polypeptides, with strong emphasis on the significance of dichroism in polypeptide spectra. Chapters VII, VIII, and IX present a detailed discussion of x-ray diffraction studies. These chapters on infrared and x-ray studies are particularly significant, as might be expected in view of the major contributions of the authors and their associates in these fields. Chapter X discusses the physical properties of synthetic polypeptides, with extensive tabulations of data. Chapter XI (by S. G. Waley) gives a very brief discussion of the biological properties of synthetic polypeptides. Chapter XII, on fibrous proteins, deals only with silk fibroin and keratin; the authors refer, in passing, to the recent major advances in our understanding of the structure of collagen.

The book covers the development of the field up to approximately the beginning of 1956. Subsequent progress has been so rapid that many very recent contributions of major importance—including some from the authors of this book—could not be included. In particular, recent outstanding developments in optical rotation and rotatory dispersion have occurred since the book went to press. This should be allowed for in judging the contents.

Certainly the book is a major contribution in its field. The authors do an admirable job in the presentation of work from their own laboratories; for others interested in the field, it will be of great assistance to have the coordinated presentation given here, which will save much searching in the original literature. But it must be added that the presentation is definitely one-sided. Although the list of references is, on the whole, comprehensive, the discussion, in my judgment, frequently fails to do justice to the importance of the work from other laboratories. For example, the recent work of Katchalski, Shalitin, and Gehatia (1955) on polymerization kinetics is dismissed in two brief sentences on page 100. Readers who are unfamiliar with the field would never realize, from this, that the work in question gives a detailed theoretical analysis of the kinetics of formation of polypeptides from N-carboxy-α-amino acid anhydrides, which includes, as special cases, some of the treatments given at length in the present book. Even this theory is probably not general enough to cover all the important cases that arise in practice, but its importance calls for detailed consideration in any comprehensive treatment. A later paper by Katchalski, Gehatia, and Sela [*J. Am. Chem Soc.* **77**, 6175 (1955)], which presents a statistical analysis of molecular weight distributions of linear and multichain polyamino acids, is not even mentioned, although it is certainly a major contribution. Other similar examples could be given of important work from other laboratories which is treated sketchily or not at all in this book. Although there is an extensive tabulation in chapter X of the solubility of synthetic polypeptides in various media, very little is said concerning the properties of the resulting solutions. There is no discussion, for example, of the extensive studies of acid-base equilibria in solutions of synthetic polypeptides, which have been carried out by Katchalski and his associates.

In view of these criticisms, I cannot regard this book as a truly comprehensive and balanced presentation of the present state of research on synthetic polypeptides. It contains, however, a very admirable survey of a large amount of material, with special emphasis on the work of the authors and their associates, and research workers who are seriously interested in the field of synthetic polypeptides will undoubtedly find it indispensable.

The make-up of the book is excellent, the figures are numerous and clear, and there is an extensive and useful index.

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A Glossary of Mycology. Walter H. Snell and Esther A. Dick. Harvard University Press, Cambridge, Mass., 1957. 171 pp. + 15 plates. $5.

A Glossary of Mycology lists and defines some 6000 terms which are or have been in use in mycology. Included are the names of antibiotics, pigments, and other metabolic products as well as the names of structures, adjectives used in technical descriptions, and common names applied to various fungi. The derivations of most of the words are given, and the entries are cross-referenced. In the case of highly specialized or restricted terms, a brief reference is given to the work in which the word was first used or to a source of a more extensive definition. The authors have remained objective and dispassionate lexicographers throughout the book, and only in rare instances have they indicated a preference between synonyms.

Beginners in systematic mycology will appreciate the 15 plates of simple, clear figures illustrating various kinds of fruiting bodies, spores, and other structures.

Another feature of the book that should appeal to systematists in this country is that approximate equivalents from Ridgway's *Color Standards* are given for the color terms in the *Repertoire de Couleurs*. Although these approximations are of necessity subjective, their inclusion will aid workers who do not have access to the latter work.

Although *A Glossary of Mycology* is less ambitious than Ainsworth and Bisby's admirable *Dictionary of the Fungi* in that it does not list the scientific names of genera and other taxa, it contains more definitions, and this completeness, together with its expanded definitions and clear illustrations, makes the book useful both for the professional scientist and for the serious amateur student of the fungi.

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A Manual of Soil Fungi. Joseph C. Gilman. Iowa State College Press, Ames, Iowa, rev. ed. 2, 1957. 450 pp. Illus. $7.50.

It has long been known that many different kinds of fungi inhabit the soil. Most of these are important as the agents of decay, others as facultative parasites on plants or animals. After it was discovered that some of these saprophytic fungi could be domesticated and used by man in the production of drugs and other commercially important products, interest in the inexhaustible reservoir of soil fungi increased enormously. Although there were many monographs on genera and families some of whose members were soil inhabitants, there was no single work on soil fungi as a whole. It was to fill this urgent need that Gilman and Abbott started a systematic study of soil fungi in the early 1920's. In 1927 the results of their studies were published in a 118-page paper, *A Summary of Soil Fungi,* in which 61 genera and 242 species of fungi were described, 20 of them new. The demand for this was so great that the supply of copies was soon exhausted.

The first edition of *A Manual of Soil Fungi,* published in 1945, was a revision and extension by Gilman of this early paper. The present volume is a revision and extension of the 1945 edition. In the first edition, 139 genera and 795 species are described; in this one, 170 genera and 917 species. As in the first edition, the book is mainly a compilation of the work of others. The manual is intended as a tool to assist investigators in identifying soil fungi.

The author includes chiefly those species of fungi which have been isolated from soil and cultivated artificially. The terrestrial mushrooms and many plant and animal pathogens which may be soil-borne are excluded, as are many wood-decay fungi. The Actinomycetes, Myxomycetes, and Zoopagaceae are also omitted. More than half of the descriptive part of the book is devoted to the Fungi Imperfecti, which contain many of the commoner and more important soil fungi and the ones