(iv) No attempt was made to control the impact of the disease process or the knowledge of the diagnosis on the various individuals. It is stated that the patients were given time to adjust to this knowledge. The criteria of "adjustment" are not given. (v) No allowance is made for the impact of previous surgical or other therapeutic procedures or for the family or social setting. (vi) There is an assumption made, not clearly justified, that the factors selected in the MMPI indicate anxiety. High scores on the factors selected are classically used to indicate a hysterical syndrome rather than anxiety, and indeed hysteria may function to diminish anxiety. "Defensiveness" was evaluated by a scale that merely taps attitudes toward taking the test, and the inferences are apparently applied to many other or all life-experiences.

Outlining psychological factors operative in either the cause or the course of cancer presents problems of enormous magnitude, since medical ignorance in both oncology and psychiatry are monumental. Attempts by West, Ellis, Blumberg, and the others are praiseworthy, but they have not demonstrated their findings beyond question. The foreword to this volume states:

> The subject is a difficult one and particularly liable to misinterpretation and error. It is of the utmost importance that findings of this very vital area of investigation be subjected to careful scrutiny. Therefore, data reported here should be looked upon as in the nature of preliminary results subject to future corroboration and in a new and growing field of research rather than as secure findings ready for clinical exploitation.

Although this volume does not live up to its title, it should certainly stimulate further research in this area.

ARTHUR M. SUTHERLAND
Department of Psychiatry,
Memorial Hospital, New York

Progress in the Chemistry of Organic Natural Products. (*Fortschritte der Chemie organischer Naturstoffe*). vol. 11 (in English and German). L. Zechmeister, Ed. Springer, Vienna, 1954. viii + 457 pp. Illus. Paper, $17.20; cloth, $18.

The 11th volume of the *Fortschritte der Chemie organischer Naturstoffe* is a continuation of the excellent series started in 1938. Its success can be attributed in great measure to the efforts of its editor, L. Zechmeister, whose influence and wide scientific contacts enable him to convince eminent organic chemists and biochemists throughout the world of the need to contribute articles on the advances in their special fields. Since the *Fortschritte*, containing contributions from many countries, is printed and published in Austria in three languages and is edited in the United States, it can be considered truly cosmopolitan in character. Of the eight articles in the present volume, two come from Germany, two from the United States, two from Australia, one from North Wales, and one from Switzerland.

Inasmuch as the subject matter differs widely and a critical appraisal by one person is not possible, I have limited myself to a brief review of the contents of each chapter.

The first article by S. Peat, entitled "Starch," is a comprehensive review of the recent developments pertaining to the structure and synthesis of this important carbohydrate. A major part of the discussion is devoted to its biochemical aspects. The role of the various enzymes involved in synthesis and degradation of the starch fractions, amylose and amylopectin, and the mechanisms of their formation are thoroughly discussed.

The chapter on "Neuere Ergebnisse auf dem Gebiete des Lignins und der Verholzung," by K. Freudenberg, deals with the constitution and origin of lignin that occurs in great abundance in nature. The author is concerned with the problem of whether lignin is a mixture of a number of related components or whether it constitutes a single polymer built from an elementary unit according to a definite plan, similar to starch or cellulose from glucose. He believes that the experimental evidence is in favor of the latter assumption.

Under the topic of "Probleme und neuere Ergebnisse in der Vitamin D-Chemie," Von H. H. Inhoffen and K. Brückner are concerned with the chemistry of precalciferol (a new isomer in the series of irradiation products of ergosterol), the constitution of vitamin D_2, the tachysterols, and other aspects of vitamin-D chemistry.

The chapter "Natürlich vorkommende Chromone," by H. Schmid, is a compilation of the chromones (derivatives of benzo-γ-pyrone, mostly colorless compounds), which occur naturally in many plants.

In an admirable review, "Configuration of polypeptide chains in proteins," L. Pauling and R. B. Corey discuss the recent achievements in the determination of structure of amino acids as related to proteins. They consider the problem of the configuration of polypeptide chains, their helical and layer configurations as revealed by x-ray studies, and the developments in the determination of the sequence of amino acid residues in the protein molecule. The review is illustrated with numerous excellent diagrams and models, showing the configuration of the atoms in space.

The subject of "Column chromatography in the study of the structure of peptides and proteins" is well summarized and detailed by W. A. Schroeder. The following broad aspects are reviewed: (i) the separation of amino acids and the determination of the amino acid composition of peptides and proteins; (ii) the determination of amino acid sequence in proteins in terms of identification of terminal residues and of the fractionation and identification of peptides; and (iii) the separation and purification of proteins themselves.

