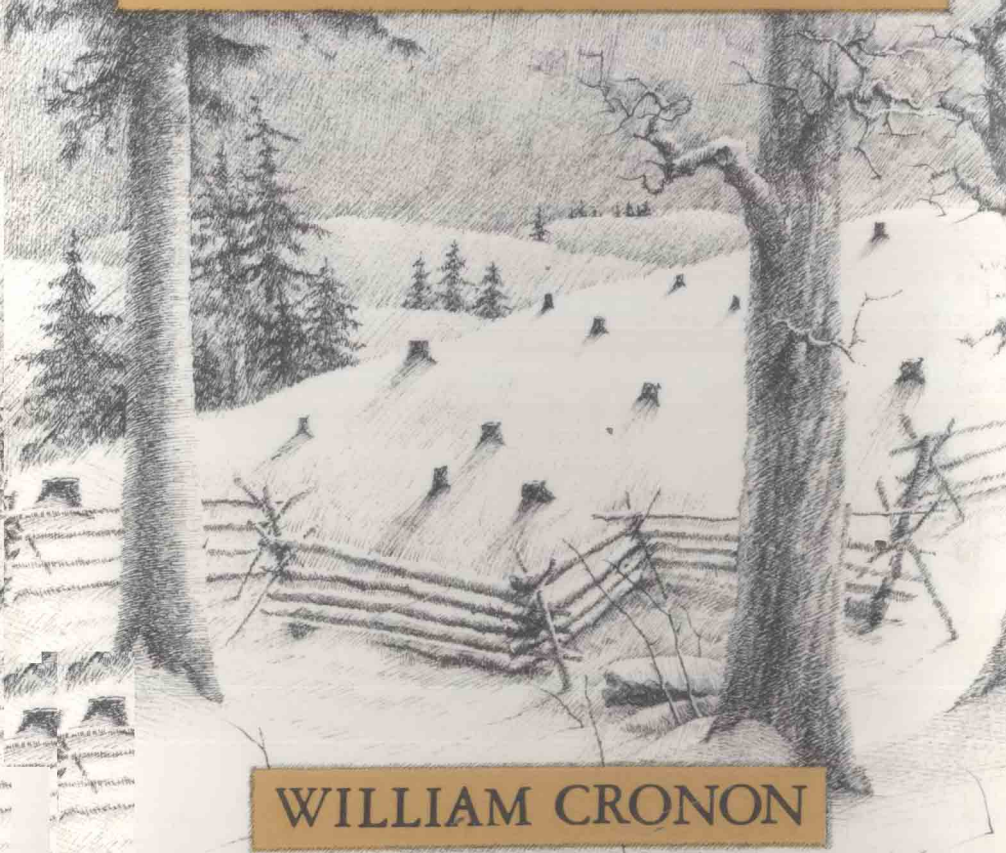


CHANGES IN THE LAND

Indians, Colonists, and the
Ecology of New England



WILLIAM CRONON

CHANGES *IN THE* LAND

*Indians, Colonists, and the
Ecology of New England*

WILLIAM CRONON



HILL AND WANG

A division of Farrar, Straus & Giroux

NEW YORK

Copyright © 1983 by William Cronon

ALL RIGHTS RESERVED

Distributed in Canada by Douglas & McIntyre Ltd.

Printed in the United States of America

Designed by Tere LoPrete

27 29 31 33 34 32 30 28 26

Library of Congress Cataloging-in-Publication Data

Cronon, William.

Changes in the land.

Bibliography: p.

Includes index.

