

### Statistics

An Intermediate Text Book. By Dr. N. L. Johnson and H. Tetley. (Published for the Institute of Actuaries and the Faculty of Actuaries.) Vol. 2. Pp. xi+318. (Cambridge: At the University Press, 1950.) 20s. net.

STATISTICS is now an important part of the course of training for actuaries. The Institute of Actuaries and the Faculty of Actuaries have consequently arranged for the preparation of this book for the use of their students.

This second volume, which completes the work, has three chapters on the general theory of distribution functions, their application to particular types of sampling and the multinomial distribution (leading to  $\chi^2$ ). There follow chapters on the general theory of statistical tests and estimation, stratified population and variance analysis, correlation analysis and curve fitting, and graduation. The exercises at the end of each chapter and the end of the volume are numerous and well chosen. That the book emanates from the Cambridge University Press is sufficient guarantee of the quality of the printing; and the price, in present circumstances, is quite reasonable.

The defects of the book—it is perhaps scarcely fair to describe them as such—are inevitable in any attempt to compress statistical theory into a comparatively brief compass at the University Intermediate level. There is only space, for example, for two and a half pages on least-squares estimation, and less than that for maximum likelihood. On the other hand, there are sections on topics which have not yet found their way into standard texts, such as the supplementation of the  $\chi^2$  test by tests of changes of sign. Notwithstanding the limited objective of the book, it should also form a useful Intermediate text for non-actuarial students.

### Trace Elements in Plants and Animals

By Prof. Walter Stiles. Second edition. Pp. xi+189+8 plates. (Cambridge: At the University Press, 1951.) 15s. net.

THE demand for a concise and reliable account of the part played by trace elements in the nutrition of plants and animals is shown by the issue of a second edition of Prof. W. Stiles's useful book on the subject. The text remains for the most part unchanged, though a number of supplementary references and a photograph illustrating molybdenum deficiency in cauliflower have been included. In view of the rapid progress that has been made in this field it seems a pity that the opportunity was not taken to extend the section on molybdenum deficiency in plants a little further, and that no references later than 1948 have been quoted. K. W.

### Flora of Egypt

Vol. 2: Angiospermae, part Monocotyledons; Cyperaceae—Juncaceae. By Vivi Täckholm and Mohammed Drar. (Fouad I University: Bulletin of the Faculty of Science, No. 28.) Pp. xii+547. (Cairo: Fouad I University Press, 1950.)

NINE years have elapsed since the publication of the first part of this work. The second volume covers the sedges, palms, aroids, rushes and some related families. The Flora is considerably more comprehensive in scope than most works of its kind, for, in addition to the systematic account of indigenous plants, cultivated species and many garden plants are included. All plants of importance in Egypt, either because of the uses to which they are—or used to be—

put, or because of their connexion with ancient cultures, receive an unusually detailed treatment which embodies much historical, archaeological and other information of interest and value. There are also copious references to literature relating to all the aspects discussed. Particularly detailed accounts are given of papyrus and date palm, in which the importance of these plants is described in relation to art, literature, religion and ancient industries. It is therefore not surprising to find that, in this volume of more than 500 pages, only seventy native species are included. The account of the palm family, for example, runs to nearly 200 pages, though only the date, dom and argoun palms are extensively grown and are important species, and only one of these is indigenous. The many other exotic species included are all cultivated plants. It is greatly to be hoped that future parts will appear at more frequent intervals, and that it will be possible to complete the work on the scale and with the thoroughness foreshadowed by the first two volumes. W. A. S.

### Die naturwissenschaftliche Illustration

Ein geschichtlicher Überblick. Von Claus Nissen. Pp. 64. (Bad Münster am Stein: Lothar Hempel Verlag, 1950.) n.p.

THIS little book surveys a very large subject—the history of animal and plant illustration from classical to modern times. Such a work must deal with questions of art, illuminated MSS., the evolution of the printed illustration, the woodcut, line engraving and etching on copper, lithography, and finally the numerous processes based on photography by which illustrations in black and colour can be produced. It is obvious that a small octavo booklet of only fifty-six pages can only explore so vast a field in the merest outline. Dr. C. Nissen's contribution, however, will be very useful to the beginner in setting him on the road to more detailed information. Skeleton bibliographies are added. F. J. C.

### The Subject Index to Periodicals, 1949

Issued by the Library Association. Pp. xi+296. (London: Library Association, 1951.) 105s.

SINCE the outbreak of war in 1939, the "Subject Index to Periodicals", of which the 1949 volume has now been published, has dealt only with periodicals in the English language, which are published in Great Britain, the Dominions and the Colonies, excluding Canadian periodicals, which with American periodicals are adequately covered by the H. W. Wilson Company's indexes. Highly specialized periodicals in science or technology are also omitted and the "Subject Index" thus caters chiefly for the general reader, offering him a key to the contents of many periodicals which are not indexed elsewhere. Among these are some devoted to subjects of limited appeal such as stained glass or mountaineering, and also the proceedings and transactions of local societies concerned with antiquities, natural history, etc. The "Subject Index" is compiled on the plan of the 'dictionary catalogue', all entries being in simple alphabetical order. Articles relating to people, places, institutions, etc., are placed under the proper names in question, while 'subject' articles are entered under simple, practical headings, which describe, as specifically as possible, the material in question. Cross-references are freely used for linking up related subjects, and where necessary titles are elucidated by admirable explanatory annotations. The production and layout maintain the high standard set by previous volumes of the "Subject Index".