

Book Reviews

Industry and Tropical Health. Proceedings of the First Industrial Tropical Health Conference, sponsored by the Harvard School of Public Health, December 8-10, 1950. Boston: Harvard School of Public Health, 1951. (Published for the Industrial Council for Tropical Health.) 292 pp. and appendix. \$10.00.

The First Industrial Tropical Health Conference was organized by the Harvard School of Public Health to bring together a selected group of industrial physicians experienced in tropical medicine and tropical public health and executives of various corporations having extensive tropical operations. It was believed that exchange of information and discussion of problems might be helpful to the organizations concerned and contribute to a pattern of education in industrial medicine oriented to the special problems of the tropics.

The book is arranged in 12 sections corresponding to the conference sessions. Among the topics included are discussions of industry and health in the Middle East, in tropical Africa, in the Far East, and in tropical America; and organization of industrial health services, nutrition, infectious diseases and problems of control, and industrial health hazards. The contents are well indexed.

This volume is a unique and valuable contribution, since it presents the views of authoritative individuals in tropical corporation management and those of physicians experienced in the development and administration of industrial medical services in the tropics. As one of the essayists points out: "Tropical industry differs from domestic industry in that labor and environment are substandard. . . ." And, "Stabilization of labor is the key to a successful . . . venture in the tropics." Accomplishment of this objective is beset by many difficulties. Communicable diseases and malnutrition in many areas create both shortage and physical inefficiency of labor. Illiteracy and social anthropologic factors create barriers to the acceptance of the scientific approach to problems of treatment and prevention. Frequently, national laws or demands of labor complicate the development and operation of an industrial medical service. It is not surprising that costs are high—in the case of one corporation approximating 4.5 per cent of the tropical payroll—nor that these costs have been a deterrent to the development of effective programs in tropical industrial medicine.

Emphasis is placed on the fallacy of separating curative and preventive medicine and upon the essential importance of the latter. Uncontrolled curative medicine rapidly becomes prohibitively expensive. It is pointed out that the ultimate objective of a tropical medical service for industry should be a cooperative relationship among government health agencies, professional associations, and industry to improve sani-

tation and health conditions and facilities for medical care in the area.

This volume represents a significant contribution to the growing field of tropical industrial medicine—a complex spectrum of exotic medicine, epidemiology, sociology and anthropology, economics, and business administration. It is regrettable that certain of the topics could not have been amplified and additional ones included, but one hopes that, in accordance with the concept of the sponsors, it will lead to further development of this field. The book will well repay study by the physician interested in tropical industrial medicine as well as by the management of industry operating in the tropics.

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Elsevier's Encyclopaedia of Organic Chemistry: Carboisocyclic Condensed Compounds, Series III; Tetracyclic and Higher-Cyclic Compounds except Steroids and Triterpenes, Vol. 14, Suppl. F. Radt, Ed. Amsterdam-Houston: Elsevier Pub., 1951. 938 pp.; 113 pp. index. \$88.00; set subscription price, \$66.00.

Elsevier's Encyclopaedia of Organic Chemistry is a compilation in English on the chemical and physical properties and on the most important physiological properties of organic compounds. Several volumes have already appeared since 1946, and previous reviews have described the general outline of the planning and mode of presentation. The authors have wisely confined their initial efforts in this tremendous undertaking to Series III, Carboisocyclic Condensed Compounds, because of the general interest in such compounds and the lack of adequate assemblage of information in this area.

The present volume is the first of two parts of a supplement to Volume 14 on Tetra- and Higher-Cyclic Compounds, which appeared in 1946. Volume 14 covered the literature through 1936. This part of the supplement embraces all the literature between 1937 and 1946, including patents, on tetra- and higher isocyclic compounds, with the exception of steroids and triterpenes, which will form the contents of the second part. Investigations that involve a change of structure of substances previously described in the literature are considered up to 1951. The number of pages of literature between 1937 and 1946 on this subject is many times the number prior to 1937; the number of ring systems has increased 60 per cent. The expansion of research in this field may be realized by noting the 938 pages devoted to this part of the supplement as compared with the 611 pages in the main volume. The subject and formula indices cover all entries in the main as well as in the supplemental volumes.

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.