

to certain details of bionomics and morphology or to bringing the information up to date. For example, after giving Dr. Smith's observations on the hatching of salt-marsh mosquito eggs, no reference is made to more recent discoveries of the factors that influence hatching. Taxonomic characters of more value than those provided are frequently omitted, and the subject matter on the different species is somewhat unevenly presented.

In a short chapter (18 pp.) on "The Principles and Detailed Procedure of Mosquito Control," the author summarizes, all too briefly, the subject on which he can speak with the greatest authority, having led the work in New Jersey for 30 years or more. His nine basic principles and his opinions on salt-marsh ditching are of great value. A short chapter on "Larvicides" is devoted chiefly to pyrethrum extract emulsion, as developed in New Jersey, and its use in the protection of outdoor gatherings against adult mosquitoes. Petroleum oils and iron or copper sulphate are the only other materials mentioned. No consideration is given to recent developments in the use of DDT.

The remaining chapters cover the subjects of environment, history of mosquito control in New Jersey, mosquito repellents, laws relating to mosquito control, and the economic effect of mosquito reduction. There is a short bibliography of 30 titles, most of which are of early work.

While the volume is local in content and little attention is given to methods employed or work done elsewhere, there is considerable material of general interest.

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Table of arc sin x and Tables of associated Legendre functions. Lyman J. Briggs, Arnold N. Lowan, et al. (Prepared by the Mathematical Tables Project, conducted under the sponsorship of the National Bureau of Standards.) New York: Columbia Univ. Press, 1945. Pp. xix + 121; xlv + 306. \$3.50; \$5.00.

These are two further welcome volumes of the series prepared under the auspices of the WPA of New York City and the OSRD.

The first of these volumes tabulates $\sin x$ to 12 decimal places, for values of the argument differing by 0.0001, and to permit interpolation, tabulates also second differences; for x near unity this plan is somewhat modified to insure more accurate interpolation. Auxiliary tables are provided for convenience in the use of the volume with interpolation.

The second of these volumes tabulates the functions $P_n^m(x)$, $Q_n^m(x)$, and their first derivatives, for integral and half-integral values of n , integral values of m , and real and pure imaginary values of x , and also tabulates the functions $P_n^m(\cos \theta)$ and their first derivatives for integral values of n and m . In the main, tabulations are to six significant figures, for $1 \leq n \leq 10$, $0 \leq m \leq 4$, and $1 \leq x \leq 10$. Tabulation of the derivatives mentioned is especially noteworthy, having been largely neglected in previous tables.

The present volumes are highly useful tools in the current development of mathematics in the direction of nu-

merical computation and physical application. The sponsor, Dr. Briggs, and the director, Dr. Lowan, are again to be congratulated on their planning, preparation, and publication.

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The university at the crossroads. Henry E. Sigerist. New York: Henry Schuman, 1946. Pp. viii + 162. \$2.75.

It is much the fashion these days to write about university education. Many more people are interested, since many more people are concerned than was the case even a few years ago. In addition, the furor over the peculiar Thomistic revival at Chicago has excited much argument over the purposes and methods of university education.

Dr. Sigerist has been disturbed by the impact of the current cultural revolution, as exemplified by the war, on university, and particularly on medical, education. The title essay of the 12 included in this small volume was written in 1944 for the *Bulletin of the History of Medicine*, in which eight others of the essays were first printed. Two, "Failure of a Generation" and "The Social Sciences in the Medical School," are published for the first time in this volume.

A collection of essays of this sort is bound to be uneven, but all illustrate well Dr. Sigerist's crusading spirit. While there is a strong pessimistic tone to most of the essays, it is applied chiefly against the quite well-known defects of current university education in the United States. Dr. Sigerist seems to think that all will be well if university professors and university-trained people will take a more active part in governmental and social affairs.

Much interesting autobiographical material is offered in the essay entitled "University Education," delivered in 1939 at Johannesburg. In this address, Dr. Sigerist reveals his interest and his prejudices. He also indicates the various men and circumstances which have so profoundly influenced him.

Five of the 12 essays deal with medical educational problems, but in a manner illustrating the way by which medical education may be correlated with a general cultural training. Dr. Sigerist pleads vigorously for an appreciation of the classic contributions on which our culture rests and urges an extension of research into their social and cultural applications.

As director of the Institute for the History of Medicine at The Johns Hopkins University, Dr. Sigerist is in a strategic position to influence cultural trends, particularly with reference to one of the great professions. He need not be disappointed at the relatively slow acceptance of his ideas and proposals. On the contrary, he may take much satisfaction in his own stimulating contributions and in the solid achievements of his many pupils. He is himself exemplifying the reasonable sort of a path which the university may profitably take when it finds itself at a crossroads.

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