

BOOK NOTICES

Weather

The publishers are to be congratulated on the attractiveness of "Weather"—the first of a forthcoming series of popular treatments on natural phenomena by Gayle Pickwell. The story of weather is vividly told in large pictures, supplemented by fascinating writing devoid of scientific terms and formulae. The book is for the layman and is not intended as a textbook for use in a technical course, although it should serve nicely as a supplement in Geography, Meteorology, and Climatology courses. Especially fine are the picture clouds, lightning, dew and frost. The author's enthusiasm for fine pictures has resulted, however, in the inclusion of some subjects remote from the theme of the book. Engraving, printing, and binding are superb.—*Paris B. Stockdale.*

Weather, by Gayle Pickwell. x+170 pp. New York, McGraw-Hill Book Company, Inc., 1938. \$3.00.

Heredity for You and You and You

This book is the first attempt at a popular presentation of human inheritance since Popenoe's "The Child's Heredity," published in 1929. The author is a layman in the field of genetics, but is a writer of considerable experience. He is gifted indeed in his ability to present technical material in an absorbing manner, for his book is a gem of writing. He has been assisted throughout by a geneticist, Dr. Morton D. Schweitzer, of Cornell Medical College, so that the book is accurate in most of its details. A delightful series of cleverly drawn diagrams presents the salient facts in striking form. The diagrams tend somewhat towards oversimplification; this is rectified to a certain extent by the accompanying text. It is to be regretted that a book so well done in other respects should contain so many teleological statements. The author's interest and enthusiasm completely capture the reader, and the book will be read as eagerly as any novel. It is highly recommended to those who desire an introductory acquaintance with their own inheritance and that of their fellow men.—*L. H. S.*

You and Heredity, by Amram Scheinfeld. xvii+434 pp. New York, Frederick A. Stokes Co., 1939. \$3.75.

Plant Genetics

The new second edition of Sansome and Philp is, in the opinion of the reviewer, the best reference available for teachers of advanced plant genetics. Chapter I contains a review of mitosis and meiosis, and of the various simple types of Mendelian inheritance. Chapter II deals with linkage and the most recent interpretations of chiasmata and crossing over. Chapter III takes up the various theories regarding the constitution of the gene and recent findings relative to position effects. Chapter IV, on Variegation and Chimeras, appears for the first time in the Second Edition. Chapters V, VI and VII are devoted to polyploids, and Chapter VIII is entitled Euploids and Aneuploids. Chapter IX discusses various kinds of chromosomal aberrations under the heading of structural hybridity. Chapter X deals with interspecific hybridization, discussing numerous examples. Chapter XI discusses plant genetics in relation to taxonomy and evolution. An excellent bibliography of the literature on plant genetics is included.

The book is perhaps too technical for a text, even for advanced students of plant genetics. We heartily recommend it, however, for the purpose for which it was primarily intended, a reference for the teacher and the research worker in plant genetics.—*D. C. Rife.*

Recent Advances in Plant Genetics (Second Edition), by F. W. Sansome and J. Philp. xi+347 pp. Philadelphia, P. Blakiston's Sons & Co., 1939.

Light

The seventh edition of an intermediate text book on light by R. A. Houston will undoubtedly receive the acclaim of many teachers in physics. The new edition has brought the already well established text up to the present time and it contains many new colored plates and much new material.

Part I is substantially unchanged, but Part II contains some rearrangement of material and three new colored plates. In Part III the ultraviolet and infrared spectra are discussed together, the material on the theory of spectra is rewritten and enlarged upon. The Chapter XVII is now devoted to X-rays and photo-electricity. It has to a large degree been rewritten and it contains additional illustrations and plates. A chapter on quantum theory has been inserted and now Chapter XIX contains much new material which was a portion of Chapter XX in earlier editions. In Part IV there are added to the end many new and useful tables. To the many who have come to regard Houston's *A Treatise on Light* as a standard text, the new edition is a pleasant surprise.—*H. H. Nielsen.*

A Treatise on Light (7th Edition), by R. A. Houston. xi+527 pp. London, New York, Longmans, Green and Co., 1938. \$4.50.

Quantitative Analysis

The educational philosophy of this book is contained in the following quotations from the preface. "It has been the aim of the authors, in preparing this work, to apply the principles of Physical Chemistry to the theory of Quantitative Analysis in a detailed and thorough manner. In stressing this point of view, it has not been forgotten, however, that the two other aspects of the subject, namely, technique and methods, play an equally important part in the education of the analyst."

"The order of presentation has been carefully considered and is as follows: (1) precision, (2) weighing, (3) measurement of volumes, (4) neutralization, (5) solubility product, (6) oxidation-reduction, (7) electrodeposition, (8) evolution and measurement of gases, (9) electrical conductance, and (10) photometry." The historical division into gravimetric and volumetric methods has not been employed.

This is an excellent book. It contains a full measure of theory and the techniques and details of the methods of analysis are well done and are accompanied by numerous citations from original papers. At the end of each chapter is a list of problems. There is a special chapter on organic precipitants and solvents and a long chapter on photometry. This last is mostly theory, and seems out of balance with the rest of the book. In the opinion of the reviewer the general techniques and methods of colorimetry and turbidimetry would have been better than so much theory. However, the reviewer heartily commends the book to students of analytical chemistry.—*C. W. Foulk.*

Inorganic Quantitative Analysis, by Harold A. Fales and Frederic Kenny. Second edition. xiii+713 pp. New York, D. Appleton-Century Company, Inc., 1939. Price, \$4.00.

Colchicine and Polyploidy

The first paper on the use of colchicine in producing polyploidy in plants was published by Blakeslee and Avery in 1937. Because of the great possibilities, which the use of colchicine promises to the plant geneticist and plant breeder, interest in the nature of colchicine and its effects on plants has become widespread. Within the last two years dozens of articles have appeared dealing with colchicine and artificial polyploidy.

A new pamphlet has been published by the School of Agriculture of Cambridge, which summarizes our present day knowledge of the action and use of colchicine in the production of polyploid plants. A bibliography of the literature on colchicine is included. The pamphlet is a sequel to a former pamphlet entitled "The experimental production of haploids and polyploids." Both pamphlets are valuable references for the plant geneticist and practical plant breeder.—*D. C. Rife.*

The action and use of colchicine in the production of polyploid plants, by J. L. Fyfe. Imperial Bureau of Plant Breeding and Genetics, Cambridge, England, 1939.