cient inclusion of an enormous number of helpful clues to simplification and variation, useful facts, and warnings about pitfalls, in a remarkably readable account. A brief discussion by J. D. Smith makes the reader acquainted with the up-to-date electrophoretic separations so useful especially for nucleotides. By way of comparative methodology, a chapter by Dische gives a glimpse into a glass-windowed analytic laboratory wherein one can judge the range, sensitivity, and sources of error of a series of alternative colorimetric methods for determining the sugars, bases, and phosphorus of nucleic acids and nucleoproteins.

A long chapter by Chargaff and another by his colleague F. Magasanik deal with the isolation, purification, characterization, preservation, and denaturation, and with the regularities in composition, of the DNA's and PNA's, respectively. The thorough discussions include most of the reliable available data on analyses of animal, plant, bacterial, and virus nucleic acids. Here at long last is an editor who believes in the retention of individuality, for almost every "long view" in his chapter is flavored with figurative expression or whimsy. To borrow his manner, one might say that every glance upward from his microscope is marked with a genial chuckle or a sly grin.

Evidence is impressive in the section by D. M. Brown and A. R. Todd that the contribution of the organic chemist to biochemistry can be (both figuratively and literally) synthetic as well as analytic. Carrying on where Baddiley left off, these authorities cover the important direct chemical approaches that have refined our knowledge of the intranucleotide linkages. D. O. Jordan gives a clear, well-illustrated picture of the physical properties, shape, size, and organization of nucleic acids, in both the dry and the dissolved state. The important dissociation, optical diffraction, scattering, and flow parameters are considered in themselves and as they are affected by *p*H or ionic strength. Light absorption and dichroism are covered by G. H. Beaven, E. R. Holiday, and E. A. Johnson with inclusion of tables and curves bearing much standard and basic data. Finally, in a comprehensive review of all the depolymerases, hydrolases, phosphatases, deaminases, and oxidases affecting nucleic acids and their components, G. Schmidt provides an impressive reference work.

From one-third to well over one-half of the cited literature references are dated 1950 or later, and another one-fourth are from the preceding 5 years, in the various chapters; there are a total of 300 or more in several cases. Copious cross references have been provided; as in so many books a large part of these are to whole chapter numbers, an inconvenience since only 15 out of more than 600 pages show the number of the chapter at which one is looking.

The completed work cannot fail to be a major source book and basic reference. It seems to have a coherence and integration that are unexpected for a complex of so many sections and retains most of the advantages derived from purifying a large body of literature through the minds of active contributors.

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Radioisotope Conference, 1954. vol. I, *Medical and Physiological Applications.* Proc. Second Conference, Oxford, 19–23 July. J. E. Johnston, Ed. Academic Press, New York; Butterworths, London, 1954. xi + 418 pp. Illus. $10.80; vols. I and II, $16.

The Second Radioisotope Conference was held in Oxford in July 1954. Forty-six papers record current research in which radioisotopes have been utilized for varied problems in the medical, biochemical, and agricultural sciences. The conference was international in participation, and an examination of this volume illustrates the numerous applications of radioisotopes to medical and biochemical problems.

Half of the papers are of interest primarily to those concerned with therapeutic and diagnostic applications of radioisotopes. Six papers illustrate applications of radioisotopes to problems in plant nutrition and plant physiology. The remainder of the papers illustrate the applications of radioisotopes, principally C^{14}, I^{131}, and tritium, to biochemical problems. The research presented in most cases was current, and in some instances the results were only preliminary. Prompt publication of the volume has been achieved, which enhances the value of the papers. In addition, the discussions occasioned by the presentation of each paper have been included and are of considerable interest.

It is my opinion that only a few papers in this volume will be of direct interest to any one person, owing to the wide range and specialized nature of the applications of radioisotopes that have been covered. However, the majority of the articles are readily understandable to the nonspecialist, and as a result, a perusal of this volume may provide one with useful ideas for the application of radioisotopes to new problems in varied fields.

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The Plant Quarantine Problem. W. A. McCubbin. vol. IX of *Annales Cryptogamici et Phytopathologici.* Frans Verdoorn, Ed. Ejnar Munksgaard, Copenhagen (U.S. distr.: Chronica Botanica, Waltham, Mass.) 255 pp. $4.80.

W. A. McCubbin has done an outstanding job of presenting and reviewing the various aspects of plant quarantines, including their biological background, social and economic relationships, legal features, and administration. There is also an over-all appraisal of the plant-quarantine problem and a discussion of quarantines from the international standpoint. A concise historical summary of federal quarantines that have been promulgated on account of plant diseases is given in an appendix.

The subject matter is well organized, clearly presented, and easy to read. The book is arranged and indexed to facilitate ready reference. It is a valuable addition to the reference literature on this subject, particularly since it represents the first time that the entire field of plant quarantines has been covered in one volume.

The author is exceptionally well qualified to discuss all phases of the plant-quarantine problem, having had more than 30 years experience in the enforcement of state quarantines as well as federal foreign and domestic quarantines. During this period he was engaged in both administration and actual enforcement in the field. This background has enabled him to present his subject so that the book not only should be useful as a reference to plant regulatory workers, teachers, scientists, and similar groups but also should be of interest to the layman who is affected by plant quarantines.

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Glass Reinforced Plastics. Phillip Morgan, Ed. Iliffe, London; Philosophical Library, New York, 1954. vii + 248 pp. Illus. $10.

This volume contains 15 chapters, each written by a separate contributor, arranged to cover the various phases involved in the manufacture and use of glass-reinforced plastics. These products constitute a relatively new class of materials, which are finding increasing applications in industry. The coverage includes glass-fiber forms and properties, chemistry of the usable resins, commercial fabrication of the desired shapes, and industrial applications.

Glass fibers offer several advantages