

Chemists engaged in the study of polycyclic compounds will find this volume invaluable.

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Sexual Behavior in Western Arnhem Land. Viking Fund Publications in Anthropology, No. 16. Ronald M. Berndt and Catherine H. Berndt. New York: Wenner-Gren Foundation, 1951. 247 pp.; 24 plates. \$4.00.

This monograph, by Mr. and Mrs. Berndt, and edited by Ralph Linton, on the sexual behavior of North Australian aborigines, is an important and impressive ethnographic report. That the authors speak with an authority based upon intensive and extended field research is clear. Throughout the monograph their generalized statements of social behavior are illustrated and substantiated by a wealth of detail. The reader gets the impression that the details have been judiciously selected from a much larger fund of experience that could have been exploited had this seemed desirable.

The report contains information on a wide range of social activities related in one way or another to sexual behavior. Considerable attention is paid to the social structure and its concomitant regulation of sex partners. Religious and ceremonial activities are portrayed in great detail, with particular reference to implications for reproductive processes. An especially interesting section is devoted to what the authors call "Gossip Songs." These are relatively recent compositions that relate in song form personal incidents in social life. Most of the songs concern the behavior of lovers and married people, and these are the ones illustrated in this report.

A somewhat disappointing section to this reviewer is the one in which the authors discuss sexual experience in the life cycle. The material is sketchy and lacks the wealth of detailed documentation characteristic of other sections. This may be explained in part by the rather curious attitude expressed by the authors in their introduction. They state (pp. 16-17):

What does not particularly concern us here is the sexual act itself—the accentuation of the erotic content of activity, or the actual resultant physical and emotional pleasure; in the same way, the swallowing of a piece of food is of minor and purely personal consideration when taken in conjunction with the wider importance and social associations of food.

To state our thesis briefly: the sexual act and the accompanying erotic play are incidental and personal, while the events leading up to, surrounding or resulting from this subject, and the institutions involved, are of general social importance to the community.

To be sure, sexual activities are personal, and so are such activities as eating, talking, and sleeping. But it is on the basis of observations of and/or hearsay about personal activities that an ethnographer builds a picture of the social customs and institutions that characterize a society. It is certainly of utmost importance to relate sexual behavior to other aspects

of culture, but this does not imply ignoring the sex act. Nor, in fact, do the authors themselves comply wholly with their self-imposed restriction. Much valuable descriptive material on sexual behavior proper is to be found in the report. The point is simply that it could have been an even more useful study for many readers had the authors not striven to maintain an essentially fictitious dichotomy between personal and social activities.

Perhaps the most significant lesson of the monograph for future field work is the demonstrated advantages of having a man and his wife cooperate in the investigation. The advantages of such teamwork stand out prominently in the study of reproduction and sexual behavior. But they are probably of considerable importance in the study of any aspect of human behavior and culture.

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Finite Matrices. W. L. Ferrar. New York: Oxford Univ. Press, 1951. 182 pp. \$4.00.

Interest in the theory of matrices has spread far and wide in the past few decades, but until recently very few texts were available in this field. Since the war many writers have been at work fulfilling this need. *Finite Matrices* is one of the latest in the post-war crop.

Various portions of the theory were included in an earlier work by Ferrar entitled *Algebra*. The author's aim in the present text is to complete the theory in such a way as "to make the argument simple and straightforward," so that it "can be read with reasonable ease." A fair measure of success in this purpose has been attained. On almost every page it is clear that the author was seeking out the difficulties in the subject and looking for lucid presentations. This makes it all the more surprising to find very often, in definitions, theorems, and proofs, that he lapses into a conversational style in which meanings are merely suggested rather than stated explicitly and accurately.

The definition of linear dependence (given by suggestion after treating only the case of three vectors) is wrong in that it requires a linear combination to vanish with at least two coefficients not zero.

The greatest drawback of the book as a text is the broad knowledge of matrix theory it initially assumes. This includes the theory of rank, the Cayley-Hamilton theorem, and the reality of the roots of a Hermitian matrix, for all of which the reader is referred to the author's *Algebra*. It is clear that *Finite Matrices* can be used as a text only on condition that the students have first had a course in Ferrar's earlier text.

After an introductory chapter summarizing the assumed results, the book gets down to work with a chapter on equivalence. One preparatory chapter then leads to the major topic of collineation (similarity) in which the method employed for the most part is the use of suitable pairs of elementary transformations.

Later the author deals with the well-known theories of orthogonal and unitary similarity, but in the latter he studies only Hermitian matrices rather than normal matrices in general. Characteristic vectors are, of necessity, implicit in these discussions but are not treated explicitly. A long chapter is devoted to infinite series and functions of matrices, providing the only recent systematic account of this topic. The book closes with a brief treatment of matrix equations and a few miscellany.

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Reviewed in Brief

Modern Magnetism. 3rd ed. L. F. Bates. New York: Cambridge Univ. Press, 1951. 506 pp. \$5.50.

