plantations, including indigenous conifers. In 1935 the New Zealand forest service managed over 12,000 square miles of state forests and valued a variety of ecological concerns equally with commercial timber extraction.⁶

In South Africa, with a small forested area of less than 4 percent of the land mass, the forest department reforested thousands of square miles with broad-leaved evergreens. In Southern Rhodesia the forest department governed 88,000 square miles of forest, much of it in private hands, and managed 6,000 squares miles of national parks, game reserves, and protected forests. In the colonial empire of the

¹ D. Brandis, and A. Smythies ed., *Report of the Proceedings of the Forest Conference held at Simla, October 1875* (Calcutta, 1876), 48. Opinion differed on whether forests affected the climate of whole continents or were a local effect only. Dietrich Brandis, Inspector General of Forests in India, took the latter view. Roy Robinson, "Forestry in the British Empire," *Journal of the Royal Society of Arts* 84 (1936): 795, 796.

² Robinson, "Forestry," 779. Harold Perkin, *The Third Revolution: Professional Elites in the Modern World* (London and New York, 1996), 2–4.

³ Robinson, "Forestry," 779. ⁴ *ibid.*, 781. ⁵ *ibid.*, 782. ⁶ *ibid.*, 785–789.



1 Reserved teak forest in Burma. Empire foresters discovered that to preserve teak they had to preserve the whole “household of nature,” including hundreds of other plant and tree species. 1914.

West Indies, West Africa, Kenya, and Ceylon, the Colonial Office administered vast areas. Mahogany, greenheart, pencil cedar, satinwood, and ebony supplied a thriving timber business, while gum trees in British Honduras, jelutong in Malaya, and cacao in the Gold Coast all required the maintenance of stable forest conditions for soil, stream flow, and humidity.⁷ All this the imperial administrators managed at a profit by designing a “demonstrated use” area for industry and agriculture.⁸ By 1928 fifty separate forest departments served the empire, with 1,500 officers, native junior officers in the tens of thousands, and 1,200,000 square miles of revenue-producing forests.⁹

Empire forestry here refers to forestry as practiced in the British colonies and, retrospectively, to forestry practiced from the inception of colonial conservation in 1855.¹⁰ The term *empire forestry* developed at the apogee of British colonial forestry, and originated with the first British Empire forestry conference, which met on July 7, 1920 at the Guildhall, London. The forest services of India and Canada

⁷ *ibid.*, 789–793.

⁸ Demonstrated use areas included access by the indigenous population for grazing and firewood.

⁹ Robinson, “Forestry,” 779.

¹⁰ See the opening remarks of the Lord Mayor of London and Lord Lovat, *The British Empire Forestry Conference* (London, 1921), 1, 2.

initiated the meeting, requesting the British government to sponsor an all-empire forestry conference with delegates from all the forest services of the colonies (concurrent with the empire timber exhibition of 1920) to exchange ideas, coordinate policies, and collectively take stock of low timber supplies after the First World War. From this meeting, held once every four years, grew the Empire Forestry Association, the Imperial Forestry Institute, and the *Empire Forestry Journal*.

But how exactly, in an age of *laissez-faire*, did empire forestry arise? With an official policy of settlement and development, how did such vast areas of land come to be protected? What shift of attitude or belief divorced public opinion from *laissez-faire*? Why did the public embrace governmental intervention and environmentalism? How did public ownership of land come to be celebrated, with a new and barely defined professional corps of government foresters such as Dietrich Brandis and Gifford Pinchot feted as popular heroes?

Among scholars, environmental history has a historiographical canon largely rooted in the American scene. Why? Because environmental history, as distinct from the practice of conservation, essentially arose in the United States. From Frederick Jackson Turner's 1893 *Significance of the Frontier in American History* to Walter Prescott Webb's *The Great Plains* in 1931, and to James Malin's *The Grassland of North America* in 1947, a fascination for epic history of a peculiarly geographical nature developed, one that featured the dichotomy of a civilized people (Americans) invading pristine nature (the West), that pitted nascent consumer culture against raw and unexploited wilderness or, in the case of William Cronon's *Nature's Metropolis*, that pitted belching factories and towering skyscrapers over and against the good red earth, dominating, seducing and defining the Great West.¹¹

Environmental scholars have also written an environmental history that was, as Donald Worster says, "born out of moral purpose." It drove the production of scholarship in the field.¹² Since the 1960s certain scholars insisted that environmental history, like a fugitive, was radical and subversive, riding on the horse of the Romantic movement, leaping to the new mount of literary nature-writing and then landing at last on the progressive saddle of Theodore Roosevelt.¹³

¹¹ Frederick Jackson Turner, "The Significance of the Frontier in American History," *Annual Report of the American Historical Association for 1893* (Washington, DC, 1894); W. Webb, *The Great Plains* (Boston, 1931); J. C. Malin, *The Grassland of North America: Prolegomena to its History* (Gloucester, MA, 1947). For an interesting analysis of the historiography of environmental history in the United States, see Michael Williams, "The Relations of Environmental History and Historical Geography," *Journal of Historical Geography* 20 (1994): 3–21. See also R. White, "American Environmental History: the Development of a New Historical Field," *Pacific Historical Review* 54 (1985): 297–335. William Cronon, *Nature's Metropolis: Chicago and the Great West* (New York, 1991).

¹² Donald Worster, *The Ends of Earth: Perspectives on Modern Environmental History* (New York, 1988), 290.

¹³ Samuel Hays, *Conservation and the Gospel of Efficiency: the Progressive Conservation Movement 1890–1920* (New York, 1959); Richard Nash, *Wilderness and the American Mind* (New Haven, 1967). For a review of conservation literature see L. Rakestraw, "Conservation Historiography: an Assessment," *Pacific Historical Review* 41 (1972).