Treatise on Physical Chemistry.

A Treatise on Physical Chemistry: a Co-operative Effort by a Group of Physical Chemists. Edited by Prof. Hugh S. Taylor. Second edition. In 2 volumes. Vol. 1. Pp. xv + 852 + 48. Vol. 2. Pp. xii + 901-1766 + 48. (London: Macmillan and Co., Ltd., 1931.) 30*s.* net each vol.

THE welcome appearance of a second edition of this two-volume treatise on physical chemistry has clearly demonstrated both the practicability and the usefulness of Prof. Taylor's somewhat novel experiment of attempting to produce a text-book by the co-operative efforts of different individuals; a practice usually reserved for dictionaries and tomes of a more encyclopædic character. Whilst the first edition was a good treatise, this second edition is better. Apart from the inclusion of new matter and the adjustment of stress on importance of what may be termed personal factors in the various chapters, the volumes, on the whole, are much more evenly balanced. We note, for example, the growth of uniformity in the treatment of the theory of solutions and of reactions taking place therein, a more minute analysis of the problems of the kinetic theory of gases, and a very desirable extension of the treatment of colloidal systems. Dr. Dushman's chapter on the quantum theory and atomic structure is really a remarkable production both for clarity and scope.

In the introduction to the first edition, Prof. Taylor states that the first volume represents that portion of the subject which can with advantage be addressed to the first-year student; the second volume presumably to those who are spending the two subsequent years in the study of chemistry. The treatise has swollen unavoidably from 1359 to 1766 pages. To those who were brought up with Ostwald, Nernst, or Sir James Walker's books on physical chemistry as texts during their years at college, these new editions, whilst representing faithfully the growth and, as some of us like to believe, the growing importance of the subject, will be welcomed and give much pleasure; but at the same time it raises in a somewhat pertinent form the important question as to what courses in college chemistry should and what such courses can do. It would be surprising if any student on graduation in chemistry could be really *au fait* with the content of these volumes. At the same time, it is doubtful if even the clear appreciation of what are somewhat vaguely termed general principles will suffice to render a man a competent scientific worker when he leaves college. Some happy combination of general principles, the working out of examples, and development of a logical and critical faculty seem to be desirable in any college course. Such are not obtainable in treatises. For example, the first-year college student in reading the first volume would receive his first introduction to the ionic theory in the heat of hydration of gaseous ions and the Donnan distribution on the two sides of a semi-permeable membrane.

For the research student, however, the two new volumes are really excellent. It is natural that with the rapid growth of particular phases of the subject even in the new volumes certain statements require revision, for example, the sections devoted to consideration of heats of adsorption of gases on active metal surfaces. Whilst a certain amount of duplication of material is unavoidable, the proof readings must have been no light undertaking and the final text is remarkably free from typographical errors. We note a few, such as 'Seminoff' for 'Semenoff' p. 1012, 'rom' for 'from' p. 1092, and 'corresponcence' for 'correspondence' p. 1172. It is to be hoped that when the third edition is called for, Prof. Taylor will continue to adopt the policy of attempting to make the book a representation of the science as it is, and not delimit it for the purpose of providing first-year college students with material for study. I suspect that this material is already too indigestible for their consumption. The printing and binding of the volumes are excellent.

ERIC K. RIDEAL.

The Complete Evolutionist.

L'Ologénèse: nouvelle théorie de l'évolution et de la distribution géographique des êtres vivants. Par Prof. Daniel Rosa. Adapté de l'italien par l'auteur. (Bibliothèque de Philosophie contemporaine.) Pp. xii + 368. (Paris: Félix Alcan, 1931.) 35 francs.

SOME time ago there was reviewed in these pages (NATURE, May 11, 1929, p. 709) a book in which Dr. George Montandon of Paris sought to explain the origin of human races by applying a theory of evolution which had been first propounded by Prof. Daniel Rosa of Modena in 1909. Dr. Montandon's advocacy has stimulated an interest in this new theory, with the result that Prof. Rosa has translated his chief work ("Ologenesi: Nuova teoria dell' evoluzione e della distribuzione geografica dei viventi." 1918) into French. The book in its French dress is much more than a translation of the original; the author has taken