providing the conceptual framework for much of this work.

When the book first appeared, it received a quite critical review by S. O. Mast in *Science* [**93**, 619 (1941)]. In their preface to the Dover edition, the authors gracefully acknowledge both the justice of some of his factual comments and the extent of Mast's influence on their thinking. However, Mast was also concerned about anthropomorphic analysis of behavior and about the pernicious use of categories as causal agents ("Negative phototaxis takes it [*Littorina*] inward. . ."). As a general admonition to students of animal behavior, these concerns are as relevant now as they were at any time in the past. However, they are not appropriate comments on this monograph. Despite the fact that the quotation is drawn from their book (page 298), the sense and spirit of Fraenkel and Gunn's analysis seem wholly on the side of the angels in these matters.

The combination of wartime circumstances that made this a rare book as soon as it was published is explained by the authors. Dover is to be congratulated for rescuing an excellent monograph and for making it available at a price that should place it where it belongs—on the bookshelf of every biologist.

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Methods and Techniques

Clinical Research Design and Analysis in the Behavioral Sciences. Eugene E. Levitt. Thomas, Springfield, Ill., 1961. xxii + 199 pp. $8.50.

This book is quite frankly addressed to practitioners and clinicians who need to understand some aspects of research methodology and some of the statistical devices for dealing with research data. The term *behavioral sciences* in the title is somewhat misleading, for the book is really an attempt to discuss, in a general way, some problems in research design and some problems in the philosophy of science. It deals also with methodological considerations and with elementary statistics. The behavioral sciences are involved only in the sense that many examples are taken from areas of the behavioral sciences—and because the author seems to think that clinical research is related somewhat exclusively to areas of the behavioral sciences. As a matter of fact, his general statements about philosophy of science, methodology, and basic statistical techniques apply to many endeavors in the biological sciences, which are also of interest to some clinicians. It becomes, therefore, an effort to inculcate some rigor into the methods of defining research problems and a discussion of several related details—some techniques used in conducting an experiment, the conclusions one can draw from the experiment, and ways of reporting the results of research.

The author, Eugene Levitt, stresses in his preface that the book is a pragmatically oriented document; he calls it a "how-to-do-it-yourself cookbook," a fairly accurate description. Therefore he develops a somewhat arbitrarily concatenated sequence that includes the bits of knowledge and wisdom one accumulates from formal training in statistics, from courses in the philosophy of science, from designing and conducting research, and from efforts to accomplish a research objective. I feel that the accumulation of information presented is fairly extensive and essentially correct but that it is unlikely to provide a great deal of help for a person who has not struggled through some of the experiences described above. Anyone who has given serious thought to the problems discussed in the book and who, because his training has not been systematic and thorough, finds that he has lacunae of fact or understanding may well find that this book helps to fill in some parts of the jigsaw puzzle. However, it is not likely to be very useful to those with little sophistication or prior interest in the quantitative treatment of data, in the formulation of hypotheses, or in the rigorous conduct and interpretation of research.

The first eight chapters are an attempt to introduce some concepts of scientific inquiry, and they contain some information on statistical procedures as well. Chapter 9, a very simplified description of statistics, is limited to material that today is considered extremely elementary and does not go beyond zero order correlations and some tests of the significance of differences. After the discussion of statistics there is a short chapter on drawing inferences and conclusions and another on the mechanics of preparing a research report, which I feel is a bit superfluous.

One can offer no serious criticism of the book in terms of the correctness of its material, but one is a little disenchanted by the simplicity and the elementary nature of much of the discussion. At the same time the superficial handling of some fairly complex problems is disturbing. As I have already indicated, the self-made statistician and the student of behavior who has almost achieved an adequate proficiency in the use of such materials may find the book helpful; the real neophyte or the uninitiated may be somewhat bewildered, or even led to a false sense of confidence.

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Fiber Plants

The Wild Species of Gossypium and Their Evolutionary History. J. H. Saunders. Oxford University Press, New York, 1961. viii + 62 pp. Illus. $2.40.

Botanists familiar with *The Evolution of Gossypium and the Differentiation of the Cultivated Cottons* [Hutchinson, Silow, and Stephens (1947)] will welcome this new book, and they will find it a most useful supplement to the earlier work.

Part 1 consists primarily of drawings of the genus' 19 wild species that have 13 chromosomes. These drawings were made from living material under cultivation at Shambat in the Sudan. The fact that one artist is responsible for 18 of the illustrations makes them more useful for comparative purposes.

Short notes are also included on each of the sections into which the genus is divided cytogenetically. The genome classification of Beasley is followed.

The A genome is represented only by the *africanum* race of *Gossypium herbaceum*. Two African species comprise genome B. The three endemic Australian species make up genome C. The D genome is the largest and most valuable, with eight species and one variety found in Western, Middle, and South America. Five species of southwestern Asia and eastern Africa are assigned to genome E.