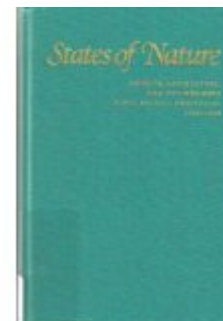


**Stuart McCook.** *States of Nature: Science, Agriculture, and Environment in the Spanish Caribbean, 1760-1940.* Austin: University of Texas Press, 2000. xiv + 201 pp. \$50.00, cloth, ISBN 978-0-292-75256-6.



**Reviewed by** Daniela Bleichmar

**Published on** H-LatAm (December, 2003)

## Nature, Profitable and Patriotic

The purpose of this book, states its very first sentence, is to analyze the ways in which the process of nation-building in Latin America transformed the relations between the state, the economy, and nature. Its success consists in being able to flesh out this ambitious statement through the careful analysis of a range of concrete and rich examples. Examining an impressive number of case studies that expand over almost two hundred years, take place in Venezuela, Costa Rica, Cuba, Puerto Rico, and Colombia, and involve cacao, sugar cane, and coffee, McCook manages to create a vivid and complex picture of a region where the successful management of export crops promised to transform former colonial possessions into functional and lucrative independent nations. In opening the black-box of "Nature"--that is, not taking the meaning of the term for granted but breaking it apart for examination, in that way understanding "Nature as an analytical category: as a variable that requires explanation rather than as a constant that does not" (p. 4)-- McCook applies one of the central methodological tools of the

history of science to the study of the Latin American environment, agricultural practices, and scientific research, producing an interdisciplinary study that offers much to scholars in various disciplines.

One of the book's virtues is to maintain a wide scope without losing focus, detail, or the exploration of a larger point beyond the specific historical anecdotes. By following the trajectories of people, plants, and pathogens as they move across nations, McCook shows the ways in which these five Spanish-speaking Caribbean countries faced similar, often related, problems. The range and comparative approach of the book are intrinsic to the phenomena studied. For example, the Swiss botanist Henri Pittier, protagonist of the book's second chapter, produced two surveys of Costa Rican flora (*Primitiae Florae Costaricensis*, 1891-1901, and *Ensayo sobre las plantas usuales de Costa Rica*, 1908) before being hired by the Venezuelan government to compose a comparable work for their country (*Manual de las plantas usuales de Venezuela*, 1926). The methods and projects were remarkably similar: to produce in-

ventories of a nation's plants that served the twin purposes of making political and cultural claims to a patriotic nature and of promoting the economic potential of these national natures to internal and external investors. So, while Latin American research communities developed in ways that differed significantly from those of Europe and North America, they were quite closely related to one another in terms of personnel, projects, crops, and problems--most notably, deforestation, soil erosion, and epidemic diseases.

The book begins with a survey of the relationship between science, nature, and government between 1760 and 1890. McCook examines the ways in which nature provided patriotic societies and new independent institutions with symbols for their nations, and later brought together governments, scientists, and agricultural elites in search of economic development through agriculture. This chapter has enormous value as a thorough and historiographically refined survey of the relationships between nation and nature in Latin America over 150 years, and teachers will find it a rich resource for introducing students to this topic. Since this survey functions as an introduction to the larger issues that will be discussed in the book, it must by necessity gloss over much of the detail. However, the fact that the wars of independence occupy a single paragraph might alarm some readers. Through this minimal treatment of the subject, McCook moves away from the historiographical magnet that is 1810, implying that--for this topic at least--the date and all that comes with it are not the focus of interest. This approach suggests that the central issue in the study of Latin American nature was not liberty but profit. This is an interesting proposition, and one that merits more attention. The historian Emma Spary, for instance, has studied the ways in which the French Revolution transformed the institutions and practices of botany in France, and the survival and reform of the political, social, and cultural attributes of pre- and post-revolutionary nature.[1] A mention of the comparable situation in Latin America,

of questions of disruption and permanence in scientific institutions and practices, would greatly interest historians of the eighteenth and early-nineteenth centuries. By contrast, historians of the late-nineteenth and twentieth centuries will be pleased to have this longer history of the relationships between nature, nation, and profit.

With this introduction providing the setting, the book moves on to the case studies that provide the meat of the argument. The first case study analyzes the relationships between scientific plant surveys and nation-building through an examination of the national floral surveys of Costa Rica and Venezuela produced by Henri Pittier at the turn of the nineteenth century. In a discussion that reminds us of the impact that Benedict Anderson's work has had, McCook argues that the representation of the natural world through plant surveys constituted a political and cultural act: by identifying, locating, naming, and describing the plants growing in a territory, scientists helped to construct a patriotic landscape that was uniquely linked to the inhabitants of the new nation.[2]

The second case study explores questions of the cross-cultural transfer of scientific knowledge, the directionality of imperial relationships, and the development of a "Creole" science--unquestionably timely topics in the current literature, as well as a meeting point for the history of science and the history of colonialism.[3] By examining the introduction of agricultural research centers in Cuba and Puerto Rico during the first three decades of the twentieth century, McCook emphasizes how the transfer of knowledge involved its transformation: Caribbean scientists selectively appropriated aspects of these U.S.-developed institutions in order to address the specific problems of tropical agriculture. In this way, McCook argues, foreign models, ideologies, and practices were transformed to produce a distinctively Latin American science that was truly "Creole"--both in the English meaning of the term "Creole" (hybrid) and the Spanish "criollo" (of local origin). This

careful analysis of knowledge transfer provokes many interesting questions on the local specificity of scientific practices. What is the difference, for instance, between "Creole" and "local" science? And how do concepts such as "Creole" help us understand what was and was not local to a science practiced in Latin America by scientists who were more often than not from Europe or the U.S., and almost exclusively trained there, regardless of country of origin?

