gather from the widespread literature some part of this organized synthesis will appreciate the size and complexity of the task. These volumes will represent a milestone in the progress of primatology, but this is not to say that they will constitute a definitive work—too little has been studied for that, and what has been done is too varied and dispersed for one worker to produce a perfect synthesis. Yet each generation needs a current summary, and Hill is preparing the best and most inclusive review to date.

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Lehrbuch und Atlas der Anatomie des Menschen. Rauber-Kopsch. vol. I, *Allgemeines, Skeletsystem, Muskelsystem, Gefässystem.* vol. II, *Eingeweide Nervensystem-Sinnesorgane.* Thieme, Stuttgart, Germany, ed. 19, 1955. vol. I, vii + 736 pp.; vol. II, vii + 768 pp. Illus. $15.35 per volume.

This 19th edition of one of the standard German works on the anatomy of the human body represents an extensive revision. It again appears in two volumes, as in the time of the original author, Rauber. Volume I comprises the histology of the epithelial, connective, muscular, and nervous tissues, a discussion of the body as a whole, the skeleton and joints, the muscular system, and the vascular system. Volume II deals with the thoracic and abdominal viscera, the nervous system, and the organs of special sense.

All the illustrations have been reproduced *de novo* and are now included within the text, and the text itself has undergone extensive alteration. Since the illustrations are truly magnificent and the text is authoritative, the result is an outstanding combined atlas and textbook. The rather high cost of these books, however, seems likely to limit their use in this country. This is unfortunate, since anatomical books of this superior quality are all too rare.

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Progress in Organic Chemistry. vol. 3. J. W. Cook, Ed. Academic Press, New York; Butterworths, London, 1955. viii + 273 pp. $7.80.

This welcome addition to the "Progress series" consists of five chapters entitled: "Total synthesis of steroids," by J. W. Cornforth of the National Institute for Medical Research, London (43 pages, 56 references); "Non-benzenoid aromatic compounds," by W. Baker and J. F. W. McOmie of the University of Bristol (36 pages, 129 references); "The fulvenes," by E. D. Bergmann of the Hebrew University, Jerusalem (90 pages, 359 references); "Organic compounds of lithium," by E. A. Braude of the Imperial College of Science and Technology," University of London (45 pages, 201 references); and "Indole alkaloids," by V. Boekelheide of the University of Rochester and V. Prelog of the Swiss Federal Institute of Technology, Zurich (48 pages, 170 references). The physical aspects of the book, including type, formulas, paper, and binding are good.

Although it could be argued that some of the topics have recently been reviewed —for instance, parts of Chapter 2 by P. L. Pauson [*Quart. Revs. London* **9**, 39 (1955); *Chem. Revs.* **55**, 9 (1955)]—I find the selection attractive and useful. Chapter 1 is a readable and comprehensive account of total synthesis in the steroid field from the early work of Bachmann and coworkers on equilenin to the recent successful efforts of various groups. Considerable attention is devoted to the work carried out at Oxford, although the Harvard, the Merck ("which has the distinction, so far unique, of being stereospecific"), the Ciba, and the two Wisconsin syntheses are extensively discussed. It should be noted that the publication date is 1955, but no references to papers published later than 1953 are included (important papers in 1954 are, for instance: *J. Am. Chem. Soc.* **76**, 5014 and **76**, 3353). Obviously, the recent work of still another group engaged in steroid synthesis could not be included [compare Stork *et al.*, *J. Am. Chem. Soc.* **78**, 501 (1956)].

A review on nonbenzenoid aromatics is timely, and Chapter 2 provides a valuable survey of a fascinating field through 1953; yet, in some respects, the chapter is somewhat disappointing. The treatment is sketchy; for example, under the promising heading of "Heterocyclic benzenoid compounds," one finds 21 lines of discussion (the use of the term *pentavalent nitrogen* on p. 47 is surprising). The cyclobutadiene problem is treated, without critical comments, in ten lines, although a more adequate coverage (two pages) is given for diphenylene. Incidentally, the recent preparation of benzocyclobutene [Cava, *J. Am. Chem. Soc.* **78**, 500 (1956)] does not bear out the implied instability (p. 51) of this structure. Some of the arguments concerning stability, or lack of it, in certain systems —for example, those on pages 63 and 76—are not very enlightening.

The review on fulvenes is excellent and truly comprehensive. In addition to dealing with the preparative aspects of fulvene chemistry, the author devotes considerable attention to the theory of the structure of these compounds; in this respect, the author stresses the results from molecular orbital theory. Regardless of his individual degree of competence in, and inclination toward, these approximate calculations, the reader will find the emphasis on physical data that follows from this approach highly rewarding.

Lithium alkyls, alkenyls, alkynyls and aryls, as well as heterocyclic lithium derivatives and dilithium compounds are treated in Chapter 4. A commendable attempt to rationalize the reactions of organolithiums is made, although in some cases—such as in dealing with additions to unconjugated olefins—the explanations are of necessity vague. This chapter will undoubtedly be widely consulted.

The discussion of indole alkaloids includes the yohimbine, corynantheine-alstonine, cinchonine, and erythrina types. The selection of topics is dictated by sound reasons, and the limited scope of the coverage permits a detailed and fruitful treatment. It is of interest to note that considerable attention is given to structural relationships and biogenetical schemes, in keeping with current trends in alkaloid research.

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Official Methods of Analysis of the Association of Official Agricultural Chemists. William Horowitz, Ed. H. J. Fisher, A. H. Robertson, and Helen Reynolds, Committee on Editing Methods of Analysis. Association of Official Agricultural Chemists, Washington, D.C., ed. 8, 1955. xvi + 1008 pp. Illus. Domestic, $12; foreign, $12.50.

The editorial board charged with the revision of the 1950 edition of this book undoubtedly had a mandate to stay within the confines of a single volume. This they accomplished by the free use of abbreviations and cross references, which sometimes makes the book more difficult to use than it would be if more space had been available.

The book covers methods for the analysis of agricultural materials ranging from fertilizer and cattle feeds to cosmetics, hormones, and drugs. The general coverage is nearly the same as that of the 1950 edition, but the field in each category has been somewhat broadened. Many of the older methods have been discarded, and newer techniques have been introduced. Practically every chapter shows important changes and improvements. Methods have been simplified or improved by the introduction of