

on the radiation hypothesis is the thermionic effect, consisting in the emission of electrons due to the temperature of the material itself, and consequently due to the radiation density of all wave-lengths characteristic of the temperature of the material. The analogue of photo-chemical change is the photo-electric effect, in which electrons are emitted from a material owing to exposure of the surface to radiation from an external source at a relatively high temperature and usually of relatively short wave-length.

The reviewer has carefully compared the new edition with that of 1919 and finds that not only has the size of the volume been doubled but many desirable alterations and corrections have also been made. There are some points which require correction, but as the author remarks with truth, in such a rapidly changing subject it is exceedingly difficult to carry out the process of selection and condensation in a satisfactory way. Whilst the book cannot be described as a work of the very first rank, no serious student of advanced chemistry or physics can afford to overlook it. H. S. ALLEN.

### Among the Natives of East Africa.

*Beneath African Glaciers: the Humours, Tragedies, and Demands of an East African Government Station as experienced by an Official's Wife; with some Personal Views on Native Life and Customs.* By Anne Dundas. Pp. 238 + 28 plates. (London: H. F. and G. Witherby, 1924.) 12s. 6d. net.

MRS. DUNDAS, as the wife of one of the Chief Commissioners (in the Kilimanjaro district), has had special opportunities for studying native problems on the spot, and these opportunities she has used to the utmost. It is admirable the ease with which she adapts herself to novel surroundings, making the best of everything, seeing something of interest in every place and object, whether at home or on the march. This is no small achievement when one considers the multitude of discomforts which have to be contended with in the climate of equatorial Africa; yet with a mind so active and so fully occupied with all that is going on around her, she is fortunate in having little time to dwell on these matters. Her sympathy with the inhabitants, and her power of expressing, in clear and pleasant language, the results of her observations and the conclusions she has come to, add a charm which is not often found in a book of this description. Existing and prospective officials, whose fate it may be to govern primitive races, could not do better than study closely what she has to say.

It is quite refreshing to read of the unsophisticated life the natives of this country lead—apparently happy—unspoilt, as yet, by the professional agitator, who

earns his living by disturbing the "natural true contentment of spirit" in which man lives. The chapter on missionaries and their ways, and the conclusions the author comes to, are of much interest because of the important influence they are sometimes able to exert on the destinies of uncivilised people. One cannot help thinking that the author's views are sound common sense. What missionaries should do, when they begin to work among primitive races, is to devote all their energies to educating them, without trying to convert them, and without interfering with their native customs, for the latter often has the effect of undermining the authority of their chiefs through whom it is our policy to govern; any interference necessary in this direction should be left to government.

Mrs. Dundas puts all this very well, and we must leave it to her readers to see how she does it. We may say, however, that her views appear to be those of a thoughtful inquirer, even on such a delicate subject as polygamy, deserving the closest attention of all who really have the welfare of native races at heart, and we hope her writings will bear some fruit. It is not the first time missionary methods have been criticised, but we are not sure criticism has produced much effect.

Mrs. Dundas has a good deal to say about Kilimanjaro, Africa's highest mountain, in sight of which she spent so much time. Two chapters are devoted to native manners and customs, and one to "big and little game." The book is well illustrated by scenes from life in Tanganyika, but a map is badly wanted, and if the volume is ever reprinted one should certainly be added. H. L. C.

### Our Bookshelf.

*L'Isotopie et les éléments isotopes.* Par Mme. Pierre Curie. (Recueil des Conférences-Rapports de Documentation sur la Physique. Vol. 9, 2<sup>e</sup> série, Conférences 1, 2, 3. Édité par la Société *Journal de Physique*.) Pp. 210. (Paris: Les Presses universitaires de France, 1924.) 22.50 francs.

THE announcement that the first series of reports published under the auspices of the *Journal de Physique* was to be followed by a second series must have been welcomed by many physicists, to whom the task of keeping abreast of the manifold developments of the subject has become of daily increasing difficulty. The editors have been fortunate in their choice both of author and subject for this opening volume of the second series. There can be no doubt of the authority with which Mme. Curie speaks in all matters radioactive, or of her ability to marshal and expound her facts in a manner which makes them easy to grasp and assimilate. The fact that she has not been personally concerned in the more startling of the discoveries which she has to narrate is an additional advantage, as it has enabled her to exercise a critical discrimination not so