

largely empirical in nature. Students of nutrition are fortunate in having the beautifully written historical works of Graham Lusk and E. V. McCollum to guide them, as well as various histories of medicine, physiology, and related sciences. With this book by the late Clive McCay the beginning student can now learn how to go about acquiring information on the historical development of his science. This information is outlined in the first chapter of the book, appropriately titled "Finding your way in the nutrition literature." In the remaining chapters the student will find hints and illustrations about acquiring a knowledge of the chronological developments of nutritional thought in the 18th and 19th centuries and up to about 1940, when much of the fundamental work had been done.

The scope of this book is broad, as might be expected from an author whose own experimental interests covered the relationship between diet and growth, physiological function, and longevity of animals from insects to man and whose writings concerned practical feeding problems of dairy cows and other farm animals, dogs, brook trout, industrial workers under wartime food restrictions, patients in mental hospitals, where cost is important, and men in the U.S. Navy during World War II, where questions of acceptability and ease of shipping demanded attention alongside questions of nutritional quality.

McCay devoted a lifetime of reading and study to the compilation of the notes which make up this volume. I remember his list of historical titles on iron in nutrition, which he showed me in 1926; I copied the references to the reviews by H. A. Christian, H. C. Sherman, and E. Meyer and obtained them from the Yale Library for study. These same references are to be found in the present book, with many more, in the section on iron in nutrition.

The approach McCay has taken is that of pursuing lines of thought, as affected by scientific studies, on what he calls the three great questions that stimulated nutritional research in its early days. These questions are: How is food transformed into body tissues? What are the relationships of the nitrogen of the air and that of soils, plants, and animal bodies? What are the sources of energy and how are they used for "operating" the body?

Except for vitamin D, there is no treatment of the remarkable contributions to our knowledge of the vitamins

that were made during the 1930's and '40's. The title of this book is completely appropriate; the material consists of "notes" about experimental studies and the men who made them. This material hitherto has been available only in the form of mimeographed sheets which McCay distributed to students in the graduate course on the history of nutrition which he offered at Cornell. There are typographical errors, though nothing serious, and the grammar in a few places reflects what a man might write on a slip of paper as he reads. These defects, if they can be so called, seem to add to the vigor and freshness of the treatment.

Clive McCay died in 1967. His wife, Dr. Jeanette B. McCay, turned over her husband's collection of papers and old books to Cornell University. There, in the Mann Library of Agriculture and Home Economics, the books are being displayed in a reading room named in McCay's honor. L. A. Maynard of Cornell began the preparation of the material in this volume for publication, and, after his death, the task was completed by F. Verzár of Basel, Switzerland. Maynard's introductory essay states that among McCay's remaining unpublished notes is detailed material on 13 vitamins, completing the record to about 1953. There is also a chronology of about 150 pages on significant events in the history of nutrition from the year 470 B.C. to about 1953. Perhaps in time this unpublished material may be made available for wider use and enjoyment, in a book to take its place beside this present interesting and useful volume.

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**Advances in Biological and Medical Physics.** Vol. 14. John H. Lawrence, John W. Gofman, and Thomas L. Hayes, Eds. Academic Press, New York, 1973. viii, 340 pp., illus. \$24.

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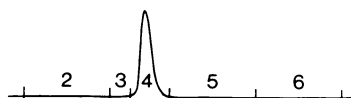
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(Continued on page 412)

