

[Interscience (Wiley), New York, 1965. 267 pp., \$6.75], K. W. Bentley considers the basic chemistry, and within each group the structural interrelationships, of imidazole, quinazoline, pyrrolizidine, amaryllidaceae, steroid, lycopodium, and diterpene alkaloids. More recent advances in the chemistry of the indole group are also outlined.

A volume that was published almost simultaneously, volume 8 of R. H. F. Manske's series, *The Indole Alkaloids* [reviewed in *Science* **151**, 317 (1966)] covers much of the same ground as Bentley's book. However, despite this overlap, the second part of *The Alkaloids* is a most welcome addition to the pedagogical armamentarium in alkaloid chemistry, particularly because, in this part as in part 1, the author strikes to the heart of the degradative and synthetic stages which were employed in the structural determinations of these natural products. This book will therefore be most useful to graduate students in chemistry, to biochemists, and to other nonspecialists in the art of alkaloid chemistry who wish to obtain a rapid insight into the structures and reactions of representative members of the foregoing groups. In conjunction with this clear and purposely nondetailed delineation of alkaloid chemistry, hand-drawn formulas

are used throughout the book. This unusual presentation, which was also used in the previously published volumes of this particular series, makes the assimilation of natural-product chemistry much easier and actually prolongs the attention-span of the reader.

A final chapter, concerned with the biogenesis of alkaloids, completes the text. The author continues largely to ignore the considerable body of isotopic tracer work that has been carried out. Hence this chapter looms as a disappointment to the chemist who is seeking a résumé of this field. Fundamental experimental studies on gamine, ajmaline, ibogaine, and morphine biosynthesis from smaller labeled precursors, and the polyacetate route to coniine, for example, are excluded in favor of considerable "graphite-cellulose" chemistry with formaldehyde, prephenic acid, dopa, and tryptophan. Thus, the opportunity to modernize the Schöpf-Robinson approach of the comparable chapter of part 1 has been missed, and the content of this particular chapter mars an otherwise excellent up-to-date teaching text.

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## Wheat: A Comprehensive Treatment

**Wheat: Botany, Cultivation, and Utilization** [Leonard Hill, London; Interscience (Wiley), New York, 1965. 448 pp., \$16], by R. F. Peterson, covers almost everything having to do with wheat. To do this in fewer than 400 pages of actual text is no small achievement, considering the fact that wheat is, with the possible exception of rice, the most important plant in the world. Of necessity the coverage is not exhaustive, but it is adequate.

To understand the botanical portion, which includes taxonomy, morphology, physiology, cytology, genetics, and evolution, the reader is not required to have a background in botany. The author even explains what chromosomes and genes are and how radiocarbon dating is accomplished. Although emphasis is placed on recent findings, a conservative viewpoint is maintained. For example, the still controversial proposal to include all the wheats in just three species, according

to chromosome number, is discussed favorably but not followed. I noted only one significant error—the speltoid effect is attributed to the gene *Q* rather than to its allele *q* and the locus is assigned to chromosome 5D instead of to 5A.

In the section on production (including also diseases and breeding), the types and varieties of wheat, the methods of production, and the conditions affecting production are given for all the wheat-growing countries of the world. In an interesting aside, the author discusses Lysenkoism and the detrimental effect it has had on wheat breeding in Russia.

Under utilization are treated storage, nutritional aspects, milling, and marketing. As in the other sections, there are many excellent illustrations, mostly photographs, well chosen and well reproduced. A concluding chapter very briefly summarizes the book and calls attention to the anomaly of

bothersome wheat surpluses in some countries and hungry people in others, with suggestions for alleviating this unhappy situation.

This book is well organized, well written, and authoritative. It should be of value to general readers and students, and particularly to wheat specialists who wish to round out their knowledge of the plant with which they work.

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## Cultural Anthropology

The 24 essays collected in **Culture and Society** (University of Pittsburgh Press, Pittsburgh, Pa., 1965. 388 pp., \$7), by George Peter Murdock, are a distillate of the research and theory of a major figure in contemporary American anthropology. Trained initially as a sociologist in the Sumner-Keller tradition at Yale, Murdock brought to anthropology a strong commitment to the comparative method, an insatiable curiosity about the wide range of patterned human behavior, and a keen sense of problem. The articles presented here evidence these characteristics and, perhaps even more, the theoretical stimulation achieved through the author's participation in the interdisciplinary atmosphere of the Yale Institute of Human Relations. As a consequence of the latter experience, Murdock came to consider himself a behavioral scientist with a specialization in anthropology; this orientation is reflected in much of his research on social organization and the dynamics of culture change.

The six sections into which the book is divided provide a roughly accurate classification of the problem areas of concern to the author. The sections are Anthropology and its Sister Disciplines; The Nature of Culture; Dynamics of Cultural Change; Social Organization; Religion, Ceremonial, and Recreation; and Cross-Cultural Comparison. A partial list of the topics discussed in particular papers illustrates Murdock's breadth of interest: waging baseball on Truk; anthropology and public health; political moieties among southeastern American Indians and North African Berbers and in modern democratic states; universal features of culture;