

with, a dark Iberian people, who in their turn had imposed a Mediterranean speech on the still earlier Mongoloids, Australoids, and Basques of Palæolithic Ireland" (p. 74). There is scarcely a statement in this sentence which is not open to criticism. Many remarks, too, in the chapter on "Racial Problems" are on a par with this. Sir Harry is always interesting and suggestive, and the book should be widely read in spite of the fact that some of the statements do not represent the conclusions to which most anthropological investigators have arrived. Those in authority in our own Empire and in foreign countries should read the final chapter on "The Preservation of Fauna and Flora."

*Trattato di Chimica Organica Generale e Applicata all' Industria.* By Prof. Ettore Molinari. Second edition. Pp. xxiii+1087. (Milan: Ulrico Hoepli, 1912.) Price 18 lire.

THE first edition of this work, reviewed in NATURE in 1910 (vol. lxxxiv, p. 170), was so rapidly exhausted that within two years of its publication a new edition was called for. In preparing this, not only has the old text been carefully revised, but upwards of 100 pages of new matter have been added; the principal sections which have been enlarged are those dealing with the manufacture of coal-tar, of dyes and colouring matters, and the alkaloids; the statistical information, which was so novel and useful a feature of the first edition, has been corrected to 1910, and where possible to 1911. Some interesting information (and criticism), for instance, is given under this heading of the recent operations of the *Camera Agrumaria* in Sicily in endeavouring to control prices of the raw material of the citric acid industry. There is no doubt, as proved by the rapid exhaustion of the first edition, that such a work meets a long-felt want, and we are glad to note that an English translation by Mr. T. H. Pope is shortly to be issued; a German translation is also being prepared by Prof. Siebert.

W. A. D.

*Peeps at Industries: Rubber.* By Edith A. Browne. Pp. viii+88+plates. (London: A. and C. Black, 1912.) Price 1s. 6d. net.

THIS book is intended to give the general reader a popular account of the rubber-growing industry. After a picturesque account of the discovery of the utility of rubber, he is taken successively through the regions of Brazil and Central America, and made to realise vividly the conditions under which rubber is produced in each country. The sources of the different American and African wild rubbers are described, and a graphic account of the collection of gutta-percha and balata is also given. The reader then learns how Mr. H. A. Wickham succeeded under great difficulties in transporting some Para rubber seeds from Brazil to Kew, and how these have given rise to the vast rubber plantations in the Middle East. All the processes involved in the production of raw rubber are described in non-technical language, and will be readily understood by anyone.

The book is singularly free from literary slips,

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but the phrase "Britain, England, Holland, and Germany" (p. 42) has apparently been overlooked. The twenty-four excellent illustrations add considerably to the value of the book, which is heartily recommended to anyone desiring a non-technical account of rubber production.

*Atlas typischer Spektren.* By Prof. J. M. Eder and Prof. E. Valenta. Pp. xv+143+53 plates. (Vienna: Alfred Hölder, 1911.) (Kaiserliche Akademie der Wissenschaften.) Price 90 marks.

THIS publication contains the results of the study and reduction to wave-lengths of the lines in the flame, arc, and spark spectra of many of the chemical elements. In all, thirty elements are dealt with for the flame spectrum, sixty-six for the arc spectrum, and sixty-eight for the spark spectrum. In general, the region of spectrum discussed extends from about  $\lambda$  2400 to about  $\lambda$  7000. The lists of lines given are not overburdened with the great number of extremely weak lines which occur in the spectra of some of the elements, but this exclusion of the weakest lines does not detract from the value of the work.

In addition to the text and tabular lists of wave-lengths, there are fifty-three excellent heliogravure plates of the various spectra. On these a wave-length scale is given showing every hundredth tenth-metre. The chief lines shown in the plates have the wave-length numbers placed opposite them, which makes the identification easy, and thus greatly enhances the usefulness of the publication. The wave-lengths of the lines in the lists are given to the nearest hundredth of a tenth-metre. One has no hesitation in pronouncing this to be by far the most complete and useful collection of laboratory spectra yet published, and the library of any practical chemist, physicist, or spectroscopist will be incomplete without it.

#### LETTERS TO THE EDITOR.

[The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of NATURE. No notice is taken of anonymous communications.]

#### Some Optical Experiments.

DURING some recent work I had occasion to try the following experiments, the results of which are, I trust, of sufficient interest to be recorded in your columns.

*Exp. 1.*—Take a disc of white cardboard about 36 in. diameter and draw thereon a series of black rings  $\frac{1}{2}$  in. wide and 1 in. apart, leaving a central disc (white) 2 in. diameter. Hang this on the wall of a room fitted with a central cluster of three electric lights. Each light should be on a separate switch; one light should be of 100 cp., one of 50 cp., and one of 8 cp. With all the lights on, gaze steadily at the central white disc from a distance of 3 ft. for about fifteen seconds, when an assistant should switch out the 100-cp. lamp. The whole disc will for a moment be invisible; then the central white spot only will reappear. After an interval of about ten seconds the outer white ring will reappear, followed by the others in succession towards the centre, until the whole disc is visible.