1. Man—Influence on nature—New England—History.

2. New England—History—Colonial period, ca. 1600–
1775. I. Title.

GF504.N45C76 1983 974'.02 83-7899

For Nan

PREFACE

I have tried in this book to write an ecological history of colonial New England. By this I mean a history which extends its boundaries beyond human institutions—economies, class and gender systems, political organizations, cultural rituals—to the natural ecosystems which provide the context for those institutions. Different peoples choose different ways of interacting with their surrounding environments, and their choices ramify through not only the human community but the larger ecosystem as well. Writing a history of such relationships inevitably brings to center stage a cast of nonhuman characters which usually occupy the margins of historical analysis if they are present in it at all. Much of this book is devoted to evaluating the changing circumstances of such things as pine trees, pigs, beavers, soils, fields of corn, forest watersheds, and other elements of the New England landscape. My thesis is simple: the shift from Indian to European dominance in New England entailed important changes—well known to historians—in the ways these peoples organized their lives, but it also involved fundamental reorganizations—less well known to historians—in the region's plant and animal communities. To the cultural consequences of the European invasion—what historians sometimes call “the frontier process”—we must add the ecological ones as well. All were connected by complex relationships which require the tools of an ecologist as well as those of a historian to be properly understood.

The great strength of ecological analysis in writing history is its ability to uncover processes and long-term changes which might otherwise remain invisible. It is especially helpful in evaluating, as I do here, historical changes in modes of production: in one sense, economy in such an approach becomes a sub-

set of ecology. I have accordingly structured my argument to take best advantage of this analytical strength. I open by contrasting the precolonial ecosystems of New England with those that existed at the beginning of the nineteenth century. I then compare the ecological relationships of precolonial Indian communities with those of the arriving Europeans, especially in terms of how the respective groups conceived of owning property (and so bounding ecosystems). Having framed the argument with these sets of contrasts, I spend the rest of the book describing the processes of ecological change that followed the Europeans' arrival.

My purpose throughout is to explain why New England habitats changed as they did during the colonial period. It is *not* my intention to rewrite the human history of the region: this is not a history of New England Indians, or of Indian-colonial relations, or of the transformation of English colonists from Puritans to Yankees. Indeed, the reader should be careful not to draw the wrong conclusions about these subjects on the basis of my text. Although I attribute much of the changing ecology of New England to the colonists' more exclusive sense of property and their involvement in a capitalist economy—both present to some extent from the 1620s onward—I do not mean to suggest that the nature of the colonial economy underwent no fundamental alterations between 1620 and 1800. It of course did, and some of those alterations, by accentuating tendencies already present, accelerated the processes of ecological change.

Equally importantly, the reader must be very clear that the Indians were no more static than the colonists in their activities and organization. When I describe precolonial Indian ways of life, I intend no suggestion that these were somehow "purer" or more "Indian" than the ways of life Indians chose (or were forced into) following their contact with colonists. Indians did not define their "Indianness" solely in terms of ecological relationships, and many of them retained their sense of identity and their resistance to colonialism even after their effective military power and political autonomy had been destroyed. Because I seek primarily to explain ecological change, I devote relatively little attention to the political and military ways in which Europeans subjugated Indian peoples. These are by now, I hope, fairly well known in their broad outline, and I trust that the reader will

pursue further reading about them in the books I discuss in the bibliographical essay.

Although I have based my argument wherever possible on primary sources, any book of this kind must inevitably rely on the work of other scholars and other disciplines. Marshall Sahlins once described interdisciplinary research as "the process by which the unknowns of one's own subject are multiplied by the uncertainties of some other science." Like Sahlins, I think the benefits of interdisciplinary work outweigh the dangers, but I share his sense of risk. I have sometimes felt perilously unsure of myself as I have made my way through alien territory in anthropology, ecology, and colonial history. Fortunately, I have been blessed with guides who have pointed me clear of obvious errors whenever they could. Chief among these is Edmund S. Morgan, who originally suggested the subject of this book as a seminar paper I wrote for him four years ago. He was responsible for convincing me that the project was feasible in the first place, and has provided both criticism and moral support throughout its gestation. For a number of years now, Howard Lamar has been my mentor in all things pertaining to Western history, and I am grateful to him not only for his advice about this book but for his tolerance of my unplanned excursion onto the New England frontier.