This third edition of the well-known book by Bates has not only been brought up to date and considerably enlarged, but the material has been rearranged in order to treat a number of new subjects not previously treated, and at the same time follow a more logical sequence. The material is now subdivided into 12 chapters. Chapter 10, the investigation of lattice and spin interaction, and Chapter 12, the domain concepts and the hysteresis cycle, contain an especially large amount of new material. With the great interest in recent years in the field of magnetochemistry, the book will be valuable to teachers and students, not only in physics but also in chemistry.

The Measurement of Radio Isotopes. Denis Taylor. New York: Wiley; London: Methuen, 1951. 118 pp. \$1.50.

This is another in the series of useful Methuen monographs on various topics in the physical sciences. It is a review, directed toward the nonspecialist, of techniques used in the measurement of radioactive materials. Within the scope of a hundred-odd pages the author covers in a relatively thorough manner such topics as the radioactive decay laws; various types of measuring instruments and counting systems; statistics, geometry, and correction factors in measurements; health physics; and, very briefly, some of the more recently developed detection techniques.

It is perhaps regrettable that the author chose to enlarge upon the construction details of G-M counting systems and to make only brief mention of scintillation and proportional counters. As is implied in the preface, however, the G-M counter is still the most useful instrument for the individual toward whom the book is directed.

Nuclear physicists may take issue with the lack of rigor in various phases of the discussion, and American readers in general may find some difficulty with the British technical jargon. Nevertheless, the book will prove a useful reference for anyone dealing with radioactivity, as well as a concise handbook for technicians in this work.

Scientific Book Register

The Terpenes: The Sesquiterpenes, Diterpenes and their Derivatives, Vol. III. 2nd ed. Sir John Simonsen and D. H. R. Barton. New York: Cambridge Univ. Press, 1952. 579 pp. \$10.00.

The Astronomical Universe: An Introductory Text in College Astronomy. Wasley S. Krogdahl. New York: Macmillan, 1952. 599 pp.; 6 sky maps. \$6.25.

The Mitotic Cycle: The Cytoplasm and Nucleus During Interphase and Mitosis. Arthur Hughes. New York: Academic Press; London: Butterworths, 1952. 232 pp. \$6.00.

Conformal Mapping. Zeev Nehari. New York-London: McGraw-Hill, 1952. 396 pp. \$7.50.

Botany. Carl L. Wilson; illus. by Hannah T. Croasdale. New York: Dryden Press, 1952. 483 pp. \$6.10.

An Introduction to Acarology. Edward W. Baker and G. W. Wharton. New York: Macmillan, 1952. 465 pp. \$10.00.

Proceedings of the London Conference on Optical Instruments 1950. New York: Wiley, 1952. 264 pp. \$7.00.

Texas Range Grasses. Benjamin Carroll Tharp; illus. by Clare Y. Whaley. Austin: Univ. Texas Press, 1952. 125 pp. \$4.00.

A Check List of the Genera & Species of Mallophaga. G. H. E. Hopkins and Theresa Clay. London: British Museum (Natural History), 1952. 362 pp. £2.

Bone Tumors. Louis Lichtenstein. St. Louis: Mosby, 1952. 315 pp. \$10.50.

Dana's Manual of Mineralogy. 16th ed. Rev. by Cornelius S. Hurlbut, Jr. New York: Wiley; London: Chapman & Hall, 1952. 530 pp. \$6.00.

Intermediate College Mechanics: A Vectorial Treatment. Dan Edwin Christie. New York-London: McGraw-Hill, 1952. 454 pp. \$7.00.

Reports on Progress in Physics, Vol. XV. A. C. Stickland, Ed. London: Physical Society, 1952. 338 pp. incl. cumulative index. £2 10s.

Navaho Veterans: A Study of Changing Values. Peabody Museum Papers, Vol. XLI, No. 1. Evon Z. Vogt. Cambridge, Mass.: Harvard Univ., 1951. 223 pp. \$3.00.

Three Navaho Households: A Comparative Study in Small Group Culture. Peabody Museum Papers, Vol. XL, No. 3. John M. Roberts. Cambridge, Mass.: Harvard Univ., 1951. 87 pp.; 14 plates. \$3.00.

Econometrics. Gerhard Tintner. New York: Wiley; London: Chapman & Hall, 1952. 370 pp. \$5.75.

Méthodes et Réactions de l'Analyse Organique: Déterminations Générales et Recherches Fonctionnelles. Vol. I: *Méthodes de l'Analyse Générale*. M. Pesez and P. Poirier; Léon Velluz, Ed. Paris: Masson, 1952. 276 pp. 1800 fr.

A Textbook of Evolution. Edward O. Dodson. Philadelphia-London: Saunders, 1952. 419 pp. \$5.00.

Secret Cities of Old South America: Atlantis Unveiled. Harold T. Wilkins. New York: Library Pub., 1952. 468 pp. \$6.00.

Radio Antenna Engineering. Edmund A. Laport. New York-London: McGraw-Hill, 1952. 563 pp. \$9.00.

The Chemistry of Organic Compounds: A Year's Course in Organic Chemistry. 4th ed. James Bryant Conant and Albert Harold Blatt. New York: Macmillan, 1952. 655 pp. \$5.90.

Introduction to Geology (Branson and Tarr). 3rd ed. Rev. by Carl C. Branson and W. D. Keller. New York-London: McGraw-Hill, 1952. 492 pp. \$5.50.