Many readers will be particularly interested in McCook's discussion of the ecological rationalization of the Caribbean sugar industry, from the discovery of a new Tahitian cane variety in 1780 through the sugar boom of the nineteenth century to the management of epidemic diseases in the 1920s. When in the nineteenth century this profitable crop became plagued by threatening problems--among them varietal decline and epidemic diseases that were increasingly global in scope--worried planters and governments funded scientific research that promised to find solutions critical to the economic well-being of the Caribbean. Comparable research was carried out by European countries in their colonial possessions throughout the Caribbean, Asia, and the Pacific. Disaster hit the Puerto Rican and Cuban sugar industries in the late 1910s and 1920s with the mosaic epidemic, an infectious viral disease similar to that affecting tobacco. Researchers, among them the Puerto Rican agronomist Carlos Chardon, moved quickly to identify the causes for the epidemic and brought it to an end through the introduction of resistant breeds. Their work saved the Caribbean sugar cane industry--and was arguably the first major agricultural crisis in Latin America solved through original scientific research. As a result, Puerto Rico's total sugar production grew from roughly 346,000 tons in 1915 to 773,000 tons in 1935. By contrast, in those same years epidemic diseases wiped out the Ecuadorian cacao industry and the Brazilian rubber industry, resulting in significant economic and social changes. This case study allows McCook to prove

the enormous impact of agricultural industries in local environments, scientific careers and lines of research, and social structures. It also exemplifies the rich new perspectives offered by environmental history to study of Latin America.

The last case study addresses the growth of technocratic ideologies of science and progress in Latin America during the 1920s. The success of Puerto Rican researchers in combating the sugar cane epidemic served as an example of how scientists, governments, and planters could collaborate to obtain results profitable to all. This led to an interest in reforming agricultural training and research institutions to make their work more "practical." By examining Carlos Chardon's involvement in reforming several institutions in Puerto Rico and Colombia, McCook shows how governments, planters, and scientists often disagreed on exactly what "practical" meant. Despite these conflicts, however, Chardon remained optimistic about the potential of technocracy to transform the economies of Latin American countries. In his view, extraction agriculture was not operating to full capacity, but this was due to political and administrative--not agricultural--problems. In an attitude that now seems almost quaintly optimistic, Chardon trusted that bureaucratic and political wrinkles would soon be smoothed away by the power of technocracy: science would triumph. As the last chapter of the book explains, the Great Depression of the 1930s and the end of a global market for natural exports shattered these hopeful dreams for economic and political development through the scientific exploitation of nature.

*States of Nature* provides a strong argument for the interrelation of science in nation-building and nation in science-building. As Caribbean countries established their identities as independent nations, they also defined relationships to their environment, the role that science and scientists would have in the modern state, and the kind of science that would be practiced there. Scientists, government officials, and agricultural

elites were engaged in uneasy relationships marked by both necessity and disagreement over who had the authority to decide agrarian problems and how best to resolve them. This study represents a welcome contribution to the history of colonial science and to the history of Latin America, two fields at an early stage of a collaboration that promises to be fruitful. While excellent studies of nature, nation, and empire within the English context have been produced, until now such an analysis for Latin America was sorely missing.[4] Historians of Latin America will undoubtedly be interested in a study that adds so much to so many of the discussions that interest the discipline; the question is whether historians of science will express similar interest in a region that remains largely peripheral to the field. Feedback across the disciplines has been uneven. This book was written by drawing in equal measures from both fields: from the history of science, it brings an interest in institutions, practices, methodologies, and knowledge transfer, and from the history of Latin America, attention to issues of nation-building, development, and economic and social booms and crises. Part of the book's value, then, lies in its ability to demonstrate how much these two fields stand to gain as they move beyond sharing common interests to introducing new questions that belong equally to both.

#### Notes

[1]. Emma Spary, *Utopia's Garden: French Natural History from Old Regime to Revolution* (Chicago and London: University of Chicago Press, 2000).

[2]. Benedict Anderson, *Imagined Communities: Reflections on the Origin and Spread of Nationalism*, rev. ed. (New York: Verso, 1994).

[3]. See, among others, Jorge Ca=izares-Esquerro, *How to Write the History of the New World: Histories, Epistemologies, and Identities in the Eighteenth-Century Atlantic World* (Stanford: Stanford University Press, 2001); Gilbert M. Joseph, Catherine C. LeGrand, and Ricardo D. Sal-

vatore, eds., *Close Encounters of Empire: Writing the Cultural History of U.S.-Latin American Relations* (Durham: Duke University Press, 1998); and Roy Macleod, ed., *Osiris* 15, "Colonialism and Science" (2000).

[4]. See Richard Drayton, *Nature's Government: Science, Imperial Britain, and the "Improvement" of the World* (New Haven and London: Yale University Press, 2000), and Richard Grove, *Green Imperialism: Colonial Expansion, Tropical Island Edens, and the Origins of Environmentalism, 1500-1860* (Cambridge and New York: Cambridge University Press, 1995).

If there is additional discussion of this review, you may access it through the network, at  
<https://networks.h-net.org/h-latam>

**Citation:** Daniela Bleichmar. Review of McCook, Stuart. *States of Nature: Science, Agriculture, and Environment in the Spanish Caribbean, 1760-1940*. H-LatAm, H-Net Reviews. December, 2003.

**URL:** <https://www.h-net.org/reviews/showrev.php?id=8557>



This work is licensed under a Creative Commons Attribution-Noncommercial-No Derivative Works 3.0 United States License.