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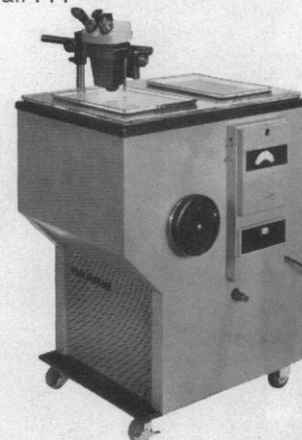
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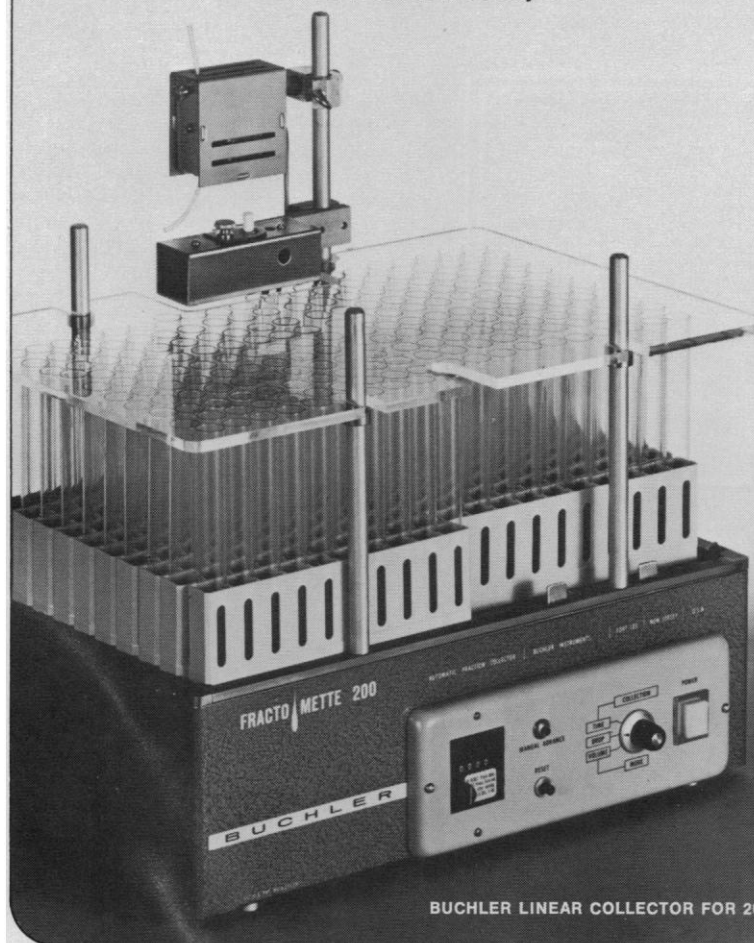
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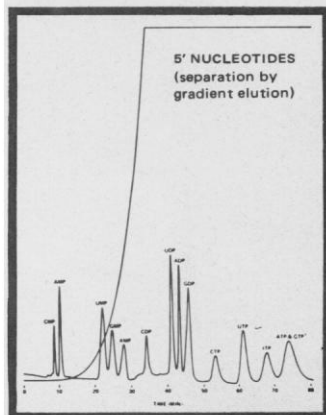
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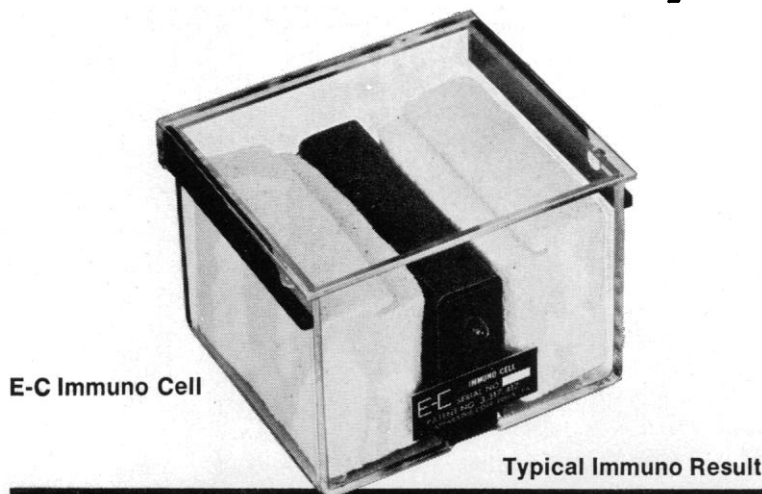
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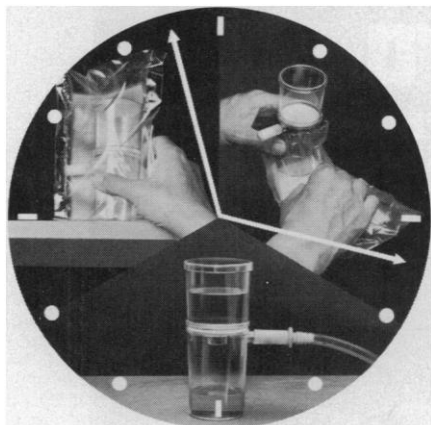
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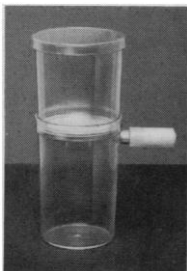
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