This book could not have been written without the resources and community of Yale University. Aside from a brief excursion to Harvard's Widener Library and University Archives, all of my research was done at Yale. One of the delights (and sometimes irritations) of interdisciplinary work is the way it takes one to library call letters, library stack floors, and in fact entire libraries one has never visited before. In addition to my accustomed haunts in the Sterling and Beinecke Libraries, I found myself visiting Yale's Anthropology, Art and Architecture, Divinity School, Forestry, Geology, Kline Science, Law, Ornithology, Seeley Mudd, and Social Science Libraries; I am indebted to their librarians and to the institution which has assembled their collections. Particularly helpful was Joseph Miller, the Yale Forestry School Librarian, who took a strong interest in this project from the start.

Many other friends have helped out in a variety of ways. George Miles has been a firm and constructive critic of the way

I analyze the New England Indians, and although I am sure he continues to disagree with some of my interpretations, I have benefited a great deal from his suggestions. Timothy Weiskel has tried to keep me honest in my anthropological interpretations, and has been my chief guide to the literature of economic and ecological anthropology. Rebecca Bormann has been my most reliable and helpful ecologist critic. Others who have discussed the book with me and given me the benefit of their criticism include Jean-Christophe Agnew, Elizabeth Blackmar, John Blum, Lori Ginzberg, Fran Hallihan, Tom Hatley, David Jaffee, Tim Mitchell, Michael Saperstein, Robert Shell, Paula Shields, Barbara Smith, Gaddis Smith, Michael Smith, Robert Westbrook, and Robin Winks. To all, I give thanks.

Arthur Wang is perhaps the most congenial and encouraging publisher into whose hands a young historian could hope to fall, and I can only add my praise to the chorus one hears from his other authors. He and Eric Foner were model editors.

A special note of thanks goes to my friend David Scobey, who not only gave me an exhaustive critical reading of the manuscript in all its stages of completion but engaged in long hours of discussion about it in the midst of his own busy schedule. This book in many ways is a direct result of our extended conversations, and would have been much the worse without them.

Finally, my wife, Nan (not to mention our golden retriever, Kira), has been my companion on hikes and drives from New Haven to Cape Cod to Mount Washington, during which we have together learned most of what we know of the New England landscape. For these and other journeyings, I dedicate this book to her.

William Cronon
New Haven, Connecticut
January 1, 1983

The first premise of all human history is, of course, the existence of living human individuals. Thus the first fact to be established is the physical organization of these individuals and their consequent relation to the rest of nature. . . . The writing of history must always set out from these natural bases and their modification in the course of history through the action of men.

—Karl Marx and Friedrich Engels, *The German Ideology*

As we have seen, man has reacted upon organized and inorganic nature, and thereby modified, if not determined, the material structure of his earthly home.

—George Perkins Marsh, *Man and Nature*

I think, considering our age, the great toils we have undergone, the roughness of some parts of this country, and our original poverty, that we have done the most in the least time of any people on earth.

—J. Hector St. John de Crèvecoeur,
Sketches of Eighteenth-Century America

CONTENTS

PART I. LOOKING BACKWARD

- 1 The View from Walden* 3

PART II. THE ECOLOGICAL TRANSFORMATION OF COLONIAL NEW ENGLAND

- 2 Landscape and Patchwork* 19
3 Seasons of Want and Plenty 34
4 Bounding the Land 54
5 Commodities of the Hunt 82
6 Taking the Forest 108
7 A World of Fields and Fences 127

PART III. HARVESTS OF CHANGE

- 8 That Wilderness Should Turn a Mart* 159
NOTES 171
BIBLIOGRAPHICAL ESSAY 207
INDEX 237

PART I

Looking Backward

1

THE VIEW FROM WALDEN

On the morning of January 24, 1855, Henry David Thoreau sat down with his journal to consider the ways in which his Concord home had been altered by more than two centuries of European settlement. He had recently read the book *New England's Prospect*, in which the English traveler William Wood recounted his 1633 voyage to southern New England and described for English readers the landscape he had found there. Now Thoreau sought to annotate the ways in which Wood's Massachusetts was different from his own. The changes seemed sweeping indeed.¹

He began with the wild meadow grasses, which appeared, he wrote, "to have grown more rankly in those days." If Wood's descriptions were accurate, the strawberries too had been larger and more abundant "before they were so cornered up by cultivation." Some of them had been as much as two inches around, and were so numerous that one could gather half a bushel in a forenoon. Equally abundant were gooseberries, raspberries, and especially currants, which, Thoreau mused, "so many old writers speak of, but so few moderns find wild."

