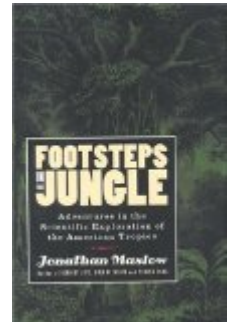


Jonathan Maslow. *Footsteps in the Jungle: Adventures in the Scientific Exploration of the American Tropics.* Chicago, Ill.: Ivan R. Dee Publisher, 1996. 308 pp. \$27.50, cloth, ISBN 978-1-56663-137-2.



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Published on H-LatAm (February, 1997)

Historians are beginning to explore the environmental history of Latin America. As they do so, they will need to pay more attention to the writings of the naturalists, past and present, who have studied the region. Scientific travel narratives, monographs, and papers all reveal changing landscapes and changing attitudes toward nature. Naturalists were uniquely well placed and well equipped to understand and analyze the changes they saw.

Although poor in many other respects, tropical Latin America contains a wealth of scientific treasures. The mythical city of El Dorado was never found, but the jungles, rivers, and mountainsides of Latin America have revealed a treasure-trove for scientists. Getting at this wealth, however, has been a challenge. *Footsteps in the Jungle* tells the story of "thirteen of the luckiest men and women of all time: the explorers who first mapped the tropical regions of the Americas and discovered the glorious biological orgy that is nature in the tropics" (p. 3).

Maslow is a journalist and naturalist who has travelled extensively in South America. In earlier

works, he has sensitively shown how the work of naturalists can provide insights into some of Latin America's most pressing political, economic, and ecological problems. He aptly describes his earlier book, *Bird of Life, Bird of Death*, as a work of "political ornithology," where he connects the declining Quetzal populations with some of the worst political changes there.

In *Footsteps in the Jungle*, Maslow recounts the lives of thirteen famous and not-so-famous explorers of the American Tropics. Alexander von Humboldt and Charles Darwin are the best-known figures. Charles Waterton, Thomas Belt, Archie Carr, Alexander Skutch, and Daniel Janzen are more likely only known to students of the region, or to other scientists. These scientists, argues Maslow, "forged a new way of meeting the unknown" (p. 7). Beginning with Humboldt, the jungle became the object of travel, rather than simply an obstacle to it. Jungles "have become part of humanity's patrimony, an important symbol of the planetary unity in the long twilight struggle to preserve a healthy global environment" (p. 8). His method in these mini-biographies is to "tag along

into the field, following the explorers on their voyages and expeditions, offering a companion guide to their discoveries and a context to their imaginative quests" (p. 8).

Humboldt, Darwin, and Wallace, not only gave us some of the early comprehensive inventories of tropical Latin America, but also were theorists of global importance. Humboldt and Aime Bonpland explored much of upper South America between 1799 and 1804. They brought with them trunks full of the latest scientific instruments, and used them to make measurements of unparalleled precision. They amassed huge collections of plants and animals for classification and analysis. On behalf of the King of Spain, they wrote reports on the economic history of New Spain and Cuba. Humboldt's success inspired many of the travellers who followed him to the New World, including the young Charles Darwin. Darwin's travels through Brazil, Argentina, Patagonia, and the Galapagos in the 1830s gave him insights that were a direct inspiration for the *Origin of Species*. Maslow argues that "Although the ideas originated in Europe, it was South America that was the crucible of Darwin's theory" (p. 86). Alfred Russel Wallace, the co-discoverer of natural selection, also had experience in the neo-tropics. Wallace was an Englishman from a working-class background, who financed his passion for natural history collecting by selling parts of his collection. In the late 1840s, he made his first major collecting expedition up the Amazon with Henry Walter Bates. His experiences in South America and later in Asia led him independently to formulate a theory of evolution by natural selection.

