practice of selective registration by the Columbia Sheep Breeders Association since its organization in 1941, but this program may be too recent to permit critical evaluation. The chapter on sire indexes has been revised considerably. The book is well printed and bound. The subject index appears to be adequate.

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Correlation of cycles in weather, solar activity, geomagnetic values, and planetary configurations. (1st ed.) Maxwell O. Johnson. San Francisco: Phillips and Van Orden, 1946. Pp. viii + 149. (Illustrated.)

This book consists of numerous tables and graphs of rainfall, sunspots, planetary configurations, and other data, with comments on the results. The author is convinced that various cycles of considerable lengths in years, which are related to configurations of the planets, are demonstrated. He attributes the cycles in terrestrial phenomena to cycles in solar variation, and these solar cycles to electric or magnetic influences of the planets. His object in all this extensive computation and study is to find sufficiently reliable cycles in terrestrial phenomena to be of real value in forecasting yields of crops.

My own belief in the reality of certain periodicities in solar variation inclines me to hope that predictions of value may eventually be possible from studies of them. I regret that all of Mr. Johnson's data are yearly mean values. I think that it is desirable to have a more detailed basis, using monthly values, for the solar periodicities I accept are not multiples of years.

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Statistical methods: applied to experiments in agriculture and biology. George W. Snedecor. Ames, Ia. Iowa State College Press, 1946. Pp. xvi + 485. $4.50.

This is the fourth edition of this well-known work, which has been widely used in the fields of agriculture and biological research since its first appearance in 1937. The general order of presentation is the same as before: simple variation and correlation, some large sample theory and more complex cases of chi-square, analysis of variance and covariance, multiple and curvilinear regression, and more complex concepts. There has been considerable minor rearrangement, and new emphasis has been placed on sampling, fiducial limits, estimation, and components of variance. The format is somewhat more attractive than in previous editions.

The book begins with several new sections on sampling of attributes, considerably more imposing than the former very elementary opening. A table of fiducial limits for binomial material is introduced (its theory being left to Chap. 16). There is also a new and useful table of random numbers. Some of the ideas brought out in the former Chapter 1 are then developed. Other chapters show less difference from former editions, but in all there are changes. Graphic tests of significance

are omitted from Chapters 2 and 4, and mathematical tests are treated more exhaustively. Fundamentals of regression and correlation are more fully discussed, and the Z-transformation is introduced. Chapter 9, on chi-square, contains some material originally in Chapter 1, as well as some new material. The chapters on analysis of variance contain material on basic assumptions, components, and disproportionate frequencies, not in older editions. Later chapters have fewer changes, but there is more attention to Gauss multipliers and more detail in discussion of single degrees of freedom, while the section on errors of "betas" is omitted. An obvious error in Example 14.7 is retained. Some familiar problems and sections are omitted and some new ones introduced.

These changes show the influence of development in the knowledge of statistics and of the work of associates on the strong staff at Ames. The book retains many of the characteristics of earlier editions. The informal language with its personal pronouns, adding to readability; the effort to develop logic "painlessly"; the presentation of tables in a form to appeal to experimenters more than to mathematicians; the strong practical emphasis and wealth of practical problems are all there. Analysis of variance is strongly emphasized, and other techniques are related to it. The close relation of the author's laboratory to experimental work in various fields is well reflected. Difficult questions are handled in an apparently easy manner, reversing the practice in some texts.

The changes superimposed on the former development have made logical outlining a little difficult. The text is definitely more valuable as a reference than earlier editions and seems more difficult to adapt to teaching. In studying and using the text, the scientific worker will feel anew the influence of the modest and unselfish work of the author and his associates, which has already contributed so much to progress.

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Organic preparations. **Conrad Weygand. New York: Interscience Publishers, 1945. Pp. xiii + 534. (Illustrated.) $6.00.**

This book, authorized by the Alien Property Custodian, is an English translation and condensation of *Qrganisch-chemische Experimentierkunst,* which was published in 1938 by J. A. Barth in Leipzig. Conversion to the English idiom is satisfactory, and indeed the publisher's Preface cites nine persons as concerned in this task.

Only the second part of the three subdivisions of the original has been translated, the other sections, concerned with materials and operations (Pt. I) and chemical analysis and physical characterization (Pt. III), having been omitted. The part translated is that entitled "Reaktionen" in the German edition. The problem of classifying organic reactions and of correlating them with laboratory practice is ever a difficult one. Prof. Weygand elected to make a classification based upon the type of bond formed. This divorces the classification from the conception of functions and their reactivity, but probably gives a more systematic treatment of collective synthetic methods. One advantage of such an arrangement is that the classification of reactions by the name of their discoverer or, as is more often the case, by that of their promoter, is distinctly subordinated. Many examples of actual laboratory procedures taken from the available voluminous literature are cited. Condensation has been effected in the translation by omitting the details but giving the references to procedures in "Organic Syntheses."

The Index, prepared by Mrs. Lucia Dawe, is greatly improved and extended from that of the German text, and the detailed Table of Contents aids in locating a particular reaction.

Apparently little effort has been made to revise the book to 1945 (excepting references to other books and to Organic Syntheses, the reviewer counted only five literature references beyond 1937), and it therefore constitutes an addition to the library of a book already available in an idiom with which an organic chemist must perforce become familiar. The book will, however, serve a useful purpose for students of organic chemistry who wish to familiarize themselves with organic synthetic methods from either a theoretical or practical standpoint. Many students will use the present translation who would veer from the German edition. The book is perhaps of more value for such a purpose than as an authoritative reference book on synthetic procedures. For example, the little section entitled "Ethers of Sugars" (pp. 165–168) is pitifully incomplete, and actually most of this small space is devoted to glycosides, which are not ethers at all, but acetals. The section on glycol-splitting reagents (pp. 454–456) is likewise inadequate from the modern standpoint.

Nevertheless, this translation will be a valued addition to our American libraries. Its appearance moves the reviewer to pose a problem. Is this book (and others like it) perhaps an intermediate phase in a future trend away from German to English supremacy in the organic monographs and texts? If so, a major task awaits the English-speaking authors, and at any event the vast accumulation of past work in German will still require familiarity with this difficult language.

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Scanning Science—

An Anthropological Club for informal discussion was formed in New York on March 4th. Some fifteen students of anthropology met at the house of Dr. Franz Boas and discussed the recent works on children and child psychology by Sully, Baldwin and Chamberlain, the books being reported on by Prof. Giddings, Dr. Frrand and Dr. Boas, respectively. No formal organization is proposed at this time.

—13 March 1896