

The author, who is not a taxonomist, has had to rely on the literature for criteria distinguishing genera. This is no mean task, what with the continuing activities of the "splitters" and the "lumpers" in our midst. But the decisions reached appear generally satisfactory. The black bear (*Euarctos*) is segregated from the grizzly and brown bears (*Ursus*); four genera of marmosets (*Callithrix*, *Cebuella*, *Leontideus*, and *Saguinus*) are recognized; the American pocket gophers fall into eight genera.

In a work of such magnitude some errors are unavoidable. Thus, we read that rabbits and sheep prey on marsupials in Australia (p. 10), and that the blue whale can swim at "15 knots an hour or more" (p. 1139). *Citellus columbianus* is misspelled as *C. colombianus* (p. 709), *Myrmecobiidae* as *Myrmecodiidae* (p. 511), and *Babirussa* as *Babyrousa* (p. 1364). The bibliographic slips are equally annoying. More discerning proofreading would have corrected much of this. But, on the whole, these three volumes comprise an essential general reference book for all professional mammalogists. Packed with intriguing details and profusely illustrated, they are also a fine example of the bookmaker's art. Certainly they will be much used by all those with an interest in any aspect of the mammals of the world.

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Need for Research Reviews

Advances in Drug Research. vol. 1.
N. J. Harper and Alma B. Simmonds, Eds. Academic Press, New York, 1964. x + 209 pp. Illus. \$6.25.

Until a few years ago, the conscientious pharmacologist could keep up with the review articles in his field by reading the quarterly *Pharmacological Reviews*, plus perhaps the less frequently published *Recent Advances in Pharmacology*. In the last few years, with the advent of *Annual Review of Pharmacology*, *Advances in Pharmacology*, and now *Advances in Drug Research*, the brimming cup has begun to spill over.

It is not that the extraordinary activity of the pharmaceutical industry and of nonindustrial scientists inter-

ested in drugs does not justify the publication of authoritative reviews on topics of importance. It is rather that one may ask whether we need quite so much as is now available in the way of publication along these lines.

For example, in the first volume of *Advances in Drug Research* there is an interesting and useful article on penicillins and related structures. This field is expanding so rapidly that an up-to-date review, especially with a chemical orientation, will be of interest to many. The material presented indicates rather clearly how far the chemists are ahead of the clinicians; new penicillins are being produced and introduced at a rate that exceeds the ability of physicians to appraise them satisfactorily.

A good review on antitussives is badly needed, but the presentation given in this volume leaves something to be desired. There are abundant references that will guide the reader to the world literature, but the discussion of the application of antitussives to clinical practice suffers from the non-clinical orientation of the authors. Physicians might suspect, for example, that many of the alleged therapeutic effects of inhalants, expectorants, mucolytic agents, proteolytic enzymes, and the like should be attributed to the placebo phenomenon. The article's strength lies in its chemistry, not in its biology, but the two are inextricably related.

With respect to the other two papers in this first volume of *Advances in Drug Research*, one can be even more ambivalent. The treatment of physiological transport of drugs is satisfactory per se, but merely adds another to a series that has appeared within the last few years. Information in this field is hardly accumulating at a rate that justifies such frequent summaries. The article on adrenergic neurone blocking agents is, again, not objectionable per se, but in view of recent reviews of this topic, including one on antihypertensive drugs (by Green) in a book put out by the same publisher in 1962, one can seriously question the advisability of soliciting the present article.

If volumes of this kind are to have a broad appeal and to merit purchase by individuals or libraries, more attention must be paid to the selection of topics. Obviously it will be difficult to avoid overlapping, with different publishers being involved and long de-

lays between the commissioning of articles and their publication. At the very least, however, scientists who are approached might more often sacrifice a modicum of ego satisfaction and turn down invitations to write reviews when they know that a review of the topic is already "in the mill" or that one has been published a year or two earlier. Neither the authors nor the reading public are likely to benefit from a continuation of the present trend.

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Physical Anthropology

Physical Anthropology 1953-1961.

Gabriel W. Lasker, Ed. (vol. 9, 230 pp. Illus. Paper, \$4.50); **Yearbook of Physical Anthropology, 1962.** Jack Kelso and Gabriel W. Lasker, Eds. (vol. 10, 383 pp. Illus. Paper, \$4.50). Published for the American Association of Physical Anthropologists by Instituto de Investigaciones Históricas, Universidad Nacional Autónoma and Instituto Nacional de Antropología e Historia, México, D.F. (order from Instituto Nacional de Antropología e Historia, Córdoba 45, México 7, D.F.).

From 1945 through 1952 the Wenner-Gren Foundation for Anthropological Research, known through part of this period as the Viking Fund, published volumes 1 through 8 of the *Yearbook of Physical Anthropology*; the series was then discontinued in favor of a more ambitious *Yearbook of Anthropology*, designed to cover the broader field. Only one issue (1955) of the latter publication appeared. Now the American Association of Physical Anthropologists, thanks to two diligent editors from its membership (Lasker currently is also President of the Association), has reestablished the series as of the year 1962, and has filled in the 9-year gap. This explains the slightly different title of volume 9, the interim volume. Welcome financial assistance has come, not only from the Wenner-Gren Foundation, but, perhaps more significantly, from two institutions in Mexico: the Instituto de Investigaciones Históricas of the Universidad Nacional Autónoma and the Instituto Nacional de Antropología e

Historia. Thus, the series now represents an example of successful international cooperation in science.

