

long way we shall have to go before we understand them in all their heterogeneity. The discussions which are also printed are informative and more valuable than the reviewer has often felt in the past. It is possible that these might still be edited more thoroughly with an improvement in the presentation.

Other biochemists could possibly have been included, but some limitation was necessary.

The book which is well produced represents a milestone in biochemical thought, and justifies the hope of Sir Hans that it will be regarded as a pioneer book. The reviewer was only surprised by one challenging sentence to the effect that hormones usually (though not always) act through direct effect on an enzyme. This would not be considered as proved by a majority of biochemists; but they should certainly make a point of reading this symposium.

RUDOLPH A. PETERS

Symposium on Protein Structure Edited by A. NEUBERGER. Methuen & Co., Ltd., London, 1958. Price 45s.

THE meeting which gave rise to this volume, held in Paris, 1957, had as its original intention a discussion of the question of purity as it applies to proteins. In the event it covered most aspects of protein chemistry. The gradual enlargement of the scope of the symposium may explain the wide differences in character between the different contributions which range from extensive review articles through more usual symposium papers to detailed accounts of particular experiments. But it has also meant the inclusion of so many topics that all interested in this field will find something of value and interest.

It contains several methodological papers under the heading—general problems and methods—which include a stimulating paper on deuterium exchange by the late Professor Linderstrøm-Lang, and an excellent review by Tanford on protein configurations in solution. The section on specific proteins contains many contributions of great interest, in particular, the accounts of Hirs, Stein and Moore, and by Anfinsen, on the elucidation of such a large fraction of the structure of ribonuclease. Papers on recent developments concerning myoglobin, haemoglobin and tobacco mosaic virus include reviews of the advances in X-ray analysis of these proteins. The paper by Kendrew gives a clear picture of the methods which have since given his model of myoglobin. The rapid progress in the chemistry of the proteolytic enzymes is well covered.

Some miscellaneous observations on a diverse range of subjects comprise the last section. These include the sequence studies on lysozyme by the late Professor Fromageot and one extensive review by Professor Li of the species variation and structures of some of the pituitary hormones.

To one on the fringe of this subject this volume conveys clearly the great interest and pace of work in this field; to the specialist despite the great unevenness in the methods of presentation there is much of interest in this book.

K. A. STACEY

The Thyroid Gland (N. B. MYANT Editor) British Medical Bulletin Vol. 16, No. 2, The British Council, London, May 1960, 20s.

THE articles are of the high standard set by previous issues of the Bulletin, and the choice of contributors is a guarantee of their authority. There is, naturally, a clinical orientation, the opening article being on Deafness and Thyroid Dysfunction (W. R. TROTTER); among the topics dealt with are diagnostic use of radio-iodine, auto-immunity, and interrelationships between the thyroid and the central nervous system. Scattered among such articles, in somewhat random order, are articles on more basic topics such as hormone biosynthesis (R. PITT-RIVERS). The latter article lacks formulae and a summary. Bioassay methods are nowhere considered, except in the excellent article by H. D. PURVES and D. D. ADAMS on thyroid-stimulating hormone; this article is marred only by a confusing opening sentence in the section on exophthalmos.

The absence of any articles on actions of thyroid hormone, at the tissue level, is a serious omission, particularly since there is an extensive and confusing literature on this question. It would, moreover, have been advantageous to give at the outset a "refresher" article, surveying established facts on the nature and actions of thyroid hormones (e.g. the role of thyroglobulin) and attempting to put the succeeding articles in perspective. The Bulletin is, then, not ideally suited to the hypothetical "general reader" mentioned in the Introduction.

E. REID