New England forests had been much more extensive and their

trees larger in 1633. On the coast, where Indian settlement had been greatest, the woods had presented a more open and parklike appearance to the first English settlers, without the underbrush and coppice growth so common in nineteenth-century Concord. To see such a forest nowadays, Thoreau wrote, it was necessary to make an expedition to "the sample still left in Maine." As nearly as he could tell, oaks, firs, plums, and tulip trees were all less numerous than they had been in Wood's day.

But if the forest was much reduced from its former state, most of its tree species nevertheless remained. This was more than could be said for many of its animal inhabitants. Thoreau's list of those that were now absent was stark: "bear, moose, deer, porcupines, 'the grim-fac'd Ounce, and rav'nous howling Wolf,' and beaver. Martens." Not only the mammals of the land were gone; the sea and air also seemed more empty. Bass had once been caught two or three thousand at a time. The progeny of the alewives had been "almost incredible." Neither was now present in such abundance. Of the birds, Thoreau wrote: "Eagles are probably less common; pigeons of course . . . heath cocks all gone . . . and turkeys . . . Probably more owls then, and cormorants, etc., etc., sea-fowl generally . . . and swans." To Wood's statement that one could purchase a fresh-killed swan for dinner at the price of six shillings, Thoreau could only write in wonderment, "Think of that!"

There is a certain plaintiveness in this catalog of Thoreau's, a romantic's lament for the pristine world of an earlier and now lost time. The myth of a fallen humanity in a fallen world is never far beneath the surface in Thoreau's writing, and nowhere is this more visible than in his descriptions of past landscapes. A year after his encounter with William Wood's New England of 1633, he returned to its lessons in more explicitly moral language. "When I consider," he wrote, "that the nobler animals have been exterminated here,—the cougar, panther, lynx, wolverene, wolf, bear, moose, deer, the beaver, the turkey, etc., etc.,—I cannot but feel as if I lived in a tamed, and, as it were, emasculated country." Seen in this way, a changed landscape meant a loss of wildness and virility that was ultimately spiritual in its import, a sign of declension in both nature and humanity. "Is it not," Thoreau asked, "a maimed and imperfect nature that I am conversant with?"²

It is important that we answer this question of Thoreau's carefully: how did the "nature" of New England change with the coming of the Europeans, and can we reasonably speak of its changes in terms of maiming and imperfection? There is nothing new to the observation that European settlement transformed the American landscape. Long before Thoreau, naturalists and historians alike were commenting on the process which was converting a "wilderness" into a land of European agricultural settlement. Whether they wrote of Indians, the fur trade, the forest, or the farm, colonial authors were constantly aware that fundamental alterations of the ecological fabric were taking place around them. The awareness increased as time went on. By the late eighteenth century, many individuals—Peter Kalm, Peter Whitney, Jeremy Belknap, and Timothy Dwight chief among them—were commenting extensively on these changes.

For the most part, unlike Thoreau, they did so approvingly. As early as 1653, the historian Edward Johnson could count it as one of God's providences that a "remote, rocky, barren, bushy, wild-woody wilderness" had been transformed in a generation into "a second England for fertility." In this vision, the transformation of wilderness betokened the planting of a garden, not the fall from one; any change in the New England environment was divinely ordained and wholly positive. By the end of the eighteenth century, the metaphors for environmental change had become more humanistic than providential, but were no less enthusiastic about the progress such change represented. In a passage partially anticipating Frederick Jackson Turner's frontier thesis, for instance, Benjamin Rush described a regular sequence for clearing the forest and civilizing the wilderness. "From a review [of] the three different species of settlers," he wrote, speaking of Pennsylvania, "it appears, that there are certain regular stages which mark the progress from the savage to civilized life. The first settler is nearly related to an Indian in his manners— In the second, the Indian manners are more diluted: It is in the third species of settlers only, that we behold civilization completed." Though landscape was altered by this supposed social evolution, the *human* process of development—from Indian to clearer of the forest to prosperous farmer—was the center of Rush's attention. Environmental change was of secondary interest. For Enlightenment thinkers like Rush, in each stage, the

shape of the landscape was a visible confirmation of the state of human society. Both underwent an evolutionary development from savagery to civilization.³

