Book Reviews

Allergy. (2nd ed.) Erich Urbach and Philip M. Gottlieb. New York: Grune & Stratton, 1946. Pp. xix + 968. (Illustrated.) $12.00.

In this second edition Dr. Gottlieb, who assisted in the production of the first edition, becomes co-author.

Despite an increase in reading matter, this edition is less bulky than the first, due to adoption of a double-column format and use of small type for certain sections.

The number of illustrations of allergic skin manifestations continues to be excessive. One questions the need of 9 illustrations to portray angioneurotic edema or of 14 to demonstrate urticaria, not to mention manifold picturizations of fixed drug eruptions, lichen urticatus, and contact dermatitis. Fig. 29 is supposed to illustrate urticaria but is not obvious as such; while Fig. 296, showing necrosis and scarring of the skin due to injections of adrenalin, duplicates Fig. 157.

As with the first edition, the outstanding feature of the work is its comprehensiveness (although a surprising omission in both editions is that of a section on preparation of extracts). A more detailed review of the literature, and particularly of the foreign literature, is not to be found in any other similar text. Unfortunately, the authors do not always evaluate the literature critically. For example, in the section on the symptomatic therapy of allergic rhinitis one finds the casual statement that the following methods have been recommended for general therapy: injections of histamine, peptone, tuberculin; vaccines of colon bacilli, bee venom, snake venom; and oral histaminase. This statement is followed by the presentation of Beckman's nitrohydrochloric acid prescription in detail, which in turn is followed by the statement that a trial of the ketogenic diet has been recommended—all this without critical comment. Mention of these methods no doubt adds to the comprehensiveness of the book and may be permissible as a matter of historical interest, but the inexperienced reader is entitled to know that these nonspecific methods of therapy have long been discarded, if indeed ever used, by allergists of repute.

Furthermore, present-day practice would frown on the use in a single prescription of such a polypharmaceutic mixture as the following, which is recommended by the authors (p. 643): codeine, ephedrine, belladonna, lobelia, potassium iodide, elixir terpin hydrate, or (p. 651): ephedrine, caffeine, digitalis, belladonna, phenobarbital, aminophyllin.

Also amiss is the continued promulgation by the senior author of certain matters which have so far remained largely unaccepted by other allergists. First may be mentioned his terminology, which produces such coinings as "allergize," and such tortured phrasings as "hetero-allergic pathergy," "polyvalent metaspecific allergy," and "heterospecific deallergization." Second is his technique of treating food sensitivities by means of so-called "propeptans," which are digests derived from foods by treatment with hydrochloric acid, pepsin, and trypsin. Third is his advocacy of oral pollen and pollen propeptan therapy.

For the foregoing reasons, one would hesitate to place this book in the hands of a beginner who needs orientation in the field of allergy.

These criticisms aside, the work reveals much that is of genuine merit. The advanced student will find that the detailed presentation of the factual material in many sections in Part 2, on the etiologic agents of allergic diseases, and in Part 3, on symptomatology and therapy, cannot be excelled elsewhere. And to the experienced allergist it remains, withal, a valuable compilation of the literature.

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L'origine des cellules reproductrices et le problème de la lignée germinale and ***Continuité germinale et reproduction agame.*** L. Bounoure. Paris, France: Gauthiers-Villars, 1939; 1940. Pp. xii + 271; pp. 83. (Illustrated.)

Bounoure's companion volumes, distribution of which was arrested by the war, have now been made available to libraries through the courtesy of the Services du Conseiller Culturel of the French embassy.

These volumes are particularly interesting because they bring into sharp focus two generalizations in biology which are of the highest importance and which should, and probably will, change the fundamental outlook in most of the biological sciences, particularly the applied sciences—the morphological continuity of the totipotent germ cells, and the law of the restriction of cellular potency or competence.

Bounoure has crystallized the conclusions gradually taking shape in the minds of biologists and has demonstrated that a morphological continuity and precocious segregation of the germ cells can no longer be doubted, thus ending a controversy which began after Richard Owen first enunciated the idea in 1843. Belated and much deserved credit is given to John Beard for having championed in his usual logical and forceful manner the morphological continuity and precocious segregation of germ cells at a time when the great majority of biologists were firmly aligned on the side of Weismann and Waldeyer, who reversed his position later, however. Bounoure quotes the following from Beard: "To us as embryologists and men the formation of an embryo has appeared to be everything, the history of the germ-cells a secondary item of no particular moment. Nature, on the other hand, reverses the relative importance of the two, setting the germ-cells on the place of honor, as linking the remote past with the distant future." There is much more for which Beard deserves belated recognition. The tribute which is paid him by Bounoure is a hopeful sign that science, which sometimes buries the work of a genius, does not bury it forever.

The manner in which Bounoure develops his subject makes exciting reading. He examines a wealth of evidence, beginning with the Protozoa and continuing through Volvox, Ascaris, the insects, Crustacea, Chaetognatha, Rotifera, Annelida,

mollusks, and the vertebrates. A remaining resistance against accepting morphological continuity in mammals is no longer necessary since N. B. Everett's work on the mouse (*J. exp. Zool.*, 1943, **92**, 49–91).

