numerous halftone figures, and some photographs are included. The text seems remarkably free of errors, despite an appendix of *errata* and *addenda*. A detailed table of contents is included at the end of the book, along with an index of 50 double-column pages.

Not all protozoologists will find the systematic treatment and emphasis completely satisfactory. The most difficult problems still reside within the Rhizoflagellata. Chatton's account of the crucially placed Amoebaea (completed after his death by Grassé) seems to suffer from a rather diffuse, less well documented treatment of taxonomic affinities than most other sections, but this group is admittedly difficult to handle. The general emphasis in the work is frankly upon taxonomic and morphologic aspects. Although this organization is not especially fitted to the currently expanding trend toward comparative biochemical and physiological studies on Protozoa, nevertheless a substantial foundation can be assembled from careful selection in the text.

All in all, this section of the *Traité* clearly seems to achieve its major objectives: to organize our current knowledge of these groups of the Protozoa and to indicate future lines of fruitful research.

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***Renal Function.*** Transactions of the Fourth Conference, 1952. Stanley E. Bradley, Ed. Josiah Macy, Jr. Foundation, New York, 1953. 189 pp. Illus. $3.50.

This report on renal function takes the same form as its well-known predecessors. In addition to an informal discussion of "Ion exchanges between extracellular and intracellular fluids" led by R. F. Pitts, it contains presentations on "Cation exchanges in the renal tubular epithelium" (Mudge), "Ion transport across living membranes" (Ussing), and "Water and ion movements across intestinal and renal epithelium" (Visscher).

As a means of promoting meaningful communication between scientific disciplines, which is a fundamental aim of the conference program, the transactions are probably less useful to the readers than the conference is to the participants. Moreover, the substance of these presentations is no longer new or has been published elsewhere, and the discussions, when read, seem unsatisfyingly diffuse and uneven. In places one finds a spirited, *avant-garde* sort of atmosphere—for example, where a participant vigorously challenges the validity of application of a Donnan-type equilibrium for certain cells—but it dissipates quickly, and one winces at the inclusion of such unregenerate arguments as, "Accuracy is supposed to be one of the virtues of mathematics, and if an equation is found to be inaccurate, I don't see why we keep using it."

This slim volume would have been helped by an index, particularly since many nephrologists will experience a certain obligation to own it. For physiologists at large, however, the report is too specialized and will have limited value. Clinicians, who may be misled by the title, will not acclimate to its rarefied air.

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***British Veterinary Codex 1953.*** Council of the Pharmaceutical Society of Great Britain. Pharmaceutical Press, London, 1953. 737 pp. 45s. + 1s. postage.

The *British Veterinary Codex,* published under the direction of the Council of the Pharmaceutical Society of Great Britain, sets forth standards for substances and preparations employed in the prophylaxis and treatment of animal diseases, and supplies information on actions and uses of these preparations. The material in it was compiled by the British Veterinary Codex Committee, composed of veterinarians and other interested individuals working in specialized fields of science in Great Britain. In addition, members of the veterinary profession from other countries served as corresponding members of the committee.

These major sections appear: Part I is devoted to monographs that briefly describe the chemical and physical properties, actions, uses, dosage, incompatibilities, and toxicity of drugs and chemicals employed in veterinary medicine. A total of 431 monographs appear. A summary of standards is given for substances that appear in the *British Pharmacopoeia* or in the *British Pharmaceutical Codex.* For agents not listed in these sources, standards prepared by the Veterinary Codex Committee are described. Chemical formulas are in accordance with current practice in Great Britain. Only those agents for which the committee considered there is adequate pharmacological and/or clinical evidence of usefulness and for which adequate standards could be prepared are included. Part II contains similar monographs on antisera, vaccines, and related biological products. Part III lists formulas and describes methods of preparation and standards for therapeutic and prophylactic agents. These monographs are listed according to the type of preparation—boluses, capsules, creams, dusting powders, and so forth. In addition to these major sections, the book contains a therapeutic and pharmacological index, tables of weights and measures, a synonym list, and information on chemical and biological assay methods.

Publication of the *British Veterinary Codex* fills a critical need in veterinary medicine for an authoritative source of information on agents used in the treatment and control of animal disease. All those who participated in this effort are to be congratulated. Perhaps the greatest service rendered by this book is the listing of standards for a number of drugs and biologicals that are widely used in veterinary medicine but for which no such standards appear in other authoritative sources. Veterinarians in the United

States may experience some difficulty with the terminology used for some drugs, but the helpful synonym list should aid in this respect.

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***Microwave Lenses.*** J. Brown. Wiley, New York; Methuen, London, 1953. 125 pp. Illus. + plates. $2.