The main purpose of the *Yearbook* has always been to reproduce photographically some of the more significant articles of the particular year in the broad field of physical anthropology. This has served to give them more emphasis and wider distribution, especially to members of the profession in out-of-the-way places where library facilities are meager. Because the editors of all the volumes have been teachers, the utility of the contents for students' use probably has been an important, if not always a stressed, factor in the process of selection.

Lasker was faced with a formidable task in deciding on the composition of the interim volume, since he had nine times more material to review, but no more pages to fill, than for a normal issue. He seems to have approached the task without qualms, and perhaps even with relish, conditioned to it as he must be by having served as editor or co-editor of all but one of the previous volumes. His 22 selections are irregularly representative of the 9-year period; none is from the year 1955, but nine are from the years 1956 and 1957. As for the articles themselves, I would agree with Lasker's opinion that the selection "has taken into account not only wide coverage of current trends and knowledgeability of the authorities included, but also whether the mode of expression is intelligible even to those with a minimum prior familiarity with the technical lingo of the science." In addition, each article is given perspective in an editorial comment which usually includes citations of pertinent references. All articles are in English.

From the 1962 publications Kelso selected 28 articles, including three in French and one in German, which required only 50 pages more than volume 9 contains. Only three of the authors represented in volume 9 reappear in volume 10. However, one looks in vain for the useful editorial comment on each article. In the absence of any such indication of editorial guidelines, the basis for selection is not always clear and, in my opinion, the "mode of expression" is not quite equal to that of the previous volume.

Whatever one may think of the individual selections, and this gets into the realm of personal interests, the present review is not the place to enter into such details. Both volumes emi-

nently serve their purposes, not the least being simply the indication by members of the profession of the contributions regarded as particularly useful. In general, it is safe to say that anyone interested in the latest chapters of the story of man, and willing to tackle articles at the technical level, will find much of interest in these selections.

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Chemistry and Biology

Chemical Background for the Biological Sciences. Emil H. White. Prentice-Hall, Englewood Cliffs, N.J., 1964. viii + 152 pp. Illus. Paper, \$1.95; cloth, \$4.95.

The series of small textbooks in biology for which the present book proposes to serve as a chemical background includes a number of distinguished volumes each of which has rather successfully summarized one specific aspect of biology. Whether the present attempt to provide a "chemical background for the biological sciences" in 152 pages is also successful is, in some degree, a matter of taste. Patently, any book so restricted in length must fail in some regard to satisfy an already knowledgeable reader. The space available scarcely permits an introduction to chemistry, much less an indication of the relationships between the operation of the chemical principles which are presented and structure or function in the living world. The following remarks are offered with this restriction in mind.

The author has constructed an excellent introduction to organic chemistry. Modern electronic concepts of organic molecules are presented clearly, with excellent illustrations, and electronic mechanisms of organic reactions serve as the theme of the entire volume. One might have hoped, however, that even within the treatment of organic chemistry the illustrative examples chosen would bear some close relation to the problems of biological chemistry. Thus, the reactions used to synthesize polypeptides or degrade carbohydrates must surely be of greater interest to the presumptive reader of this series than, for example, the synthesis of saccharin or group migration during the reaction of aliphatic amines with nitrous acid.

In contrast to the excellent outline of organic chemistry, there is a decided paucity of information concerning the nature and properties of inorganic compounds, of organometallics, or of chelates. Physicochemical principles receive short shrift generally, and the brief statement of thermodynamic principles appears quite inadequate. A total of 23 pages is devoted to a sketchy catalog of "natural products," a catalog that conveys little understanding, whereas many of the compounds so listed are treated in extenso in other volumes of the series. Accordingly, I would have preferred omission of this catalog and a more extensive use of such natural products as the examples used to illustrate organic reactions. Alternatively, the space thus conserved might well have been used to extend the treatment of physical principles, to discuss the relationship between absorption spectra and molecular structure, or to discuss *why* asymmetric compounds rotate the plane of polarized light, among other topics. Perhaps this is but the prejudice of a biochemist, but I must conclude that, whereas White has provided an elegant introduction to organic chemistry from the standpoint of an organic chemist, the student of the life sciences will not find this a sufficient introduction to chemistry for his purposes.

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Botany

Laboratory Techniques in Botany. M. J. Purvis, D. C. Collier, and D. Walls. Butterworth, Washington, D.C., 1964. viii + 371 pp. Illus. \$11.50.

This book makes available a wealth of technical detail. The authors, technicians at University College, London, have apparently pooled the useful information that has accrued to them through broad experience in the botanical laboratory. Copiously illustrated, the book carries 155 figures (line drawings and photographs) and includes 14 tables. The line drawings are adequate but not attractive. Users of the book who reside in the United States will find that many of the supply sources and trade names listed are unfamiliar, since those provided are predominantly British, and some read-