

*Vitamins and Hormones, Advances in Research and Applications*, Volume XII, Edited by R. S. HARRIS, G. F. MARRIAN AND K. V. THIMANN. Academic Press Inc., New York, 1954, 275 pages + author and subject index, \$ 7.50.

Another volume in this well-known series has appeared and it is hardly necessary to mention that a number of interesting reviews has become available. This time more space than normal is occupied by papers on vitamins, and especially the vitamins B<sub>12</sub> and A are well treated in this volume.

K. FOLKERS AND D. E. WOLF give an excellent survey on *The Chemistry of Vitamin B<sub>12</sub>*. This chapter not only summarizes our knowledge about the normal cobalamins, but the related substances, like the pseudocobalamins and the factors A-H, are also mentioned in great detail (because many interesting papers about the structure and the purification of cobalamins have appeared since this review was written, it would perhaps have been advisable to mention in the introduction which period was covered). In the second chapter on *The Intestinal Synthesis of Vitamins in the Ruminant*, written by S. K. KON AND J. W. G. PORTER, vitamin B<sub>12</sub> and the related factors are among the vitamins discussed.

Two chapters concerned with vitamin A are *The Biochemistry and Pathology of Hypervitaminosis A* by C. NIEMAN AND H. J. KLEIN OBBINK, and *Vitamin A Requirements of Animal Species* by S. H. RUBIN AND E. DE RITTER. The first article summarizes critically the effect of interaction of excess vitamin A with several vitamins and other nutrients, while the second paper contains 13 tables with data about the daily requirements of vitamin A or carotene in animals and man, together with information about factors that can change these requirements.

The question could be raised as to whether the interesting article of C. S. DAVIDSON on *Disturbances in Nutrition Relating to Liver Disease in Man* falls in the scope of *Vitamins and Hormones*.

J. HAMMOND JR. deserves credit for the excellent way in which he has compiled the enormous amount of data on *Light Regulation of Hormone Secretion*. When reading this paper it becomes evident that we are only at the beginning of the understanding of the effects resulting from photoperiodicity. Another almost unexplored field is treated by R. B. BRADBURY AND D. E. WHITE in *Estrogens and Related Substances in Plants*.

This volume ends with a very competently written review by F. W. LORENTZ on *Effects of Estrogens on Domestic Fowl and Applications in the Poultry Industry*.

Quality of paper and printing is excellent, as could be expected; only one error in print was observed: on page 31 the ring system of the figure should have been a benzimidazole ring.

H. G. WIJMEGA (Oss, The Netherlands)

*Nature and Structure of Collagen*, edited by J. T. RANDALL F.R.S., assisted by SYLVIA FITTON JACKSON, London, Butterworth's Scientific Publications Ltd., 1953, 269 pages, 142 illustrations, price \$ 2.2.0d.

More than a year ago I was asked to comment on RANDALL's book "*Nature and Structure of Collagen*". Is there any sense in discussion at this stage? Science advances fast; nearly 2 years have passed since the symposium, the important contributions to which have been so well edited by RANDALL. His book is only a snapshot of scientific development. Is such a snapshot still of value at this time?

I have no hesitation in giving an affirmative answer to this question. Some of the matters discussed at the symposium have indeed been placed in a different light by the discovery of new facts but, notwithstanding this, the general survey offered by RANDALL's book is so clear, so balanced and at the same time comprehensive, that it is still—and will probably remain so for some years to come—a reliable starting point for anyone who is interested in the study of collagen and all that adheres—in literal and figurative sense—to it: the mucopolysaccharides and the ground substance, "the evasive and pervasive material".

Admirable in itself is the arrangement of the many-sided problems and the diversity of techniques employed. There are contributions from biologists, histologists, chemists and physicists. Electron microscopy, X-ray spectrography, infra-red spectrography, electrophoresis and paper chromatography are all represented and combined in magnificent team-work. The whole is so masterly that one hesitates to criticize. It seems to me that after RANDALL's introduction, from which I have quoted, one would expect a sharper formulation of the question: what is collagen? Is it a protein or is it a complex of a protein with a mucopolysaccharide? In several previous discussions this question was actually raised; first in JACOBSON's histological survey and in