Arrangement of genera is alphabetical under Divisions of the Plant Kingdom. Representative species of genera are included with a concise, descriptive text describing key characters. No keys to aid in identification are included. A chapter on "New Methods in Physical Cell Research and their Application in Studies of Pollen Grains and Spores," contributed by B. M. Afzelius, and another on "The Cutting of Ultrasound Sections," by J. Radwan Pragowski, will be useful to workers preparing materials for electron polarization, X-ray diffraction, ultra-violet, and interference microscopy.

SOILS: AN INTRODUCTION TO SOILS AND PLANT GROWTH


The author has included in this introductory text a discussion of a wide variety of topics. The subject matter is divided into two general areas; Part I: Fundamentals of Soil Science; Part II: Applied Soil Science. In Part I, the author discusses the conventional topics included in most soils texts of this level. The approach is simple and the subject matter is presented in an ABC sequence. In Part II, he discusses the commonly accepted practices of soil fertility and management with expanded sections on specific geographical and climatological areas.

The book is exceptionally well illustrated and printed in a very readable fashion. If one is teaching a beginning soils course, which is organized similar to this book, it should prove to be an effective guide for further lecture expansion. The book is not advanced and may be applicable to high school courses.—HOMER C. FOILKS.

AGRONOMY JOURNAL

TRACE ANALYSIS


The purpose of the book is to acquaint the biologist, the physiologist, and the chemist with the new as well as the established techniques available for trace analysis, with emphasis on inorganic substances. The book collects in convenient and, for the most part, readable form the basic knowledge about the techniques. Many references to the literature are given. The basic techniques are discussed from the standpoint of theory, application, sensitivity, precision, accuracy, sources of error, advantages, and limitations. Detailed procedures for specific constituents are not given. The book is subdivided into 24 chapters which, together with the appended discussions, represent the combined efforts of 43 individuals. The chapter titles are as follows: (1) chromatography and electrophoresis, (2) ion exchange, (3) extraction, (4) chemical microscopy, (5) spot tests, (6) colorimetry, (7) flame spectrometry, (8) polarography, (9) potentiometry, (10) coulometry, (11) polarography and voltammetry, (12) amperometry, (13) emission spectrochemical analysis: basic principles and applications, (14) emission spectrochemical analysis: determination of trace elements in plants and other biological materials, (15) gamma-ray spectroscopy, (16) mass spectroscopy, (17) x-ray spectroscopy, (18) x-ray micrography: analysis of elements by microtechniques utilizing absorption emission and scattering of x-rays, (19) neutron-activation analysis, (20) microbiological techniques: inorganic ions, (21) instrumentation, (22) the interaction of beta particles with matter, (23) trace-element sensitivity: comparison of activation analysis with other methods, and (24) separation, concentration, and contamination.—C. A. BLACK.

Agronomic Affairs

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ERRATUM

Readers have called attention to the misspelling of the name of E. C. Stakman in the Book Reviews section of the June issue, p. 346, where we reviewed Principles of Plant Pathology, by Stakman and J. George Harrar.

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