set up an Office of War Mobilization. All existing war agencies, including the Office of Scientific and Technical Mobilization, are to be brought under the coordination and guidance of the Office of War Mobilization.

Widespread individual information is the basis of an intelligent democracy. Scientists, academic and applied, would have a more direct interest than most other groups of our citizens in the proposed Office of Scientific and Technical Mobilization and a very great interest in the proposed Office of War Mobilization. They would do well to obtain copies of the bills and hearings to acquaint themselves with the terms and ideas embodied in them.

K. A. C. ELLIOTT,
Chairman, Philadelphia branch, American Association of Scientific Workers
HARRY GRUNDFEST,
National Secretary, American Association of Scientific Workers

CARIBOU AND THE MEAT SHORTAGE

MANY of our people seem concerned about the shortage in meats, which have been strictly rationed since March 29. As regards our home population it is not likely that this shortage will be serious; and it may even be an advantage, for at least the sedentary section now overeats and especially of proteins. If this were not sufficiently indicated by the tubby figure and especially by the protruding paunch of the average business man in middle life, it is confirmed by the unexpected, but considerably improved health of the British people since rationing was instituted there.

However, it is essential that our armed forces and our manual working population be supplied with an adequate protein diet, and it is pertinent to draw attention to a considerable supply of meat available in Alaska.

Since the beginning of the century there have been domesticated caribou (reindeer) herds in Alaska. Ten years ago estimated to number two hundred thousand to half a million, they have been now reduced to from fifty thousand to one hundred thousand. The wild caribou herds are estimated as between one and two millions of individuals, with other millions in Canada.

All those who have been privileged to eat caribou meat in the North will, I think, agree with me that it surpasses in its palatable qualities the best beef or the best venison. Caribou meat has something of the gamy flavor of venison, but in its juiciness it is more like beef. Already for a good many years caribou steaks have been obtainable in certain restaurants in this country, but the sale has never been large, partly because of the difficulty of overcoming inertia which favors the continued use of beef, mutton and pork, but mainly because of the opposition of the United States cattle and sheep men.

As the domesticated herds are largely in northwestern Alaska near the Bering Sea, it would be possible to ship the refrigerated meat by sea to our bases in the Southwest Pacific and to our own Pacific ports.

WM. H. HOBBS
UNIVERSITY OF MICHIGAN

SCIENTIFIC BOOKS

ORGANIC CHEMISTRY

Organic Chemistry. By G. ALBERT HILL and LOUISE KELLEY. viii + 919 pp. 6 × 9 in. Bound in dark blue cloth. Philadelphia: The Blakiston Company. 1943. $4.00.

THE authors of this new text are both leading professors of organic chemistry, one at Wesleyan University and the other at Goucher College, the former with considerable experience in the teaching of the subject to men, and the latter's teaching experience having been with women students. A collaboration of this kind should be mutually stimulating and helpful.

The result is a well-balanced presentation of the subject in its manifold and diversified aspects, theoretical and practical; including the purely descriptive side of preparation, properties and applications; the theoretical considerations underlying the behavior of certain molecules and the immensely important role of organic chemistry in the maintenance and progress of our present civilization and industries.

The volume contains 46 chapters, a glossary (mainly of medical terms), an explanation of symbols and Greek letters used and a good subject index. If it is intended to serve as a reference book, as well as a text, as its authors state in their preface, its lack of citations of the original literature and of pertinent bibliographies to supplement the necessarily restricted information given in so vast a field is regrettable.

The introductory chapter discusses the nature of atoms and of atomic linkages, including types and strength of bonds, bond angles, rotation about bonds, distances between atoms and anomalous valences; molecules, dipole moments, resonance, hydrogen bridges; the mechanism of organic reactions and the primary divisions of organic compounds into aliphatic, aromatic and heterocyclic.

The succeeding chapters present the various groups of organic compounds in the usual order, beginning with the hydrocarbons, then the alcohols and ethers, halogen derivatives, aldehydes and ketones, etc.

A helpful feature is the explanation of the generally accepted International Union of Chemistry (I.U.C.) system of nomenclature. In the chapter on "Heterocyclic Compounds," attention should have been called to the ring index, a *vade mecum* which is indispensable to all students and investigators in this branch of organic chemistry.