Other naturalists, such as Charles Waterton, Henry Walter Bates, Thomas Belt, and William Henry Hudson, were less interested in grand theory. Instead, they devoted themselves to the study of specific places. Waterton was a British eccentric, whose explorations of British Guyana in the early nineteenth century sometimes smacked of the fantastic. He was widely ridiculed in England

for his claim that he had ridden on the back of a ferocious cayman. Maslow tells us that Waterton "was [also] an outstanding field naturalist... [who] could enter into the minds of animals and fathom their intentions and understand their adaptations from excellent firsthand knowledge of their actual behavior" (p. 47). William Henry Hudson was born in Argentina of British parents, and grew up with an almost animistic relationship with the pampa. In the 1870s he moved to England where, after a number of years, he emerged as a prominent ornithologist and writer. Indeed, he is probably better remembered today for his fiction than he is for his natural studies. His novel *Green Mansions* typifies the romantic view of tropical nature. In contrast to the eccentric Waterton and the romantic Hudson, Henry Walter Bates and Thomas Belt were more sober naturalists and collectors. Bates collected alongside Wallace in the Amazon. Belt, an engineer, surveyed parts of Nicaragua between 1868 and 1872, leaving a detailed study of Nicaragua's nature and society.

Two chapters deal with people who were not, strictly speaking, naturalists. One describes the archaeologists and explorers John Lloyd Stephens and Frederick Catherwood, and the other the painter and explorer Margaret Mee. Stephens was an American archaeologist, and his travelling companion Catherwood was an English architect and artist. In the 1830s, they travelled to the Yucatan Peninsula and to Guatemala to study Maya ruins. Catherwood's exquisitely detailed drawings and Stephens' narrative (*Incidents of Travel in Central America, Chiapas, and Yucatan*), "returned the Maya to history" (p. 156). Margaret Mee was a British expatriate living in Brazil. Beginning in 1956, she made fifteen expeditions to Amazonia to paint the flora of the Amazon. Her paintings and her writings have captured the beauty and diversity of the Amazonian flora, and lament the gradual destruction of the rainforest.

The most powerful biographies in this collection deal with the naturalists of the twentieth cen-

tury, such as William Beebe, Alexander Skutch, Archie Carr, and Daniel Janzen. These men are as much environmentalists as they are naturalists, and they have done great work in drawing attention to ecological crises in the region. William Beebe was one of the early explorers of the under-sea world of coral reefs in the Caribbean. In the first half of this century, he did much to promote popular understanding of tropical nature through a series of books. Maslow describes Archie Carr as "one of the founders of conservation biology." Carr was particularly interested in the migration patterns of sea turtles in the Caribbean. In the 1950s, he began a project of tagging turtles in order to understand what happened during the "lost year" after the turtle hatchlings returned to the sea. Later in life, Carr also began to dedicate himself to the preservation of the turtles' habitat, which was being increasingly threatened by pollution, hunters, and fishermen. Alexander Skutch is an ornithologist who lives and works in the remote cordillera of southern Costa Rica. He has done detailed studies of bird behavior and nesting patterns. Daniel Janzen, a naturalist at the University of Pennsylvania, has for the past thirty years been doing a detailed study of the ecosystems of the Guanacaste peninsula in Costa Rica. His science goes one step farther than that of his predecessors. He seeks to rebuild ecosystems that have been destroyed, to speed up the process of natural regrowth. Conservation in this case no longer simply consists of preservation, but also of reconstruction.

Footsteps in the Jungle does not seek to be a scholarly history of the exploration of the tropics in the New World. Maslow hopes that "such field science as the tropical explorers practiced on the hoof rouses the reader's imaginative juices and kindles dreaming--especially that romantic enthusiasm for tropical adventures that readers can embark upon first by proxy, perhaps later in reality" (p. 8). This romantic vision of field science pervades the book. Of Henry Walter Bates, Maslow writes that "the true collector is ... also operating

under the impulse of obsession. The urge to amass an ever greater number, or a complete set, of some objects can take a powerful hold of the human soul" (p. 113). He discusses in some detail the animism of W. H. Hudson, Beebe's reflections on the organic world as "an inexhaustible source of spiritual and esthetic delight" (p. 178), and Alexander Skutch's analysis of the ways in which humans and animals relate to one another.

