is likely to increase rapidly, making the task of the compiler even more difficult than it is at present.

An additional piece of information, which might well be included in the tables and graphs, is the method of measurement used. Since many methods are used quite widely, a simple coding system should be possible.

It was a disappointment to find that the supplement to the compilation, which was made available to members of the Geneva Conference, was not attached to the present publication. This supplement included data taken from all sources on the cross-sections of the fissile isotopes, whereas the main compilation covers American sources only. Consequently, the supplement is invaluable to those interested in atomic energy. (The book, including the supplement, is also available in paper covers from the Government Printing Office, Washington, D.C., price 3.50 dollars.)

In conclusion, this well-presented compilation is as essential as its predecessors to everyone working with neutrons, and we all look forward to many future editions coming from the same source.

P. A. EGELSTAFF

THEORETICAL STATISTICS

Introduction to Mathematical Statistics
By Prof. Paul G. Hoel. Second edition. (Wiley Publications in Statistics.) Pp. xi+331. (New York : John Wiley and Sons, Inc. ; London : Chapman and Hall, Ltd., 1954.) 40s. net.

THIS is one of the best text-books on theoretical statistics at the undergraduate-level. The first edition was good, but this second edition has been revised, extended and greatly improved. It is very suitable for first-year students with a knowledge of elementary calculus and some general acquaintance with the scope of statistical method. There are numerous exercises, the answers to which can be obtained separately.

Prof. Hoel breaks away from the traditional course of development. An initial chapter on probability introduces the idea of a sample space on p. 4, before frequency distributions or their summarizing measures have been discussed. Models, testing hypotheses and estimation are dealt with in the following chapter. This sounds like putting the cart before the horse and, logically, perhaps it does so ; but from the teacher's point of view there is much to be said for it.

The book then swings back more or less on course and deals with frequency distributions, sampling theory, correlation and regression, goodness of fit, the general principles of testing hypotheses, small sample distributions, design of experiments and non-parametric methods. The treatment throughout is fresh and clear. Prof. Hoel has succeeded in teaching the essential ideas without much mathematical complication and, at the same time, in providing enough exercises to enable the student to feel that he has mastered the details of the technique.

A few suggestions for further editions : would the author not consider 'theoretical statistics' a better expression than 'mathematical statistics', and 'distribution-free methods' better than 'non-parametric methods' ? Moreover, could he not say something about the manipulative algebra of expectations and about generating functions, two subjects which, in my experience, give the greatest trouble to beginners ?

M. G. KENDALL

THEODORE ROOSEVELT AS NATURALIST

Theodore Roosevelt's America
Selections from the Writings of the Oyster Bay Naturalist. Edited by Farida A. Wiley. (American Naturalists Series.) Pp. xxiii+418. (New York : The Devin-Adair Company, 1955.) 5.75 dollars.

THIS book is one of a series devoted to commemorating such famous American naturalists as were citizens of the United States, by publishing selections from their writings. Theodore Roosevelt was a most versatile as well as a most remarkable man, and an intense love of wild Nature was one of his greatest and most lasting interests. His knowledge of natural history was wide, and though he studied natural sciences, including zoology, for four years at Harvard, his defective eyesight compelled him to abandon the idea of making science his life-work. He entered politics instead, but after three years went on a hunting trip into the Bad Lands of the Dakotas to recuperate his health. He was so fascinated with the region, and with the life of the cattlemen, that he bought two ranches where he lived for the next two years as a stockman. Thereafter he returned to politics ; but his experiences in North Dakota had left a deep impression on him and, indeed, formed a vivid background to the rest of his life.

Most of this book consists of Roosevelt's own writings about the Bad Lands, and the last two chapters deal with his expedition through tropical Brazil. The introductory matter by several hands entitled "Roosevelt as a Naturalist" on the whole does little service to his memory ; but the subsequent chapters from the pen of the great man himself are very different, and at once arouse the reader's interest. There is probably no better account of life on a cattle ranch in the 1880's than Roosevelt's—he writes with sympathy, knowledge and understanding. His style is simple and direct, and gives a most vivid picture of the country with its human and other wild inhabitants. His accounts of the game animals, the birds, and the smaller creatures are first class, and his yarns about his cowboys and about his adventures with 'bad men' and other desperadoes are thrilling. It was a hard strenuous life, and he lived and enjoyed it to the full.

It was in later life that Roosevelt undertook his South American expedition, which turned out to be a laborious and at times a hazardous journey ; he was perforce more of a passenger than he would have wished to have been. His account of it is interesting, but it has not the vitality of the chapters on the old days in Dakota when he was in full health and vigour.

A chapter criticizing the Thayers' book on revealing and concealing coloration in the animal kingdom, originally published many years ago, is of little present interest—the Thayers' principle of counter-shading is generally agreed, and all their fantastic nonsense has long ago been forgotten. A short chapter "In Defence of our Natural Heritage" reminds the reader that Roosevelt was one of the great pioneers of conservation, which has made so much progress all over the world since his day.

The book is decorated with most attractive silhouette designs by Ugo Mochi ; but it is marred by numerous misprints that ought to have been eliminated by competent proof-reading.

L. HARRISON MATTHEWS