

more observations on this point. The hawk-moths mentioned by one correspondent are scarcely sufficiently common to serve as the usual pollinating agencies, and the dipterous insect (apparently a *Volucella*) arrived in too fragmentary a condition for identification. The *Bombi* certainly visit these flowers, but the vague "bee" used in the book under review would certainly lead to confusion with the true honey-bee, which is not known to visit *primulas*. I may add that in the Manchester Museum there is a series of insects taken by Prof. Weiss on the primrose. No moths are included amongst them.

THE REVIEWER.

#### An Optical Phenomenon.

Is your correspondent "V. P." (*NATURE*, June 3, p. 398) perfectly sure that there is not in the glass pane in question one of those flattened oval air bubbles so common in window glass, which he may have overlooked? The phenomenon of the dark disc of shadow with the bright edge so exactly corresponds with the effect produced by these common flaws in glass that, in spite of his assurances, I cannot help suspecting that he may have misjudged the angle of incidence of the sun's rays. A window is before me as I write which presents identically the same phenomenon, and I was nearly being misled

#### SPRUCE'S TRAVELS IN SOUTH AMERICA.<sup>1</sup>

DR. ALFRED RUSSEL WALLACE has rendered a great service to the scientific world, not only in having consented to rescue from oblivion the account of Spruce's remarkable travels, but also by the admirable way in which he has edited the manuscripts placed in his charge. Spruce's journal, which forms the substance of these volumes of about 1040 pages, has been carefully edited and considerably condensed. Passages of no particular interest have been omitted, and short summaries by the editor take their place. Several letters to Sir William Hooker, Mr. Bentham, and personal friends have been inserted which carry on the narrative and give a more life-like impression of Spruce himself.

These letters, which are keenly alive and full of human interest, form some of the most interesting portions of the book. Those to Mr. Bentham show the ardent botanist fired with enthusiasm for his work, whilst those to his friend Mr. Teesdale reflect the character of the man himself, and give a vivid picture of the every-day occurrences and of the perils which he experienced.

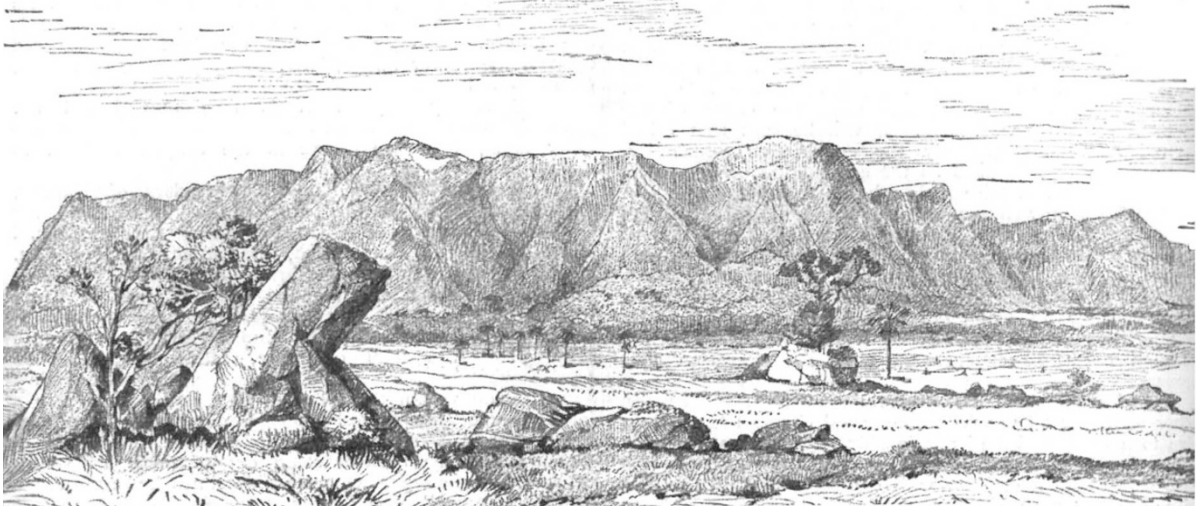


FIG. 1.—Cerro Duida (8000 feet), from the Cross near the Village of Esmeralda. Looking north. (R. Spruce, December, 1853.) From "Notes of a Botanist on the Amazon and Andes," vol. i.

until, with a pencil point laid on the pane, I tracked the shadow to its source, which was much higher up on the window than I should have judged.

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#### Dew-Ponds.

IN the recent correspondence on this subject several rival theories have been put forward to account for the supposed fact that certain ponds situated on the tops of hills have a plentiful supply of water. It seems to me that no satisfactory solution of the question can be expected until much more definite data are at hand.

What is wanted is a detailed, contoured survey of a typical "dew-pond" with its drainage area, and a year's observations of the height of water in it, an estimate of the number of cattle using it, rainfall and hygrometric observations in the neighbourhood, and a section showing the construction of the bed of the pond and adjoining slopes. If someone interested in the question and resident in the neighbourhood of one of these ponds would undertake the work, it would be of far more value than twice the labour spent in founding theories on insufficient data.

Wirksworth, June 12.

L. GIBBS.

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At times the reader is inclined to complain of an occasional want of continuity and of abrupt changes of subject, but such blemishes are not common, and, owing to the necessity for condensation, could perhaps hardly have been avoided.

The first volume, covering the period from July, 1849, to January, 1855, deals with Spruce's travels on the Amazon and Rio Negro, including a journey along the Casiquari and to the Orinoco cataracts.

The second volume opens with the account of the voyage from Manaos to Tarapoto, and continues his travels in the eastern Andes of Peru from that place, his excursions in Ecuador and in the Cinchona forests, and his last years on the western side of South America. There are also botanical and historical notes, which conclude with a highly exciting story of a hidden treasure of the Incas. The period spent in South America covered by this volume is from March, 1855, to April, 1864.

<sup>1</sup> "Notes of a Botanist on the Amazon and Andes." By Richard Spruce. Edited and condensed by Dr. Alfred Russel Wallace, O.M., F.R.S., with a Biographical Introduction, Portrait, 77 illustrations and 7 maps. 2 vols. Vol. I, pp. li+518; vol. II, pp. xii+542. With a Glossary of Native Names and Index. (London: Macmillan and Co., Ltd., 1908.) Price 21s. net.