R. Lemberg's article on "Porphyrins in nature" deals with the structure, occurrence, and biosynthesis of porphyrins, and A. Albert's article concludes the volume with a discussion of "The pteridines." Albert

notes that only three naturally occurring pteridines were known in 1945 and now as many as a dozen can be counted. They are considered to have an important function as regulators of cell division.

All the chapters contain extensive bibliographies, varying from 106 to 262 references.

In these days with the constant increase in the volume of literature, when time required for covering original papers is so great, authoritative and lucidly presented reviews such as these become increasingly more valuable.

W. Z. HASSID

Department of Plant Biochemistry, University of California, Berkeley

A Budget of Paradoxes. Augustus De Morgan. Unabridged republication of ed. 2 (1915) edited by David Eugene Smith, with a new introduction by Ernest Nagel. Dover, New York, 1954. xxvi + 789 pp. $4.95.

This well-known, remarkable collection of some "400 classic examples of scientific logic gone haywire, gleefully collected and mercilessly exposed by one of the wittiest mathematical innovators of the 19th century" first appeared in book form after De Morgan's death in 1871. Ernest Nagel, in his excellent introduction to the present reprinting, points out that many popular accounts of the developments of modern science tend to "portray the failures, the paradoxers, and the misplaced energies in the history of sciences as if they were invariably the products of foolish ignorance and astonishing incompetence"; that, although the *Budget* "gives ample proof that such paradoxers are indeed frequently undisciplined intellects," nevertheless "it also shows that they are often men with unusual mental powers. . . ." In any event, the failures and the apparent cranks in the quest for knowledge have not all been fools or ignoramuses. And surely there are many attentive readers of the *Budget* who will not be able to repress the comment in connection with some of the figures appearing in it: "There but for the grace of God go I."

DUANE ROLLER

Ramo-Wooldridge Corporation

Handbook of Textile Fibers. Milton Harris, Ed. Harris Research Laboratories, Washington 11, D.C. 1954. xii + 356 pp. Illus. $12.50.

The evolution of fiber science that has taken place during the last few decades has emphasized the need for good reference books to go beyond the framework of conventional chemical, physical, and engineering handbooks. Harris and his staff of able collaborators are to be commended for publishing a handbook that contains, in easily accessible form, important information widely scattered over the textile literature. Thus, it offers a valuable tool to those concerned with the fundamental and engineering aspects of fibers.

Handbook of Textile Fibers is a compilation of physical, chemical, and textile data frequently needed by the fiber technologist, with added information on nomenclature, economics, and fiber identification, as well as selected chemical and engineering tables. It shows some analogies with Kaswell's *Textile Fibers, Yarns and Fabrics,* which was published a few months earlier. However, its scope is somewhat different, and the two books supplement one another.

The data listed are reliable and up to date. Only a few minor flaws were noted, such as an incomplete "List of textile periodicals," a list of "Man-made fibers" that is not completely up to date (although some of the missing items may be found elsewhere in the book), a scarcity of foreign language literature references, and the absence of an author index. (Although it is true that many handbooks do not contain an author index, the value of the Harris book would undoubtedly be increased by an easily accessible reference to key publications.) Also, there are some slight inaccuracies. For instance, data are presented on Orlon without specifying to which of the widely different types they refer (p. 100).

In spite of such minor deficiencies, the new handbook is definitely an important addition to the textile literature. There are few books in the fiber field that contain so much information in so little space.

Handbook of Textile Fibers is well printed and contains a wealth of tabulated data and many well-reproduced illustrations. It can be warmly recommended to all those whose work requires frequent and quick reference to the characteristics and the performance of natural and man-made fibers. It is up to date in all important respects and reflects the research achievements of a generation, compiled and interpreted by the dedicated effort of a group of outstanding contributors.

FRANK J. SODAY

Chemstrand Corporation

Miscellaneous Publications

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The Archeological and Paleontological Salvage Program in the Missouri Basin, 1950–1951. Smithsonian Misc. Collections, vol. 126, No. 2. Paul L. Cooper. The Institution, Washington, 1955. 99 pp.

New York Life Insurance Co. 110th Annual Report, 1954. The Company, New York 10, 1955. 37 pp.

Enemy Way Music. A study of social and esthetic values as seen in Navaho music. Rpt. of Rimrock Project Values Ser. No. 3. David P. McAllester. Peabody Museum, Harvard Univ., Cambridge, 1954. 96 pp. $2.65.

Soil Freezing. Highway Research Bd. Bull. 100. Natl. Acad. of Sciences–Natl. Research Council, Washington 25, 1955. 35 pp. $0.60.

Aprovechamiento de la Energia Atomica. Ser. Monogr. Cientificas. German E. Villar. Div. de Publicaciones, Union Panamericana, Washington, 1955. 66 pp.