

and failures of conservation efforts in Canada and the United States in comparison to those of other nations. In particular, the book would have been stronger if it had addressed such issues as the biological and ecological impacts of reindeer herding peoples on regions where caribou have been domesticated by these groups.

Another problem with the book involves Section 4, which contains several research articles written by caribou biologists. Unlike earlier sections of the book, where native people whose cultures are dependent on caribou to varying degrees provide useful regional perspectives on the importance of caribou conservation to their communities, the section containing the research articles is often redundant. These articles provide interesting details on particular caribou herds, but they do not contribute significantly to the main thesis of the book.

Despite its minor flaws, *Caribou and the North* will be useful for anyone interested in caribou, whether in their biology and ecology, the sustainability of ecosystems where they live, or their importance for wider environmental, economic, and social issues. The authors have created an authoritative volume on the animal, its significance to northern ecology, and human impacts and reliance on it. Moreover, rather than simply decrying the fate of caribou and humankind's hand in their destruction, Hummel and Ray have included an entire chapter that outlines plans, policy suggestions, and responsibilities for various groups and institutions, both public and private, that if implemented would improve the fate of caribou in the north.

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Canada and Arctic North America: An Environmental History.
By Graeme Wynn. Santa Barbara, CA, Denver, CO, and Oxford,
England: ABC-CLIO, 2007. xxi + 503 pp. Illustrations, maps, glossary,
bibliography, index.

Canada and Arctic North America: An Environmental History is the eighth installment in ABC-CLIO's regionally-focused Nature and Human Societies series. Series editor Mark Stoll recruited Graeme Wynn, an historical geographer, to write a synthetic treatment of what is one of the largest landmasses on earth. Wynn's work succeeds in demonstrating the impacts on the environment of human activities across northern North America over the past one thousand years. While the text fails to meet

some of its own goals in terms of content and presentation, it remains an important and exciting contribution to the burgeoning field of Canadian environmental history.

Wynn organizes his work into six parts, which span the historical record from “Deep Time” (Part I) to the present day. Part II, “Contact and its Consequences,” builds on Swiss historian Urs Bitterli’s tripartite classification of “contact” to explore the myriad exchanges, collisions, and relationships among natives and newcomers in North America—and their diffuse consequences for cultures and landscapes. Over the course of the next three sections, Wynn launches into the heart of his narrative, which considers the multi-scalar effects of energy regimes on Canadian and Alaskan ecologies and economies. “Settlers in a Wooden World” (Part III) focuses on human relationships with wind, water, and wood (in step with Lewis Mumford’s characterization of the “Eotechnic” era), while “Nature Subdued” (Part IV) documents the shift to coal, mineral, and iron use. “Nature Transformed” (Part V) closes out this extended treatment of energy by foregrounding hydroelectricity and oil development. Part VI offers “Reflections on the Remaking of Northern North America,” Wynn’s summation of the major actors in the drama of North American environmental history and his reasons to hope for a better future.

Following Harold Innis, Wynn creates narrative consistency in these parts by tracing the flow of commercial staples—furs, timber, fish and farm products—in chapters distributed regularly throughout the book. A history of the rural-urban relationship in Canada constitutes a final thread in the text. Other chapters (“Northern Visions,” “Fields of Exertion”) are only loosely tied to the overall thematic structure, while the author’s own reflections on the process of writing the book serve as bookends. Finally, Wynn attaches a timeline, a bibliography, and an “Important People, Events, and Concepts” appendix to serve as quick-use source materials.

Though some reviewers have claimed the book lacks an overarching thesis, the intensity of Wynn’s writing in Parts II, III, and IV leaves a lasting impression. Here, Wynn establishes a significant claim: resource development connects Canadian and Alaskan people and places across time and space. In Wynn’s estimation, natural resource exploitation has shaped the contours of human and physical environments for better and (more often than not) for worse. Wynn reinforces these basic claims near the end of the book, where he concludes, “the main drivers of the story of environmental change unfolded in these pages are trade...and technology (in its broadest sense), rather than the swirl of ideas that conceived of nature ...” (373). Since the work of Lewis Mumford and, to a lesser extent

environmental historian John McNeill, provides such critical scaffolding for Wynn's analysis, the author might have discussed his analytical debt to these scholars in more detail.

Early reviews of *Canada and Arctic North America* honed in on Wynn's choice of content. Some critics commented on his mere gestures toward conservation history, wishing he had included a fuller and more direct treatment of the subject. Other reviewers noted that any work of such wide scope is bound to attract both criticism and praise. Wynn himself anticipated many of these concerns in his preface and two closing chapters, where he describes the obstacles and opportunities inherent in writing an environmental history of northern North America. For him, the "boundless" political, economic, cultural, and environmental spaces of Canada and Alaska ensure that any history of them is incomplete, a view that may serve as launching pad for discussions among scholars about the very project of environmental history.

