author's devotion to pure compounds and from his passion for exactness. The work is a monument to the patience and perseverance of a scientist who devoted his labors to the purification of compounds and to the measurement of exact constants, and whose attitude is set forth in the statement on page 9, "for the truth alone is unique, while error is manifold."

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The Clinical Use of Radioactive Isotopes. Bertram V. A. Low-Beer. Springfield, Ill.: Charles C Thomas, 1950. 414 pp. $9.50.

Some of the clinical medical applications of radioactive isotopes have now pervaded the fields of endocrinology, surgery, clinical physiology, dermatology, gynecology, and many other medical specialties in addition to radiology and biochemical research. The effort required to understand the background of atomic physics and to appreciate the potential applications of radioactive materials to specific medical problems has been a forbidding prospect for most physicians. This volume is an admirable attempt to correlate necessary information, and the book presents it in quite readable form.

The discussion of radiation physics in nonmathematical language occupies the first part of the book, and the basic essentials of atomic structure and the properties of radioactive atoms are logically covered without unnecessary detail. Those who anticipate considerable work with isotopic materials will need to consult the more complete reference sources given at the end of this part, but a surprisingly complete scope of the subject is made available here. In addition, there are excellent chapters on equipment and the units used in detection and measurement, as well as notes on the handling and disposal of radioactive materials.

The clinical applications are covered in the second part of the volume, which is divided into sections on diagnostic investigations, dosage determinations, and therapeutic applications. The nature of the uses that have been found for isotopes is responsible for what seems to be a succession of unrelated subjects as individual isotopes are discussed. This section will also most quickly become obsolete, for many of the clinical uses are in exploratory stages, but the situation is fairly evaluated up to the publication date. Furthermore, the principles here discussed will remain valid for later changes in method, and the preliminary section on physics ensures that the reader will have the requisite basic information to apply his understanding to new fields.

It is appropriate that emphasis should be placed on the physiological data accompanying isotopic distribution in the body, and that specific dosages and clinical techniques are largely confined to those isotopes that have already shown reasonably permanent worth, particularly radioactive phosphorus and iodine.

The volume is suitable for use as a text for students whose work will include use of isotopes in clinical research or therapy, and it should be required reading for radiologists, radiological physicists, and physiologically minded physicians. It will be a valuable reference work for physicians in almost every medical field.

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Biology of Drosophila. M. Demerec, Ed. New York: Wiley; London: Chapman & Hall, 1950. 632 pp. $10.00.

This book, some ten years in the making, represents primarily reports of original research by the authors on aspects of the biology of *Drosophila.* Under the editorship of M. Demerec, the authors, Kenneth W. Cooper, B. P. Sonnenblick, D. F. Poulson, Dietrich Bodenstein, G. F. Ferris, Albert Miller, and Warren P. Spencer, have contributed chapters on normal spermatogenesis, early embryology, histogenesis, organogenesis, and differentiation in the embryo, on postembryonic development, external morphology, internal anatomy and histology, and on collection and laboratory culture, respectively. The emphasis is on *Drosophila melanogaster,* with pertinent information on other species of the genus and on related organisms. The numerous photographs and drawings are with few exceptions original. A deliberate restriction to discussion of the wild type form serves to keep the volume from becoming unwieldy, although the apparent necessity of avoiding discussion of the pertinent information on mutant types is regretted by this reviewer —as is the almost total absence of reference to *Drosophila* physiology.

In any work of this magnitude, there are bound to be statements which to some readers seem equivocal. For example, in the chapter on postembryonic development, Bodenstein, in describing the venation of the prepupal wing, states (p. 297) that "they are apparently not identical with the later imaginal veins (Waddington, 1939)." Waddington, *loc. cit.* (*Proc. Nat. Acad. Sci.,* **25,** 299), actually states that "This venation is not *altogether* [reviewer's italics] identical with that of the adult; . . . ." In view of the possibility that the prepupal venation may be in part homologous with the wing venation of subsequent stages, Bodenstein's citation would seem to this reviewer to be misleading. (It should be added that there is no reference to Waddington's more extensive description of wing development in the *Journal of Genetics,* **41,** [1941].)

To the *Drosophila* worker, long plagued by the scattered and fragmentary nature of the literature on the biology in *Drosophila,* this book should prove to be an invaluable reference manual.

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