

mechanisms of organic reactions. The younger school of organic chemists fails at times to recognize this major contribution to their science.

On September 13 Robinson attained the age of seventy, and as tribute to his friend and former teacher Sir Alexander Todd has edited a series of essays entitled "Perspectives in Organic Chemistry". The contributors include not only his former students and collaborators, Sir Alexander Todd, Profs. Wilson Baker, E. L. Hirst, H. Erdtman, E. Schittler, Dr. J. W. Cornforth, but also many foreign friends, L. Pauling, K. Folkers, A. Butenandt, L. Ruzicka, K. Ziegler and R. B. Woodward. It would be impossible in any short review to do justice to this remarkable series of essays; each of them is in its own way masterly, and they should be read and re-read by all organic chemists. They suggest that organic chemistry is at the cross-roads. In the past two decades the techniques available to the organic chemist have been greatly refined. New methods of purification, such as paper chromatography, vapour-phase chromatography and counter-current distribution, have been developed, while increased assistance can also be obtained from infra-red and ultra-violet absorption spectra. Yet the recent reliance on R_f values and of infra-red spectra alone as a proof of identity, in the absence of direct chemical evidence, must be deplored. As Prof. Woodward points out in his brilliant essay "Synthesis", this branch of our science, apart from its intellectual attraction, has still a major function to perform. Will not these new techniques enable the organic chemist to attack more successfully the chemistry of life? Dr. Cornforth, in concluding his essay on "Isotopes in Organic Chemistry", rightly suggests that organic chemistry and biochemistry can no longer be regarded as distinct disciplines. This is well illustrated by the contributions of Dr. Folkers' "Micro-organisms in Organic Chemistry", Sir Alexander Todd's "Nucleic Acids" and Prof. Erdtman's "Organic Chemistry and Conifer Taxonomy".

We feel that all chemists will be grateful to Sir Alexander Todd for having edited this remarkable tribute to a great chemist. It is beautifully produced, and an excellent coloured photograph of Sir Robert Robinson forms a frontispiece. It is unfortunate that its somewhat high price may limit its circulation.

J. L. SIMONSEN

ZOOLOGY OF ICELAND

Zoology of Iceland

Four volumes (65 parts). (Copenhagen: Ejnar Munksgaard, 1937-1955.)

THE publication of this ambitious work started in 1937, and by July 1956 sixty-five parts, divided into four volumes, had appeared, and the preparation of six more was announced. It will doubtless be several years yet before the end is in sight. The "Zoology of Iceland" is already of great value to zoologists working in many fields of their subject, and when complete it will be the standard work for a century or more. Its scope is wider than usual with similar faunistic surveys, for it aims at a complete description of the occurrence, range, and biology, so far as they are known, of every species of animal—terrestrial, freshwater and marine—that has been found in Iceland and the surrounding seas: a truly colossal task.

All the parts are written by authorities in their respective fields; most of the writers are Danish or Icelandic, but the editors have enlisted the help of those of other nationalities wherever desirable. The editors have also wisely ensured the widest availability of the work to zoologists by publishing it entirely in the English language.

Each part of volumes 2, 3 and 4 deals with a separate group of animals, generally an order, though in some the group is larger and in others smaller. The general plan is to start with a short historical introduction and then to provide a full synopsis of the species, giving status, records of occurrences, distribution outside Iceland, and short notes on biology. This is followed by a section of general remarks and discussion on the biology of the forms concerned and their zoogeography, and by synoptic tables. Each part concludes with a full list of references.

Volume 1, however, contains the papers of widest interest: Part 4, "The Hydrography of Icelandic Waters", by Helge Thomsen, Part 6, "The Benthonic Animal Communities of the Coastal Waters", by R. Spärk, and Part 11, "The Hot Springs, their Animal Communities and their Zoogeographical Significance", by S. L. Tuxen. The last is a very thorough account of the subject, and the author concludes that some of the members of the hot-spring fauna have probably been present for some 100,000 years because their warm environment enabled them to survive the last ice age. Indeed, he goes further and suggests that they may have survived the earlier ice ages too, and thus have perhaps been present throughout the whole of the Pleistocene period. This paper is illustrated with a number of interesting photographic plates.

When this great work is complete, no similar region of the globe will have such a comprehensive written history of its fauna. It will be an example and an inspiration to zoologists all over the world to work towards producing like surveys of the regions with which they are familiar.

L. HARRISON MATTHEWS

PHYSIOLOGY OF REPRODUCTION

Marshall's Physiology of Reproduction

Edited by Dr. A. S. Parkes. Vol. 1: Part 1. Third edition. Pp. xix+688. (London and New York: Longmans, Green and Co., Ltd., 1956.) 150s. net.

THE first edition of the late Dr. F. H. A. Marshall's "Physiology of Reproduction" appeared in 1910. The second, which was published in 1922, was described in these columns as the best treatise on the subject that we have. The reviewer went on to say that "it is because it is so good and so valuable that its beneficiaries are so concerned in its further development. It must remain the best book on the subject and a memorable contribution to British scientific literature". His hope has without doubt been realized in the third edition, now enlarged to three massive volumes, of which the first appeared in 1952, and the second is now under review. A third volume, dealing mainly with the male, is still to come.

The new edition is edited by Dr. A. S. Parkes and numbers among the contributors many of those who have been responsible for the advances that have been made since the second edition. Vol. 1, Part 1, which in spite of its numerical description has appeared after Vol. 2, contains two chapters con-