

of hydrological medicine, these natural remedial agents can now be prescribed with authority and precision, and presently it will be as foolish to go to the wrong spa as to choose an inappropriate drug or an improper operation in surgery.

For the necessary growth of this knowledge research and instruction must go hand in hand. At the present time, as Dr. Sunderland points out, the value of waters and baths scientifically applied is being abundantly proved in the case of sick and wounded soldiers. The results obtained at the British spas show how great and unexpected are the resources of our own country in this respect.

That which is wanting in British hydrology is system—both in scientific teaching and in co-ordinating the unrivalled assets belonging to the health resorts of the Empire. It remains for London to meet this need by providing the means of special instruction and research. Here as elsewhere in medicine the tradition and empiricism of the past must in due course give place to ordered knowledge and instructed art.

Dr. Sunderland's book is profusely illustrated and withal entertaining, and may be recommended to all who are interested in the social as well as the medical history of London.

ORGANIC CHEMISTRY.

Organic Chemistry, or Chemistry of the Carbon Compounds. By Victor von Richter. Volume i. *Chemistry of the Aliphatic Series.* Newly translated and revised from the German edition by Dr. P. E. Spielmann. Pp. xvi+719. (London: Kegan Paul and Co., Ltd., 1915.) Price 21s. net.

NO more striking illustration of the development of organic chemistry could be found than that presented by the growth of this popular German treatise. Appearing about 1880, as companion volume to a modest octavo text-book on inorganic chemistry, it rapidly acquired popularity and passed through numerous editions. As the contents swelled with each succeeding edition, it became necessary first to divide the book into two parts and finally to modify the format. Like many German scientific books it soon found an American translator and publisher, and has reached its third American edition. The present volume, it should be noted, is the first *English* edition, a term which we presume refers to the nationality of the publisher rather than to the greater purity of the vernacular of the last translator. Be that as it may, Richter's organic

chemistry has passed out of the region of text-books.

The theoretical part is condensed into a comparatively few pages at the beginning of the volume, and is of so sketchy and superficial a character as to possess little value for the student. Yet the subject, especially on the physical side in connection with structural problems, is one of growing interest and importance. This is a cardinal defect. On the other hand, the book is so crowded with facts as to form a kind of abridged "Beilstein." It is divided into chapters containing the names of a large number of related compounds, an outline of the mode of their preparation, and an account of their more important physical and chemical properties. Occasionally there is a proper name attached to a compound or process, and sometimes a reference. It is rarely that one finds an English name, or, indeed, that of any other nationality than German. There is no reference to the modern method for preparing silicon alkyl compounds or to its author; no reference to the discoverer of oxalyl chloride, ketene, and the numerous azoimides, or to the mechanism of the formation of formic acid from glycerol and oxalic acid, though the process is given, or to the abnormal addition of bromine to maleic acid, which is wrongly described.

English names, it appears from the preface, are purposely omitted for the remarkable reason that "references to German literature have been retained with the object of preserving to the student the advantages of the origin of the book; the English references will be otherwise readily obtainable by him." If the references are not given, nor even the names of authors of these fundamental discoveries, it is difficult to see how they will be "readily obtainable." No doubt there are advantages in having the origin of the book steadily thrust upon one as a stimulus to the British chemist; but it is to be hoped that there may be forthcoming a text-book—a real students' text-book—of organic chemistry which shall give him a clear, critical, and suggestive review of the big problems of organic chemistry with which the names of many distinguished English chemists are linked. That the English organic chemist has pursued the experimental part of the subject with the object of elucidating theoretical rather than practical problems is readily explained by the fact that his activities on the industrial side have been necessarily restricted, and he has had little incentive up to the present to busy himself with the discovery of new classes of commercially useful products.

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