Liberally illustrated with structural formulas and provided with tabular summaries of important series and their properties, nearly every chapter concludes with a list of test questions. Considerable attention is given throughout the book to the use of organic compounds in medicine, and the final chapter gives a compact up-to-date review of polymerization, synthetic rubbers and plastics.

The subject-matter is well classified and arranged, lucidly and logically presented, covering the subject admirably within its space limitations, so that the book should prove a very useful and interesting first-year college text and as a foundation for more advanced and more highly specialized courses.

In paper, type, printing and binding in vermin-proof and water-resisting material, the book is up to the usual high standard of all recent Blakiston publications.

MARSTON TAYLOR BOGERT

BIOLOGICAL SYMPOSIA

Sex Hormones. Edited by F. C. KOCH and PHILIP E. SMITH. 146 pp. The Jaques Cattell Press. 1942. $2.50.

THE ninth volume of "Biological Symposia" is a presentation of eight papers delivered in a symposium on "The Comparative Biology and Metabolism of the Testicular and Ovarian Hormones," presented as part of the fiftieth anniversary celebration of the University of Chicago in September, 1941. The book has two sections: I. Sex hormones—their actions and metabolism; II. Hormonal factors in the inversion of sex.

A broad and thoughtful introductory chapter by Professor Carl Moore is followed in Section I by three more meaty disquisitions by Dr. A. T. Kenyon, Professor E. A. Doisy and Professor F. C. Koch. They discuss, respectively, the metabolic influences of gonadal hormones, the metabolism of estrogens and the metabolism of androgens.

Dr. Kenyon's is an informative account in biochemical terms of the purely somatic effects of the sex hormones. It is in essence a description of the pioneering in a field that is bound to expand and develop. His data are derived chiefly from observations on human subjects and thus give point to the need for well-controlled experiments with animals.

Professor Doisy's paper is by contrast an essay in comparative biochemistry. In a balanced survey of the chemical changes undergone by estrogens in the animal body, Professor Doisy brings order to a subject hitherto confused by purely technical difficulties. The informed reader will find this chapter a welcome corollary to Doisy's previous writings in this field.

Professor Koch's lucid chapter is an admirable synthesis of biochemical theory and clinical findings. Proceeding from the studies of androgen and steroid excretion in human subjects, normal and abnormal, to the little-known but highly interesting data on the bacterial metabolism of steroids, Professor Koch develops an excellent general picture particularly of the catabolic fate of androgenic substance. His critical account of modern theories concerned with the origins of androgenic hormones is especially clear and interesting.

In the second section of the book are papers on experimental sex inversion in the plumage of birds (by Professor C. H. Danforth), in Amphibia (by Professor R. R. Humphrey), in the rat embryo (by Dr. R. R. Greene) and in the opossum (by Professor R. K. Burns, Jr.). These papers are concerned in varying degree and detail with the bipotentiality of various somatic responses to endogenous or exogenous androgen and estrogen, particularly in embryonic life. The much more surprising effects of the sex hormones upon differentiation of the embryonic gonads are carefully detailed, from the almost complete sex reversal in certain amphibia to the sterilization in mammalian embryos. The reviewer is struck by the contrast between the biochemical analysis of the first section and the morphogenetic detail of this section. In the study of sex inversion a large biochemical gap needs bridging. The dichotomy of response of gonad cortex and medulla, Mullerian and Wolffian duct, to various steroid hormones has had a real embryological demonstration. A biochemical basis for such dichotomy is woefully lacking.

These factual summary presentations illustrate in part the dramatic development of our knowledge of steroid hormone function. I doubt that Professor Doisy realized in 1929 the consequences of his chemical isolation of theelin. His few crystals initiated the deluge of steroid hormones—androgens, progestins, estrogens, cortins. Their biological activities extend from conception to senescence. Their roles in a host of physiological processes are slowly becoming clear. This book has the special merit of shaping that clarity from a large and formless literature.

GREGORY PINCUS

CLARK UNIVERSITY

VITAMINS

The Biological Action of the Vitamins. Edited by E. A. EVANS, JR.

THIS book, which takes one close to the heart of the problem, is composed of fourteen invitation papers, presented at the fiftieth anniversary celebration of the