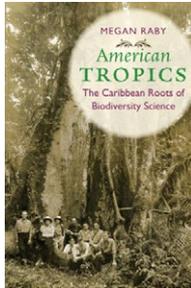


The Context of Tropical Biology



AMERICAN TROPICS: THE CARIBBEAN ROOTS OF BIODIVERSITY SCIENCE

Megan Raby

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Most of those engaged in understanding, conserving, protecting, and fighting for tropical environments, their peoples, and their biodiversity would agree that biodiversity is of intrinsic value, is a global resource, and that its protection, conservation, and management is a global responsibility (Wilson 1988). But these selfsame individuals might be completely nonplussed to learn that the presence of U.S. biologists studying and working in the tropics during the 20th century grew 'largely through connections to U.S. corporations, government agencies, and the military.... [and that] tropical biologists' most important stations were located in colonies or neocolonies that garnered special U.S. military and economic protection' (*American Tropics*, p. 205). In *American Tropics*, Megan Raby artfully weaves these two themes together, exploring the myriad motivations that have led biologists to do research or live full-time at tropical field stations in the 'circum-Caribbean' (which in *American Tropics* includes the Florida Keys, Caribbean Islands, Central America, Colombia, Venezuela, and Guyana), while at the same time contributing to, or at least taking advantage of, 'imperial networks of infrastructure and patronage' (p. 15).

Looking back from our 21st-century post-colonial vantage point, it is likely that few recall that Chiquita Brands International evolved from the United Fruit Company (a.k.a. *el pulpo*), whose 'banana republics' included portions of Costa Rica, Cuba, Guatemala, and Honduras and which supported individual research and operations

at field stations including Barro Colorado Island (BCI); that when the United States constructed the Panama Canal in the Republic of Panamá, the latter was a *de facto* protectorate of the United States, which had complete sovereignty of all aspects of life in the Canal Zone; or that female researchers from the United States or host-country scientists were for the most part *personae non gratae* at virtually all field stations throughout the circum-Caribbean. Yet it is difficult to argue with Raby's observations that the (mostly male) tropical biologists of the time, working within their available local, social, institutional, and geopolitical contexts were unaffected by them or, at times, took advantage of the status provided by being members of privileged classes or countries. *American Tropics* provides an excellent overview of the historical and sociopolitical milieu in which modern tropical biology originated and came of age.

Doing field research, whether in the tropics, the temperate zone, or the polar regions, depends on access to field sites, and getting that access involves obtaining informal permission or formal permits from tribal custodians, titled landowners, NGOs, or governmental agencies. In the Caribbean, as elsewhere in the global South, accessing field sites in the 19th and 20th centuries—and living to write up the research thereafter—often meant negotiating with the aforementioned 'imperial networks' of multinational corporations, colonial governments, or military occupiers. Field research also is not free, and researchers follow the money, either couching the outcomes of 'basic' research in terms of their potential benefits to humankind ('broader impacts') or take on 'applied' research contracts that enable us to ask fundamental questions using systems of interest to the funders (e.g., predator-prey interactions in coffee plantations). Although some of us would find fault in taking funding from the U.S. Department of Defense, I suspect that fewer would balk at a grant from Chiquita or an operator of a resort aimed at the ecotourist market. Raby's discussions of the founding and history of 17 Caribbean field stations, either defunct (e.g., the New York Zoological Society's Kalacoon [1916–1917] and Kartabo [1918–1926] Tropical Research Stations in British Guiana), transformed from foreign to local control (Harvard's Botanical Station for Tropical Research and Sugarcane Investigation [1899–1961], now Cuba's Jardín Botánico de Cienfuegos), or still active (the various field stations operated by the Smithsonian Tropical Research Institute and the Organization for Tropical Studies) illustrate clearly how ease of access and demands by funders and society at large for immediate uses of tropical resources determined where field stations would be established and how they operated. These discussions are rich in

detail and enlivened by the personality facets and quirks of many of the protagonists (e.g., William Beebe, Thomas Barbour, James Zetek, and Howard Odum, among many others). For its historical and sociopolitical contextualization of research in the Caribbean, *American Tropics* is a must-read.

But there is another theme running through the book that readers may find somewhat more difficult to accept. Raby asserts that 'U.S. scientists never simply went "to the tropics"; they worked at specific Caribbean localities that they framed as tropical' (p. 17). What does 'framed as tropical' mean? Here, Raby adopts the notion that tropical field stations provided landscapes that 'could meet U.S. visitors' *expectations and epistemological needs* for natural conditions in the tropics' (p. 105; emphasis added). These include the tropics of the 19th-century imagination (an exotic 'earthly paradise or green hell...[filled with] attractions and dangers, unbounded abundance and riotous growth, disease and decay'; p. 5) that justified its colonization and exploitation by Europeans and North Americans. While recognizing that tropical biologists are driven by a diverse range of motivations, ranging from pure curiosity to concerns about conservation and resource use, Raby unites the work of tropical biologists and the field of tropical biology through its demarcation by outsiders (p. 5). From this standpoint, 'tropical biology' is set in opposition to (or comparison with) biological investigations in the temperate zone.

By extension, tropical biology is the domain of temperate-zone researchers whose 'outsider's perspective left its mark on the kinds of questions' they asked (p. 5), and who excluded researchers from the tropical countries themselves. Although Raby goes on to say that '[tropical] biologists' views cannot be reduced to such tropes' (p. 8), the importance for tropical biology (redefined as 'biology in the tropics') that '*the tropics* [has] complex, contested cultural meanings' (p. 5, emphasis in the original) is a provocative leitmotif of *American Tropics* that enriches its historical analysis.

In sum, *American Tropics* is a thought-provoking study of how U.S.-based scientists and the social, cultural, economic, and political contexts in which they lived and worked created the field of tropical biology with its contemporary emphasis on biodiversity. Raby reminds us of the implicit and explicit biases that color our day-to-day work. Recognizing and acknowledging these biases is the first step toward working through and beyond them to create a more inclusive biology—one that involves researchers from around the world in all of its geographic regions.

REFERENCE

- Wilson, E. O. (Ed.). 1988. *Biodiversity*, pp. 538. National Academies Press, Washington, DC.