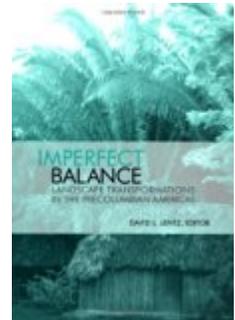


David L. Lentz, ed.. *Imperfect Balance: Landscape Transformations in the Precolumbian Americas*. The Historical Ecology Series. New York: Columbia University Press, 2000. x + 547 pg \$65.00, cloth, ISBN 978-0-231-11157-7.



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Published on H-Environment (September, 2001)

Life and Landscapes in the Precolumbian Americas

In teaching courses on Environmental History of America, Native American history, and Latin American history, the first points I make (assuming that most students know little of Precolumbian life) is that the "New World" was neither a "Virgin Land" when Columbus and his gang arrived nor a landscape that had gone without significant environmental change since human settlement began. Indigenous peoples had been remaking their environment, sometimes in dramatic fashion, for thousands of years. To present this history of the Americas in its various contexts, I have looked for resources that could help make my case more compelling. *Imperfect Balance* offers a perfect balance of accessible writing and scholarly approaches to understanding the Western Hemisphere's incredibly diverse landscapes, the human forces that shaped them, and the impact of this interaction on sustained human settlement. An underlying goal of the volume, expressed by a number of its contributors, is to address this Virgin Land myth, or the "myth of the

pristine environment" to use geographer William Denevan's phrase. As David Lentz writes in the introduction, "Somehow through the veil of ethnic hubris, Western scholars have resisted providing an accurate appraisal of the effect of indigenous cultural development on the American biota" (p. 1). In addition to lifting this "veil of ethnic hubris" and thus reinforcing the idea that human agency mattered in the Precolumbian world, the authors also consider recent arguments portraying the impact of this agency as destructive. Overall they succeed quite nicely in achieving a scholarly balance between these polar conceptions of Precolumbian environments.

Edited by Lentz, who directs the graduate studies program at The New York Botanical Garden, *Imperfect Balance* is the result of work by a diverse set of nineteen scholars, four of whom are specialists connected to The New York Botanical Garden. Writing from the disciplinary perspectives of Anthropology, Geochemistry, Aquatic Sciences, Geography, Archeology, Systematic Botany and Biology, the authors collectively advocate the "new ecology," which emphasizes, according to

Denevan, "the instability of the biophysical environment and the dynamic flux that characterizes human interactions with their surroundings" (p. xviii). The volume features, among others, case studies on climatic change, a typology of pre-human vegetation, Precolumbian practices of water and timber resource management, and agricultural practices in the Mississippi River Valley, as well as more wide-ranging and theoretical investigations; there are four case studies examining North American environments (including the Sonoran Desert), three on the Andes, three on other South American locales, five on Central America and Mexico (including two on the Maya), and three which cross these geographical designations.[1]

There are a number of recently published books on historical ecology appropriate for classroom use, including Charles Redman's *Human Impact on Ancient Environments*, *Historical Ecology: Cultural Knowledge and Changing Landscapes* edited by Carole Crumley, and *Advances in Historical Ecology* edited by William Balee, which was the first book in Columbia's *The Historical Ecology Series*. [2] Each of these books can be considered comparative and each has its strengths. Together they cover more ground in terms of space than *Imperfect Balance* and consider post-Columbian impacts. Balee's book devotes great attention to the Americas, especially to Amazonia, but it also includes chapters on Thailand and India and uses a chronology that stretches to the 1990s (it also has an intriguing chapter entitled "The Rat That Ate Louisiana"). The chronological and geographic focus of *Imperfect Balance* is both a strength and a weakness, but mostly a strength because it makes comparative study of the Precolumbian Americas more accessible. Although not particularly strong in its study of northern latitudes, the book is both comprehensive and well balanced, offering something for every scholar involved in the investigation of Precolumbian life and landscapes.

Despite the emphasis on restoring human agency to Precolumbian environments, in the end the landscapes are largely the center of study rather than the people associated with them. In "studying the complex interplay between cultural and environmental processes" (p. 191), I would have liked a better balance and perhaps more attention paid to the historical context; to scholars invested in the study of the Maya and other peoples of the hemisphere, the historical context is a given, but to generalists it will not be. This is in some ways captious criticism because the volume is designed to offer a multi-dimensional and multi-disciplinary perspective and not to follow a single pattern for exploring complex human impacts on the land.

