in the field of public health and in wildlife and zoological problems, due unquestionably to the stimulating activity of the organizations mentioned above.

Papers covering original research are not confined to these two subjects but are rather widely scattered throughout the book. This book will be valuable to all students working in or proposing to work in Alaska, since it contains reports of progress and historical résumés of previous research which will provide a good starting point for students in many fields.

IRA N. GABRIELSON

Wildlife Management Institute
Washington, D. C.

Small Particle Statistics. Gustav Herdan; with a guide to the experimental design of particle size determinations by M. L. Smith. Amsterdam–Houston: Elsevier, 1953. 520 pp. Illus. $12.00.

The subtitle of this book is "An account of statistical methods for the investigation of finely divided materials—with a guide to the experimental design of particle size determinations." This last guide (pt. v) is written by M. L. Smith and gives a comprehensive survey of the most important methods for determining the distribution of particle sizes with special reference to the errors which are specific to the different methods. The following methods are discussed in slightly more detail: the microscope method (ch. 18), sedimentation methods (ch. 19), permeability method (ch. 20), photo-extinction method (ch. 21), and adsorption methods (ch. 22).

The main part of the book is devoted to a discussion of the statistical aspects of particle size determinations. This subject plays an important role in cement, glass, ceramic, rubber, and linoleum industries, industries dealing with polymerized materials, soil science, and sedimentary petrography. The author has tried, and as far as I can judge, succeeded in developing his subject without assuming any prior knowledge either of statistics or of advanced mathematics.

Part I of the book deals with the determination of the fineness of solids. Chapter headings are: Particles in the Sieve and Sub-Sieve Size Range; Some Fundamental Concepts of Statistics; The Units of Particle Statistics and the Principles of Particle Size Measurement; The Distributions of Particle Sizes and Their Averages; Sampling Procedures for Particle Size Determinations; Some Standard Forms of the Distribution Function; Graphical Representation; Statistical Testing and Analysis of Differences Between Determination Results.

Part II describes the technological importance of the fineness of solids with the following chapter headings: Methods for Ascertaining the Relations Between Variable Characteristics of Materials; Testing the Dependence of Properties of Materials upon Particle Size by Correlation Methods; Fundamental Relations Between Particle Size and Other Characteristics of Materials as Particulate Matter; Physical and Chemical Properties of Materials in Their Dependence upon the Characteristics of These Materials as Particulate Universes.

Part III discusses how a specific fineness (ch. 13) and homogeneity (ch. 14) can be attained. In chapter 15 the inhomogeneity of polymers is discussed.

Part IV is entitled Principles of Statistics of Coarse Disperse Systems. Chapter 16 discusses the principles of statistical theory and chapter 17 the statistical design of investigations of particulate materials.

The book is extremely well written and seems to cover a large amount of ground. It is difficult to single out particular chapters but the most interesting, and probably the most useful, chapters seem to me to be the ones dealing with a discussion of the relative merits of different methods of determining particle size distributions (ch. 8), the chapter discussing correlation methods (ch. 10), the chapter describing how the molecular weight distribution curve of polymers can be found (ch. 15), and the chapter dealing with the statistical design of experiments (ch. 17). By far the weakest chapter to my mind is chapter 16 where the discussion lacks the sharpness and precision which characterizes the rest of the book.

It seems that the author has succeeded in producing a handbook for people working in the field and both he and the publishers can be congratulated. The production is excellent and extensive indexes and a list of principal symbols further enhance the usefulness of this volume.

D. TER HAAR

Department of Natural Philosophy
University of St. Andrews, Scotland

New Books

Professional People in England. Roy Lewis and Angus Maude. Cambridge, Mass.: Harvard Univ. Press, 1953. 284 pp. $4.00.

Astronomical Photoelectric Photometry. Symposium presented on December 31, 1951, at the Philadelphia meeting of the AAAS. Frank Bradshaw Wood, Ed. Washington, D.C.: American Association for the Advancement of Science, 1953. 141 pp. Illus. $3.75.

A Brief Survey of Modern Algebra. Shorter version of *A Survey of Modern Algebra.* Garrett Birkhoff and Saunders MacLane. New York: Macmillan, 1953. 276 pp. Illus. $4.75.

Ideologie und Forschung in der Sowjetischen Naturwissenschaft. Arnold Buchholz. Stuttgart, Germany: Deutsche Verlags, 1953. 126 pp.

Relativity and Reality. A re-interpretation of anomalies appearing in the theories of relativity. E. G. Barter. New York: Philosophical Library, 1953. 131 pp. $4.75.

Primates: Comparative Anatomy and Taxonomy; Vol. I: ***Strepsirhini.*** W. C. Osman Hill. New York: Interscience; Edinburgh: University Press, 1953. 798 pp. Illus. + plates. $12.50.

Physical Chemistry: For Students of Biology and Medicine. 4th ed. David Ingersoll Hitchcock. Boston: Little, Brown, 1953. 266 pp. Illus. $5.00.

Ways of Mammals: In Fact and Fancy. Clifford B. Moore. New York: Ronald Press, 1953. 273 pp. $3.50.

Man, Time and Fossils: The Story of Evolution. Ruth Moore. New York: Knopf, 1953. 411 pp. + index. Illus. + plates. $5.75.

Notions Élémentaires de Chimie Générale: A la Lumière des Théories Modernes. Paul Pascal. Paris: Masson, 1953. 550 pp. Illus. + plates. 3,600 fr.