Parallel to Maslow's promotion of a romantic vision of science and nature is a lament for the destruction of that same nature. For example: "The rich tropical ecosystems Humboldt first recognized are being wantonly destroyed to profit cattle, timber, and other extractive industries" (p. 31). As the book comes to deal with more recent figures, this lament become more prominent both for Maslow and for the naturalists he writes about. The destruction of the remaining pieces of wilderness are of central concern to Beebe, Carr, Mee, Skutch, and Janzen. In describing Janzen's projects, Maslow also reveals his own project: "Janzen has learned that you cannot salvage tropical rainforests only for scientific and commercial reasons. You must sensitize people of the North *and* South to the great living classrooms of nature. You must tell natural history stories that add meaning to their lives" (p. 284). The stories that Maslow tells here pursue that same goal.

Footsteps in the Jungle makes a passionate and ultimately successful case for why we should be interested in preventing the further destruction of tropical nature, but it is less successful as a work of history. It lacks the usual scholarly apparatus of footnotes, although since Maslow relies almost exclusively on the original narratives, most passages should not be too difficult to track down.

A more serious problem, even for a book that does not pretend to be a scholarly work, is Maslow's portrayal of the historical development of the sciences in the New World. In insisting that "Only Humboldt had no one to influence him: he

was the true discoverer of America" (p. 7), Maslow perpetuates a kind of black legend about science in colonial Latin America. Maslow argues that during the two and a half centuries after the arrival of Columbus, the Spaniards and Portuguese made no efforts to study nature in the new world systematically. This is not even approximately true. By 1569, Monardes had published a natural history of the medicinal plants of the New World. Francisco Hernandez undertook botanical explorations of Mexico between 1571 and 1577. In the late sixteenth century Oviedo and Acosta published their natural histories of the New World.

Even when the Spanish colonial government ceased publishing accounts of the botany of the New World, on the ground that they were state secrets, collecting continued. Early in the eighteenth century, Joseph de Jussieu collected in the Andes and the Amazon basin as part of La Condamine expedition to Peru. Charles III sponsored major scientific exploring expeditions to the Peru, New Granada, and New Spain in the late eighteenth century. These expeditions trained some of Latin America's most prominent scientists of the late eighteenth century, most famously Jose Celestino Mutis (1732-1808). Humboldt himself recognized the value of scientific research in Latin America, and depended on it heavily. Unfortunately, Latin America's burgeoning scientific community was largely destroyed during the wars of independence in the early nineteenth century. Only in the twentieth century has Latin America's research community begun to grow significantly once again. The Spaniards, Portuguese, and Latin Americans studied nature much more systematically and scientifically than Maslow admits.

Maslow's criteria for selecting the subjects of his biographies are also unclear. Apart from Humboldt, all of Maslow's subjects are either British or American. This selection hides the central importance of German explorers and naturalists in opening the neotropics to science, particularly before the First World War. The Schomburgk brothers

left valuable accounts of their travels in British Guyana, which have since been translated into English. French explorers also played an important role. Auguste Saint-Hilaire's several accounts of his travels and researches in Brazil have much valuable biological and ecological information. Even some prominent American naturalists are missing from his story. Most significant is Marston Bates, who lived for many years in Colombia, and whose *Where Winter Never Comes: A Study of Man and Nature in the Tropics* explores the issues that are at the very heart of Maslow's project.

Footsteps in the Jungle succeeds admirably in its stated purpose of awakening interest in the study of the tropics. It is less successful as a history of the scientific exploration of the tropics. The strongest biographies in this collection are those that deal with post-World War Two naturalists, whose interests most closely parallel Maslow's own. Historians who are interested in pursuing the history of the environmental sciences in Latin America topic further should consult some of the excellent historical literature on this subject, listed below. For historians, Maslow's most important and original contribution is to stress the importance of field scientists as central to our understanding of the profound environmental changes taking place in Latin America, both past and present. As historians begin to write the environmental history of Latin America, they will have to rely heavily on the works of these scientists.

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Citation: Stuart McCook. Review of Maslow, Jonathan. *Footsteps in the Jungle: Adventures in the Scientific Exploration of the American Tropics*. H-LatAm, H-Net Reviews. February, 1997.

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