Two essays on Precolumbian agriculture, by anthropologists Clark Erickson and Gayle Fritz, were especially interesting to this reviewer. In considering human transformation of the environment in the Lake Titicaca Basin of present-day Bolivia and Peru, Erickson takes on the "myth of the pristine environment" by examining the "Precolumbian structures of everyday life (fields, pathways, walls, canals and other features of the built environment and landscape)" (p. 349). His focus is the "smallholders" of the area, who altered the land with "small-scale intensive" agricultural techniques and whose "built environment represents the landscape capital of hundreds of generations of farmers and herders and reflects a rich indigenous knowledge system" (p. 314). Fritz examines Native American agriculture in the Mississippi River Valley, a much-visited site of investigation. Her article (and others) consider an important dimension of Precolumbian life, the extensive agriculture that so amazed Spanish explorers traveling through the Americas. Most students are surprised to know that indigenous peoples were not just hunters and gatherers but accomplished farmers. Fritz's essay will help convince them of this fact while giving the scholar more "food" for

thought as to the character of Precolumbian "agricultural ecosystems" (p. 240).

Although recent scientific investigations in historical ecology and archeobotany have greatly expanded the quantity of data and the quality of historical models, the conclusions reached in some areas of inquiry seem impressionistic. As Charles Peters remarks in his chapter ("Precolumbian Silviculture and Indigenous Management of Neotropical Forests"), "the lack of direct evidence" creates a "basic problem" in determining historical accuracy. And yet a look at native land use managers and the environments in which they operated "can provide convincing glimpses of what silviculture [and other ecological features] might have been like in the New World prior to Columbus" (p. 204). Chapter 1 on climate change, a particularly difficult area of inquiry in which to determine human causation, also leads to suggestive conclusions, though reasonable ones at that. Some essays, then, will be more convincing than others depending on the reader's specialty.

Besides the topical, geographical and disciplinary variety, one of the volume's strengths is the quantity and quality of the accompanying illustrations--ninety-six figures and eighteen tables. Each essay contains helpful maps, tables, drawings, or photographs. Among the most interesting tables were those listing "archeological evidence for early plant use" and "crops of the Americas, their wild progenitors, and distribution at time of contact" (in Lentz, "Anthropocentric Food Webs in the Precolumbian Americas"). Most of the data will be a welcome addition to the generalists' store of information, though some scholars may dispute the authors' characterization of Precolumbian populations (e.g. pp. 5-7, 214, 242-243).

The conclusions reached, as a whole, are balanced. The volume clearly demonstrates that the New World was "an area of incredible biodiversity" (p. 494). While this point may not surprise the reader, the evidence presented will reinforce just

how diverse biological life was. And in line with recent (and perhaps somewhat overly) critical analyses of indigenous peoples' environmental manipulations, the authors found land use practices that were both "sustainable and highly productive" as well as those that "could be viewed as destructive, and may have brought about ecological disasters" (p. 494). While such conclusions are not earth-shattering, the evidence presented in reaching them makes them more understandable and humanizes the original inhabitants of the Americas who struggled, as we do today, to find a livable balance between natural and human ecology.

Despite the academic nature of the essays, the writing is generally of such an excellent quality that generalists interested in the period and the contexts will find most of the essays accessible and understandable. Given the volume's breadth and depth, there is something here for everyone. This excellent book will make the job of teaching the historical ecology and the history of Precolumbian indigenous peoples easier and more interesting and will also provide additional evidence to put to rest any lingering thoughts of the New World as a Virgin Land. As Clark Erickson put it succinctly, "The human impact on the land before the arrival of Europeans was so profound and at such a massive scale that it could be argued few, if any, of the environments of the Americas occupied by humans past and present could be considered natural or pristine" (p. 311).

Notes

[1]. Chapters and titles are: 1. Introduction: Definitions and Conceptual Underpinnings; 2. Climate Changes in the Northern American Tropics and Subtropics since the Last Ice Age: Implications for Environment and Culture; 3. Vegetation in the Floristic Regions of North and Central America; 4. Anthropocentric Food Webs in the Precolumbian Americas; 5. Prehispanic Agricultural Systems in the Basin of Mexico; 6. Prehispanic Water Management and Agricultural Intensifi-

cation in Mexico and Venezuela: Implications for Contemporary Ecological Planning; 7. Stability and Instability in Prehispanic Maya Landscapes; 8. Precolumbian Silviculture and Indigenous Management of Neotropical Forests; 9. Native Farming Systems and Ecosystems in the Mississippi River Valley; 10. Hohokam Impacts on Sonoran Desert Environment; 11. Vegetation of the Tropical Andes; 12. The Lake Titicaca Basin: A Precolumbian Built Landscape; 13. Andean Land Use at the Cusp of History; 14. Lowland Vegetation of Tropical South America--An Overview; 15. The Lower Amazon: A Dynamic Human Habitat.

[2]. Charles Redman, *Human Impact on Ancient Environments* (Tucson: University of Arizona Press, 1999); Carole Crumley, ed., *Historical Ecology: Cultural Knowledge and Changing Landscapes*; William Balee, ed., *Advances in Historical Ecology* (New York: Columbia University Press, 1998).

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Citation: Paul C. Rosier. Review of Lentz, David L., ed. *Imperfect Balance: Landscape Transformations in the Precolumbian Americas*. H-Environment, H-Net Reviews. September, 2001.

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