To move beyond discussion of the ways that Wynn could have written this book, one may measure the author's success against the objectives he set out for himself: to offer a user-friendly text; to present a contextualized account of the formation of places in Canada and Alaska; to show nature's resilience and dynamism; and to pursue an open and interdisciplinary approach in his research and writing. These four goals serve as points of departure for the remainder of this review.

Though critiques of accessibility are not common in scholarly reviews, *Canada and Arctic North America* invites this kind of scrutiny because it is intended as a teaching resource. Indeed, previous reviews have unanimously agreed that Wynn's book will fill a significant gap in instructional materials for courses on northern environmental history. Yet Wynn's use of titles, appendices, tables, and images will disappoint many students and teachers. His nomenclature for the various parts and chapters of the book give only indirect clues to the chronology of the story he tells. A more structured, consistent, and straightforward system with time-specific labels for parts and chapter titles would have been more helpful. In addition, the sub-chapter breaks that Wynn employs—a row of asterisks—do not provide smooth transitions between chapter sections. This becomes problematic as Wynn moves between spatial, temporal, and thematic modes of analysis without giving appropriate signals to the reader. Furthermore, while a timeline and glossary are included in the book, they are not integrated with the main part of the text. As other reviewers have noted, the form and layout of these appendices make them more confusing than complementary.

Especially since some sections of the book are intended as “flip-to” guides on particular themes, Wynn could have consolidated the statistical information he offers in these sections into tables or graphs. This is especially true for the data he provides on changing market prices and legislation pertaining to particular resources, such as agricultural products (195–6), cod and seal fisheries (222–3), and oil (295–6). Wynn relies heavily on the *Historical Atlas of Canada* for maps and charts—but only refers to each figure once and thus does not make full use of them. In some cases, images in the book present a misleading story of change when compared with Wynn’s written evaluation (for example, his figures on administrative units on page 164 and on aboriginal peoples in New France on page 31). In other cases, images are absent where they might have helped to clarify a complicated storyline. For instance, a visual representation of vegetation in deep-time Canada or the movement of the Thule across northern North America would have been helpful.

With respect to Wynn’s pledge to provide contextualized accounts of regional environmental change, the author gracefully employs a series of detailed, nuanced, and place-based vignettes. Tucked into various chapters are revealing case studies of the Huron confederation (“Trade and the Huron”); William Cooper (introduction to Part III); the rise of the suburb (“New Urbanism”); the dairy and potato industries (“Countrysides in Transition” and “Rapacious Harvests II”); the Klondike Gold Rush (“Rushing North”); and the militarization of the North (“Corridors of Modernization” and “Northern Visions”). These micro-level investigations allow for an understanding of the processes of economic and environmental change in a given landscape at a given moment. In order to return to the big picture and the broader patterns of environmental history, Wynn concludes several of the six parts of the book with a summary that highlights key events, figures, and themes, and which draws connections between local changes and regional developments over time. The parts of the book where these summaries appear are better equipped to illustrate the complexity and cohesiveness of environmental history than the parts that rely solely on fine-scale analyses (NB: parts II, IV, and V do not have summaries).

In the end, Wynn’s choice to narrate a history of the material impacts of human activities in the North undermines his goal of portraying nature as resilient and dynamic. The author chronicles the environmental effects of extractive industries, rather than examining the *relationship* between people and the places they inhabit. He generally starts each chapter by profiling an extractive industry and closes it by accounting for the ways

this industry affected the local and regional landscape. This approach does little to capture the ways in which changed environments themselves altered human life or to highlight the dialogic character of ecologies of extraction. Wynn's admission at the end of the book that nature remains present despite the human history of development thus gives the reader a sense that nature is resilient and dynamic by default, not by any tested definition. Moreover, the author rarely transcends descriptions of commodities to investigate the species, life cycles, and habitats in which these objects are embedded. The sections on forests and forestry may be the exception that proves this rule.

Its shortcomings aside, Wynn's book hits one of its targets by providing a model of scholarly openness and interdisciplinarity. The author routinely cites colleagues from a variety of fields and employs a diverse set of disciplinary resources in bolstering his claims. The interdisciplinarity of the book is perhaps most evident in the chapter entitled "First Peoples, Faunal Extinctions," in which Wynn draws upon sources of evidence used in many fields of research, including linguistics, geology, and microbiology, and, rather than proclaiming any one of these approaches superior to the others, highlights the struggle between competing types of data and the uncertainties inherent in environmental history research. Through this discussion, the reader is given an appreciation for the complex forms of evidentiary analysis that underpin the study of history.

Canada and Arctic North America is a personal investment by an esteemed scholar and a useful model for the practice of environmental history. Wynn's successes and failures in meeting his own goals represent the challenges and choices of researching, writing about, and presenting complicated relationships between humans and nature. Wynn's text embodies critical and reflexive scholarship, successfully addresses complex issues of scale, explores compelling and sometimes conflicting evidence from several disciplines, and makes visible and comprehensible some of the more thorny problems in North American environmental history. While the packaging of this rich material and the portrayal of "resilient" nature could have been better, the motivated reader will find this an enlightening and enlivening book.

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