Whether interpreted as declension or progress, the shift from Thoreau's forest of "nobler animals" to Rush's fields and pastures of prosperous farmers signaled a genuinely transformed countryside, one whose changes were intimately bound to the human history which had taken place in its midst. The replacement of Indians by predominantly European populations in New England was as much an ecological as a cultural revolution, and the human side of that revolution cannot be fully understood until it is embedded in the ecological one. Doing so requires a history, not only of human actors, conflicts, and economies, but of ecosystems as well.

How might we construct such an ecological history? The types of evidence which can be used to evaluate ecological change before 1800 are not uniformly reliable, and some are of a sort not ordinarily used by historians. It is therefore important to reflect on how they should best be criticized and used. The descriptions of travelers and early naturalists, for instance, provide observations of what New England looked like in the early days of European settlement, and how it had changed by the end of the eighteenth century. As such, they provide the backbone of this study. But to use them properly requires that we evaluate each traveler's skills as a naturalist, something for which there is often only the evidence of his or her writings. Moreover, we can only guess at how ideological commitments such as Thoreau's or Rush's colored the ways they saw the landscape. How much did William Wood's evident wish to promote the Massachusetts Bay Colony lead him to idealize its environment? To what extent did the anonymous author of *American Husbandry* shape his critique of American agriculture to serve his purpose of preserving colonial attachments to Britain? Even if we can remove most of these ideological biases to discover what it was a traveler actually saw, we must still acknowledge that each traveler visited only a tiny fraction of the region. As Timothy Dwight once remarked, "Your travelers seize on a single person, or a solitary fact, and make them the representatives of a whole community and a general custom." We are always faced with the problem of generalizing from a *local* description to a *regional* landscape, but our under-

standing of modern ecosystems can be of great help in doing so.⁴

A second fund of data resides in various colonial town, court, and legislative records, although here the evidence of ecological change can sometimes be tantalizingly elliptical. We cannot always know with certainty whether a governmental action anticipated or reacted to a change in the environment. When a law was passed protecting trees on a town commons, for example, did this mean that a timber shortage existed? Or was the town merely responding with prudent foresight to the experience of other localities? If a shortage existed, how severe was it? Was it limited only to certain species of trees? And so on. Only by looking at the overall pattern of legal activity can we render a reasonable judgment on such questions. These problems notwithstanding, town and colony records address almost the entire range of ecological changes in colonial New England: deforestation, the keeping of livestock, conflicts between Indians and colonists over property boundaries, the extermination of predators such as wolves, and similar matters. Deeds and surveyor records can be used statistically to estimate the composition of early forests, and are usually more accurate than travelers' accounts even though subject to sampling errors.⁵

Then there are the less orthodox sorts of evidence which historians borrow from other disciplines and have less experience in criticizing. Relict stands of old-growth timber, such as the Cathedral Pines near Cornwall, Connecticut, can suggest what earlier forests may have looked like. The relict stands which exist today, however, are by no means identical to most of the forests which existed in colonial times, so that the record of earlier forests must be sought in less visible places. Ecologists have done very creative detective work in analyzing tree rings, charcoal deposits, rotting trunks, and overturned stumps to determine the history of several New England woodlands. The fossil pollen in pond and bog sediments is a reliable but fuzzy indicator of the changing species composition of surrounding vegetation; despite problems in determining the absolute age of such pollen, it supplies some of the most reliable evidence for reconstructing past forests. In addition, a wide variety of archaeological evidence can be used to assess past environments, particularly the changing relations of human inhabitants to them.⁶