

Book Reviews

INTREPID EXPLORER

Henry Walter Bates

Naturalist of the Amazons. By George Woodcock. Pp. 269+8 plates. (Faber: London, April 1969.) 35s.

HENRY WALTER BATES was one of the great explorer naturalists of Victorian England whose evidence—Bates's—especially on mimicry in insects—opened up the whole science of biology. From having been a static taxonomy emphasizing "rarities", biology was proved to be the study of dynamic, continuing and coherent process. In *The Descent of Man*, Darwin freely used the mass of data that Bates collected in South America as supporting evidence for his general theory, and considered Bates's book *The Naturalist on the River Amazons* as second only to Humboldt's. His account of eleven years among rivers and rain forests had all the attraction of a travel book which is not only about adventures and perils, but has scientific purpose.

Bates and his now less neglected companion Alfred Russel Wallace had been, like Darwin, fired by reading Lyell on geology, Malthus on population, and a third and more dubious work, that strange anonymous production, *Vestiges of Creation*; also by what he and Wallace had gathered by collecting in England and from lectures at Mechanics Institutes. The two young men set out for Brazil with less than two hundred pounds between them and, unlike Darwin or Huxley who voyaged officially on HMSs *Beagle* or *Scorpion*, without official backing. They had a little unofficial encouragement from the remarkable brothers, Stevens, who were "natural history auctioneers". The Stevenses assured Bates and Wallace that they might hope to get, at auction, threepence each for all "nicely preserved and set rarities" either botanical or zoological, the bidding coming from museums or private collectors. How the stay-at-home Stevenses, year after year, managed the two explorers' shaky financial affairs and befriended them, is in itself a fascinating story.

The explorers' own hope was that, as they collected, light might be thrown on what Wallace especially felt to be the grand question; the question of the sources of the intricate and overwhelming variety of living forms. For, as exploration was extended, observant and curious minds were becoming increasingly and even uneasily aware of the need for a better hypothesis than "special creation".

It was certainly high time that the agreeable and intrepid Bates should have a biographer. Mr Woodcock, himself a traveller, using a good deal of hitherto unpublished material, gives his readers a memorable account of Bates's year on the great river and its huge tributaries—"the Amazons" as Bates always called them. He tells of Bates's meticulous observations of insects, of his collection of eight thousand species "then new to science" and of how, with a caution almost equal to Darwin's early hesitations, Bates did not venture to call the insect

mimicry that he observed and recorded "evidence of adaptation". He also shows Bates as a remarkable social mixer, able, like his butterflies, to adapt. He could get on with Portuguese planters, white explorers, and with the wildest and shyest Indian tribes from the forests.

Woodcock disentangles the intricacies of the great river systems, and also of dates, times and motives, sometimes made deliberately obscure by Victorian reticence. (In the course of this disentangling he takes me to task.) The intellectually more impulsive Wallace and the more cautious Bates parted company and took up with other companions, and neither of them in their respective narratives chooses to be explicit as to the when or why.

This is one of those books which the reader may well wish had been a little longer. While the travels and hardships are given plenty of space, the whole story of Bates's return to England, his friendship with Darwin, his reaction to such men as Lyell, Huxley and Hooker, and to the famous upheavals that followed the publication of *The Origin of Species* are only outlined. Nor is much made of his renewed friendship with Wallace or of what must have been Bates's remarkable contacts when, for twenty-seven years, he was one of the secretaries of the Royal Geographical Society. Woodcock tantalizingly tells his readers hardly more than that Bates "played a leading part in organizing a number of notable expeditions" including those of Burton, Speke and Prince Kropotkin or the one sent out to discover what had become of Livingstone—that very different explorer. Wallace had also applied for the job of undersecretary and, in writing a life of Wallace, I caught a glimpse of many curious and controversial sides to exploration at a time when, as Woodcock all too briefly says "The society was a kind of unofficial extension of the Foreign and Colonial Offices, preparing often the way of Empire".

We catch no sight either of that notable and curious character, Bates's chief, Sir Roderick Murcheson, the Highland Laird, after whom that awkward geographical feature the Murcheson Cataracts on the Shire River were not inappropriately named. We are given entertaining gossip about Portuguese planters, but not enough about their equally singular and more important British contemporaries. Yet to wish a book longer is to praise it.

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SOCIOLOGIST AND BOTANIST

Leonhard Rauwolf

Sixteenth-century Physician, Botanist, and Traveller. By Karl H. Dannenfeldt. Pp. viii+321. (Harvard University Press: Cambridge, Mass.; Oxford University Press: London, April 1969.) 76s.

WHAT is the justification for writing a 300 page book on a botanist who does not even figure in Sachs's *History of Botany*? Professor Dannenfeldt's reasons have more to do with social history than with botany. As an expert on the renaissance, Dannenfeldt has used Rauwolf's intimate account of his travels in the Near East from 1573-75 supported by the writings of other travellers to describe the trade, customs and beliefs of the peoples of those lands. The custom of drinking coffee, of taking a Turkish bath, the dangers of body snatching, the belief in unicorns and griffins and a host of other facets of social history are reported. The book contains a competent compilation of data from a wide range of published material.

Rauwolf's claim to a place in the history of botany rests on the fruits of his journeys. Sir Hans Sloane was sufficiently impressed by the Bavarian physician's *Aigentliche beschreibung der Raisz . . .* (1582) to arrange for an English translation to be made under the editorship of John Ray. This work reached a wider audience when published in Ray's *Travels* in 1738. Rauwolf brought