

8. *Notes of a Botanist on the Amazon and Andes, being records of travel on the Amazon and its tributaries; as also to the cataracts of the Orinoco, along the eastern side of the Andes of Peru and Ecuador, and the shores of the Pacific, during the years 1849-1864*; by RICHARD SPRUCE, Ph.D. Edited and condensed by ALFRED RUSSEL WALLACE, O.M., F.R.S., with a biographical introduction, portrait, seventy-one illustrations, and seven maps. In two volumes. London, 1908 (Macmillan & Co).— This treatise is exceptional in many respects. It is the record of botanical exploration about half a century ago, which is almost as fresh and important as if it was made during the last year. Furthermore, it is full of physiographical and ethnological memoranda of extraordinary interest, edited by a thoroughly sympathetic friend and fellow-naturalist. Everybody knows the range of the journeys made by Wallace in South America, and is familiar with the hardships attending them. Spruce not only passed over a great deal of territory which was practically like that investigated by Wallace, but he was in the equatorial belt at the very time when Wallace was there and knew of his serious illness.

Spruce is best known for his copious contributions to our knowledge of the Bryophytes. Beginning their study during his life in Yorkshire, he carried on explorations in the Pyrenees, where he discovered mosses and liverworts in places which had been thought to contain none, and afterwards he collected extensively in South America. With scarcely any means, and with only enfeebled health, he managed, by dint of an iron will, to carry his work on in a manner which has always commanded respect.

He has been most fortunate in his editor. No one could have condensed the voluminous notes more skillfully, or connected them with more instructive remarks than Mr. Wallace.

Our readers will enjoy in the perusal of this absorbingly interesting volume the proofs of Spruce's sagacity which led him to interpret many structural features in the Tropics as indicative of a certain drifting of specific characters, vaguely pointing towards descent through variation. After Spruce's return to England, he became an ardent Darwinian, going so far as to state unequivocally

cally that "if we had all the forms now in existence, and that have ever existed, of such genera as *Rubus*, *Asplenium*, *Bryum*, and *Plagiochila*, we should be unable to define a single species—the attempt to do so would only be trying to separate what Nature never put asunder—but we should see distinctly how certain peculiarities had originated and become temporarily fixed by inheritance; and we could trace the unbroken pedigree of every form."

G. L. G.