was so filled with snow that it was practically impossible to see any objects through it as it passed my path. This may not be of any great interest, but I don't recall reading or hearing about whirlwinds in the winter-time, which accounts for my calling the matter to the attention of the readers of SCIENCE.

H. D. MATTHEWS

MINNEAPOLIS

"TITANS OF THE DEEP"

I WOULD like to correct a rather vital misconception in regard to the film now running in New York City and elsewhere in the country, called "Titans of the Deep." This is being credited to me and my associates, whereas neither I nor any member of my staff of the Department of Tropical Research, nor any one connected with the New York Zoological Society, had anything to do with it.

At the very beginning are shown a few authentic shots of the Bathysphere, but all the rest of the film is the work of Mr. Otis Barton, and was taken in Panama at his own expense and with no relation to the Bathysphere. I never saw any of it until it appeared on a New York screen. Together with my staff, I would like completely to dissociate myself from this motion picture and to have it known altogether as the work of Mr. Barton. In a recent letter he tells me he has been trying to accomplish this correction, but without success.

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SCIENTIFIC BOOKS

STATISTICAL METHODS

Statistical Methods—Applied to Experiments in Agriculture and Biology. By GEORGE W. SNEDECOR. Collegiate Press, Inc., Ames, Iowa, 1938. xiii + 388 pp. Price $3.75.

IN the preface, the author writes: "It is a pleasure to acknowledge the leadership of Professor R. A. Fisher. . . . By his residence as guest professor in mathematics at Iowa State College as well as through his writings he has exercised a profound influence on the experimental and statistical techniques of the institution." It is not surprising, then, that Snedecor's book should resemble R. A. Fisher's "Statistical Methods for Research Workers" more than it resembles the usual text-book on statistics. And the appearance of a sixth edition of the Fisher book (1936) testifies to the assistance that such a book can render to investigators, especially to those working in biological fields. Fisher's book is a reference book, almost devoid of mathematical proof, giving by detailed examination of numerous problems some of the most important principles of statistical research, with special emphasis upon significance tests. Snedecor's book proceeds along the same general lines, but the latter is a little more informal, it devotes a little more space to making plausible what it does not attempt to prove, and it inserts 417 examples, enough to make it a practical text-book as well as a reference book.

The following three problems taken from the first three chapters will illustrate the type of problem in which the author is most interested:

Example 1.10—An entomologist was trying to adjust the concentration of a spray so as to kill 50% of the flies in a container. Having got what seemed to be a satisfactory mixture, he sprayed a batch of 128 flies, killing 55%. Show that this is not a significant deviation from the 50:50 expectation. 2.30—Assuming that the coefficient of variation of yields in field plot tests with wheat is usually near 5%, would you be surprised if told that in an experiment where the yield was 25 bushels per acre, the standard deviation of plot yield was 0.5 bushel per acre? 3.17—An agronomist interested in the effect of superphosphate on corn yield tried adding the fertilizer to a treatment of manure and lime. Five pairs of plots were tested. The plots with superphosphate yielded 20, 6, 4, 3 and 2 bushels per acre more than their parallels. Was the value of superphosphate demonstrated?

The book contains a number of useful tables for statistical computations. Unfortunately, these are imbedded in the text, instead of being placed in an appendix. Disregarding Table 1.3 as one row of Table 9.1, these tables appear as follows:

Page 58. Values of t at the 50%, 5% and 1% levels. Here t = (Computed average x—Theoretic mean x)/(Computed standard error of the average).

Page 89. Values of the ratio (Range)/(Theoretic standard deviation) for various sample sizes, n.

Page 133. Correlation coefficients at the 5% and 1% levels of significance.

Page 152. Ordinates of the normal curve (4 decimals).

Page 154. Cumulative normal frequency distribution (4 decimals).

Page 163. Chi-square at levels 99%, 95%, 50%, 30%, 20%, 10%, 5%, 1%.

Page 184–187. F = (Larger variance)/(Smaller variance) at 5% and 1%. (Applicable to problems in analysis of variance.)

Page 286. The 5% and 1% points for r and R. (Simple and multiple coefficients of correlation.)

Page 329. Coefficients and polynomials for terminal values and differences for fitting terms up to the seventh degree.

Page 351. Coefficients for sets of independent comparisons for 2, 3, 4, and 5 groups at equal intervals.