## Our Bookshelf.

- Trattato di chimica fisica. Del Prof. Harry C. Jones. Seconda edizione italiana a cura di Prof. Michele Giua. Pp. xxiii+731. (Milano: Ulrico Hoepli, 1923.) 56 lire.
- Elementi di chimica fisica. Del Prof. Arrigo Mazzucchelli. Pp. xv+504. (Roma, Torino, Napoli: Unione Tipografico-Editrice Torinese, 1923.) 50 lire nette.
- Treatise on General and Industrial Organic Chemistry. By Prof. Ettore Molinari. Second English edition, translated from the third enlarged and revised Italian edition by Thomas H. Pope. Part 2. Pp. viii+457-897. (London: J. and A. Churchill, 1923.) 30s. net.

It is unnecessary to do more than notice briefly the appearance of a second edition of the Italian translation of the "Physical Chemistry" of the late Prof. H. C. Jones, of a new work on physical chemistry in Italian by Prof. Mazzucchelli, and of a further instalment of the second edition of Mr. T. H. Pope's English translation of Dr. Molinari's "Treatise on General and Industrial Organic Chemistry."

Of these three issues, the first appearance of Prof. Mazzucchelli's book on physical chemistry is of most interest. This work follows a familiar course, dealing successively with such subjects as the kinetic theory of gases, the liquid and solid states, dilute solutions, equilibrium in binary liquid mixtures, in gases, and in electrolytes; it concludes with a series of chapters on thermochemistry, thermodynamics, and chemical kinetics. In general, the point of view is one that is familiar to English readers; but a suggestion made by Ciamician in 1890, which has not found its way into English text-books, is worthy of notice, namely, that the hydration of ions in aqueous solutions depends on the affinity of cations for oxygen and of anions for hydrogen. This is expressed by showing the "watery atmosphere " of the ions in symbols such as

$$\begin{array}{ccc} H_2 & O \\ O & H_2 \\ H_2 O & K \cdot O H_2 \\ O & H_2 \\ H_3 & O \end{array}$$

in which the molecules of water face in opposite directions in the cation and in the anion. This suggestion, although it was made over thirty years ago, is remarkably in accord with some modern views; and the formulæ set out above show definite points of resemblance to the symbols used by Werner in assigning formulæ to the complex hydrated ions of acids and bases, as, for example, when he writes caustic potash as  $\begin{bmatrix} K \\ H \end{bmatrix}$  OH, with potassium linked to oxygen, and hydrochloric acid as (ClH. OH) + H, with chlorine still linked to hydrogen in the hydrated ion.

The book is excellently printed on good paper and in large type, smaller print being used only for the bibliographies which are placed at the end of some of the chapters. It certainly does credit to Italian chemistry.

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The Fauna of British India, including Ceylon and Burma. (Published under the authority of the Secretary of State for India in Council.) Oligochæta. By Dr. J. Stephenson. Pp. xxiv+518. (London: Taylor and Francis, 1923.) 305.

UNTIL very recently, so little has been ascertained about the Oligochæta of India-and indeed about the Oligochæta generally-that Dr. Stephenson has been able to quote only 106 memoirs in his complete bibliography of this region of the East. The first of these appeared in the year 1844, but the greatly preponderant mass of the work has been completed in the last fifteen years, during which Dr. Stephenson's own contributions to the subject were published. We are now acquainted-and really very well acquaintedwith no less than 338 species exclusive of certain "varieties" which some persons might raise to the rank of species; and of these, no less than 123 received their names and adequate description at the hands of Dr. Stephenson. It is thus clear that no better person than Dr. Stephenson could have been selected by Sir Arthur Shipley to carry out efficiently this valuable contribution to the "Fauna of British India."

The present volume, which is of about the average size of others of the series, contains 518 pp., of which by far the greater part is devoted to a full statement of the specific characters of the species found within the area, with such notes as are deemed necessary upon allied forms from other regions of the earth's surface. In addition to this, however, are to be found some by no means negligible observations upon the distribution of Indian earthworms and their aquatic allies, and upon various facts concerned with habitat and seasonal variation. With reference to habitat, it is interesting to note that a large number of obvious " earthworms, *i.e.* forms with no likeness to the slender and delicate aquatic Microdrili such as the Naids, are usually or constantly inhabitants of water or very wet soil. This state of affairs is also, we may remark, not unknown in other tropical regions. Thus, of the Oligochæta of equatorial Africa, which are in the same way definitely "earthworms" as opposed to "water worms," some reside, as it would appear, habitually in marshy places. It is further to be noted that in the latter (of the family Eudrilidæ), as well as in some members of the former, the dorsal pores are absent—a character which is one of the most marked of the purely aquatic worms such as Naids already referred to.

We congratulate the editor of the series as well as the author of this volume in having determined its very satisfactory scope and composition. F. E. B.

Race Problems in the New Africa: a Study of the Relation of Bantu and Britons in those parts of Bantu Africa which are under British Control. By the Rev. Prof. W. C. Willoughby. Pp. 296. (Oxford: Clarendon Press; London: Oxford University Press, 1923.) 155. net.

THE Rev. W. C. Willoughby, a professor in the Kennedy School of Missions in Connecticut, was formerly principal of a mission institution in South Africa, where he had opportunities of studying some Bantu who had long been under European influence. His account of Bantu thought is written with the bias of the missionary,