The subject of this small book is a recent development in microwave technique. The introduction of so-called artificial dielectrics, dating back only a few years, opened new possibilities for designing microwave antenna. The properties of these structures, consisting of conducting elements of various shapes spaced according to some pattern, should be of general interest to a physicist. Such a reader might wish to find in the book more emphasis on this aspect.

The book is intended primarily for those interested in antenna design. The analyses involved are similar to those of geometrical optics. The first two chapters present general considerations and radiation patterns of microwave lenses. The different types of dielectrics are then treated in separate chapters, each beginning with an explanation of the properties of the dielectric followed by discussions of lens design. The use of lenses for wide-angle scanning is taken up in a separate chapter and also enters in the discussions of the last three chapters.

The material covered in the book is well organized. The presentation is clear and concisely covers the essentials of the subject.

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***Hydrocarbons from Petroleum.*** ACS Monograph No. 121. Frederick D. Rossini, Beveridge J. Mair, and Anton J. Strieff. Reinhold, New York, 1953. 556 pp. Illus. + charts. $18.50.

This volume is the result of more than 300 man-years of work performed by the American Petroleum Institute Research Project 6 under the able direction of Frederick D. Rossini. The project was carried out with creative imagination. This document should be a part of every library in the world for its enormous amount of useful information, not alone from the standpoint of research, but also for industrial utility. It is the result of more than 25 years of continuous study that has given us for the first time an intimate and quantitive knowledge of individual hydrocarbons present in a number of crude oils.

The physical properties of the highly purified individual hydrocarbons isolated were analyzed through the very latest techniques available. The purification of these compounds was achieved through the use of a wide number of fractionation processes, including such techniques as low-pressure distillation, thermal diffusion in the gas phase, and electrophoresis. The details of mechanisms of operation and procedures for purification of the individual hydrocarbons are given.

This monumental tome covers not only the fractionation, analysis, isolation, purification, and properties of hydrocarbons but also investigations of sulfur, nitrogen, oxygen, and metallic compounds and fractions of crude oil such as gasoline, kerosene, gas oil, and lubricating oils. In addition, synthetic products, such as alkylates, codimers, and hydrocodimers, were also analyzed in detail with respect to the structure and properties of the individual compounds present.

*Hydrocarbons from Petroleum* is literally a bible on the subject, packed with information not available before.

The foreword states:

> Fundamental research under the sponsorship of the American Pertoleum Institute had its inception in a grant of $250,000 made by John D. Rockefeller on November 15, 1925, augmented by an equal sum given on January 12, 1926, by Universal Oil Products Company, which provided for a five-year program of research in fields of interest to the petroleum industry.

The program was continued with funds provided by the member companies of the American Petroleum Institute, and the researches are still continuing at the Carnegie Institute of Technology under the direction of Rossini.

GUSTAV EGLOFF
*Universal Oil Products Company, Des Plaines, Illinois*

## *New Books*

***Vapor Pressure of Organic Compounds.*** T. Earl Jordan. Interscience, New York–London, 1954. ix + 266 pp. Plates. $14.50.

***Snow Crystals: Natural and Artifical.*** Ukchiro Nakaya. Harvard Univ. Press, Cambridge, 1954. xii + 510 pp. Illus. $10.

***The Track of Man.*** Adventures of an anthropologist. Henry Field. Doubleday, Garden City, N.Y., 1953. 448 pp. Plates. $5.95.

***Stress Concentration Design Factors.*** R. E. Peterson. Wiley, New York; Chapman & Hall, London, 1953. 155 pp. Illus. $8.50.

***Radio Receiver Design.*** Pt. 1. Radio frequency amplification and detection. ed. 2. K. R. Sturley. Wiley, New York, 1953. 667 pp. Illus. $10.

***A Practical Manual of Medical and Biological Staining Techniques.*** Edward Gurr. Interscience, New York, 1953. xix + 320 pp. $4.

***Organic Chemistry.*** ed. 2. Reynold C. Fuson and H. R. Snyder. Wiley, New York; Chapman & Hall, London, 1954. viii + 544 pp. Illus. $6.50.

***Metabolism of Steroid Hormones.*** Ralph I. Dorfman and Frank Ungar. Burgess, Minneapolis, 1953. 170 pp. Illus. $4.

***International Symposium on Atmospheric Turbulence in the Boundary Layer.*** Geophysical Research Papers, No. 19. Massachusetts Institute of Technology, June 4–8, 1951. E. W. Hewson, Ed. Geophysics Research Directorate, Air Force Cambridge Research Center, Cambridge, 1952. 530 pp. Illus.

***Induction and Dielectric Heating.*** J. Wesley Cable. Reinhold, New York, 1954. vii + 576 pp. Illus. $12.50.