Regarding the supposed origin of sex cells (gonocytes) from the germinal epithelium, Bounoure writes the following: "To this question many workers have answered in the affirmative; but their arguments are derived from *pure observations* (italics, C. G.) and usually consist of the supposed existence of transition stages of coelomic cells into germinal cells." These transition stages are really slices inevitably obtained by sectioning the large germ cells.

The second volume discusses asexual reproduction as it applies to germinal continuity. After evaluating a great many data concerning those forms in which asexual reproduction is best illustrated, the author shows that the germ cells are involved in both sexual and asexual reproduction.

The discussion of the law of the restriction of cell potencies, begun in the first volume, is forcefully and convincingly developed. Bounoure states: "One of the most important results of tissue culture is to *have demonstrated the irreversible character of cellular differentiation.* The consequence of these results destroys every hypothesis which attributes to cells *in physiological isolation from the organism,* the possibility of reverting to the embryonic state and to acquire through this reversion new and greater potentialities." These conclusions are of great importance to the cancer problem.

There are 555 references in the first volume and 171 in the second, but no indexes.

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The chemistry of heterocyclic compounds. Avery A. Morton. New York: McGraw-Hill, 1946. Pp. vii + 549. (Illustrated.) $6.00.

The literature of heterocyclic chemistry, barring the publications of original investigators in the field, is confined to a relatively small number of specialized monographs and a variety of survey chapters in some of the larger works on organic chemistry. This book is a contribution which has not been attempted previously; it is a textbook of heterocyclic chemistry and will prove useful in presenting graduate courses in that subject. The book is not intended as a reference work, but the comprehensive manner in which it reviews the third broad division of organic chemistry, and the representative quality of the numerous literature citations, make it a work of interest to organic chemists generally.

The material is arranged in classical order, oxygen and sulfur heterocycles preceding the more numerous nitrogen compounds, simpler ring systems being followed by structures of increasing complexity. Most of the chapters are prefaced with historical remarks of human interest, after which the nomenclature, preparation, and reactions of compounds containing the ring system under discussion are introduced. Descriptions of representative compounds and a selection of problems follow. Emphasis is placed on natural products, and the compounds selected for description either occur naturally or are of theoretical significance. The problems are a welcome addition to a text of this type and alone cover an appreciable part of the literature. Many of them reconstruct syntheses which have been realized experimentally, while others illustrate degradative methods of structure determination. Statements of problems include a starting material, a sequence of reagents, the composition of the final product, and a reference to the paper in which the reactions are described.

The typography of the book is identical with that of preceding volumes in the International Chemical Series. Misprints are few and self-evident, although errors like parabamic for parabanic acid (p. 462) could prove misleading. The use of a large R for a condensed benzene ring, "to focus attention on the heterocyclic chemistry of a synthesis," is initially confusing and without increased significance. Analytical applications are mentioned for many of the compounds described, and the omission of a substance like picrolonic acid is surprising. Not all heterocyclic compounds are difficult to prepare, and the ready availability of some of them compared with similarly constituted but theoretically simpler carbocyclic and aliphatic substances is of general interest. The accessibility of many unusual aliphatics and aromatics through syntheses involving heterocyclic intermediates is just touched (pp. 130 and 431).

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The prolongation of life. Alexander Bogomolets. (Translated by Peter V. Karpovich and Sonia Bleeker.) New York: Duell, Sloan & Pearce, 1946. Pp. xvii + 98. $1.50.

The Russian edition of Bogomolets' *The prolongation of life* has been read by several million people, and brief popularizations of phases of his work have appeared in the *Ladies' Home Journal* and in *Reader's Digest.* In making available this translation to the non-Russian reader, its purveyors astutely preface the work with the statement that they act "merely as transmitters." The author, the late Alexander Alexandrovitch Bogomolets, was president of the Ukrainian Academy of Sciences, founder and director of the Kiev Institute of Experimental Biology and Pathology, and recipient of a Stalin Prize, first class (March 13, 1941).

Since this book is primarily a popular essay on the subject of aging, no attempt is made to present a critical discussion of antireticular cytotoxic serum (ACS).

The bibliography of the text is very limited, and none of the work on gerontology in the English language is quoted. Nine different allusions, however, are made to Hufeland's 1796 edition of *Makrobiotik, oder die Kunst, das manschlice Leben zu verlängern* (translated into Russian in 1852). Most of the data on specific cases of longevity are quoted from the pages of *Izvestia, Pravda,* or the newspaper *Communist.* There are other miscellany on examples of longevity in plants and animals. While these data cannot be accepted as scientific material, they are of such a nature as to endow the manual with some value as a source book for *curiosae* on longevity.

Regardless of the validity of Bogomolets' hypothesis, his popular manual can serve only to perpetuate among the laity an alarming quantity of pseudo science and old wives' tales. On page 26 he writes: "I stated a long time ago that cancer cannot develop in an organism if the reticulo-endothelial tissue has retained a sufficient degree of resistance." Since the occurrence of cancer is then accepted *ipso facto* as an indication of the failure in resistance of the reticulo-endothelial system, Bogomolets' statement seems to mean no more than that, for