

of the paper, and the code number. It would also be advisable to put the code number on any abstracts made of the reprints. However, doing this may add a bit of extra work, since abstracts are often made from the original article before a reprint is obtained and catalogued. Although I have not found it necessary, it is suggested that if any group becomes overburdened with reprints, the titles be listed numerically on a sheet inserted at the beginning of the group. If the group becomes still bigger, a subject card index file could be set up as suggested by Richardson.

Instead of envelopes for holding the reprints I have been using pamphlet boxes, 7 inches wide  $\times$  10 inches high  $\times$  3½ inches deep. When necessary, reprints are trimmed to 7 inches  $\times$  9½ inches, or those too large to be trimmed are folded. Trimming or folding has not been found a serious handicap, since only about one-fourth are too large for this size of box. Spacer cards with index tabs giving the subject and code number separate the different groups of reprints. If the boxes are kept at a minimum of three-quarters full, there is little more waste space than that represented by the thickness of envelopes, especially when the envelopes may hold in

many cases no more than a single reprint. If envelopes were used for filing by subject, there would be, at least in most fields, far fewer needed than in filing by author.

When a box becomes full, the rear group of reprints is transferred to the next box, and a similar shift is made in successive boxes. In a rapidly growing collection new boxes should be inserted at intervals. The effort in making such a rearrangement from time to time is minimal. A card on the outside of each box gives the code number and subject of each group in the box. The card is slipped into a shallow pocket made by pasting a cut envelope on the outside of the box. The code numbers and subjects are visible above the edge of the pocket.

In setting up the system some thought should be given both to the classes of subject matter and to the group titles. As I have employed the system, nearly every class has some unused group code numbers which are available for future expansion. With the use of subgroups expansion of the filing system is virtually unlimited.

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## Book Reviews

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*Acetanilid: a critical bibliographic review.* Martin Gross. New Haven: Hillhouse Press, 1946. Pp. 155. \$3.00.

This review of acetanilid is the first of a series of monographs from the Institute for the Study of Analgesic and Sedative Drugs. It is introduced by H. W. Haggard, director of the Laboratory of Applied Physiology, Yale University, and will be followed by other volumes under the same editorship dealing with salicylates, phenacetin, bromides, and antipyrine. Not only are these intended to furnish for investigators a critical review of the whole literature, but they also collect and evaluate the previous and encourage additional research.

The present work is an excellent survey of the problems which have been studied by biochemists, pharmacologists, and clinicians since acetanilid (antifebrin) was introduced in 1886 by Cahn and Hepp as the first modern antipyretic. The material is discussed in several meticulously elaborated chapters. The most important are: "The Fate of Acetanilid in the Body," "Therapeutic Use," "Pharmacology and Toxicology With So-called Cases of Acetanilid-Poisoning," and "The Question of Addiction or Habituation." Pharmacologists and clinicians will find in all these chapters that, despite 60 years of experimental and practical research, a wide field is still open for new investigations to confirm and augment older studies and to ascertain new facts about the antipyretic, analgesic, and toxic action of this drug, so fundamental to our knowledge of all antipyretics subsequently discovered. Its excellent and critical contents are supported by an extensive bibliography of 763 references.

All scientists interested in the progress of experimental or clinical therapy will find stimulating material for study in this outstanding volume, which is highly recommended.

ERNEST P. PICK

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*The dynamics of human adjustment.* Percival M. Symonds. New York: D. Appleton-Century, 1946. Pp. xiv + 666. \$5.00.

This book gives evidence of the increasing interest in dynamic psychology, which the author defines as "concerned with the ways in which an individual satisfies his inner drives from the physical and social world in which he lives." The scope and level of the volume show that it is intended primarily as a textbook for advanced students who are preparing for professional work in clinical psychology.

The six opening chapters deal with general principles of dynamic psychology. The thesis of these chapters is that the frustration of human drives leads to aggression, that aggression meets with punishment, that punishment is the source of anxiety, and that anxiety, in turn, is the basis of substitutive and neurotic behavior. The seventh chapter, on defenses against anxiety, is a transition to the core of the book, which discusses at length each of the mechanisms of adjustment, including fixation, regression, repression, displacement, introjection, projection, identification, sublimation, reaction and reversal formation, compensation, rationalization, and fantasy.

There is a final chapter on the criteria of normality. It may be regretted that the author did not add a systematic presentation of psychotherapy, although therapeutic considerations are included in a number of the chapters on the mechanisms. The bibliography of 883 items is unusually complete and accurate, and includes brief commentaries on almost all of the references.

Most of the material in the introductory chapters is compatible with the trend of eclectic American psychology, based on physiological and experimental concepts and evidence. The chapters on the mechanisms are, as the Preface states, "frankly psychoanalytical" in point of view. In many instances the objective and psychoanalytic approaches have been blended harmoniously, but in others the reconciliation has not been accomplished successfully, with the result that contradictory statements sometimes occur in close proximity. For example, page 138 says: "Anxiety is learned. . . . Since anxiety is a response to the anticipation of danger, it must have been learned from the actual situation of danger. . . ." Page 140 states: "Anxiety puts in its first appearance at birth and is evidenced by the infant's first spasmodic efforts to catch its breath and to utter its first wail." Contradictions such as these are but the growing pains of an immature but vigorous area of investigation. In spite of them, the clinical and analytical material is of value as a storehouse of hypotheses that, in time, will be drawn into the structure of scientific psychology.

Symonds' book is a worthwhile contribution to progress in the merger of psychology and psychoanalysis.

LAURANCE F. SHAFFER

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**pH and plants: an introduction for beginners.** James Small. New York: D. Van Nostrand, 1946. Pp. vii + 216. (Illustrated.) \$4.00.

Considering that "many biological reactions tend to vary as the logarithm of the hydrogen-ion concentration or activity," the author has assembled from "the literature, now immense . . . samples over a wide field to illustrate methods of approach and type of results." Abstracts or summaries of numerous research papers are more or less loosely grouped together in chapters on pH in relation to plant sap, cell walls, protoplast, plant enzymes, aquatic life, plant pathology, and succulents.

In a chapter on "Soil pH and Plants" selected species are assigned to a series of classes termed "acidiphilous, acid-tolerant, amphi-tolerant, mesophilous, alka-tolerant, and alkaliphilous." The distinction of presumed "phily" from tolerance is based, however, merely on slight numerical differences in reported pH ranges.

There is a bibliography of some 300 titles, on the whole well selected, although one misses the names of Aslander, whose studies of the antagonism of hydrogen by other ions are of considerable interest. No clear-cut logical treatment with concise conclusions or summaries of the results obtained in the various fields is given, but a 17-page index makes possible the location of many scattered items.

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## Scientific Book Register

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BEDINGTON, H. M. (Compiler.) *Some British books on agriculture, nutrition, forestry, and related sciences, 1939-1945.* (Imperial Agricultural Bureaux Joint Publication No. 11.) Penglais, Aberystwyth, Great Britain: Imperial Agricultural Bureaux, 1946. Pp. v + 37. 3s.

BRILLOUIN, LEON. *Wave propagation in periodic structures: electric filters and crystal lattices.* New York-London: McGraw-Hill, 1946. Pp. xii + 247. (Illustrated.) \$4.00.

ELLIOTT, STANLEY B. *The alkaline-earth and heavy-metal soaps.* New York: Reinhold, 1946. Pp. x + 342. (Illustrated.) \$7.50.

ENGLE, EARL T. (Ed.) *Proceedings: Conference on Diagnosis in Sterility.* Springfield, Ill.: Charles C. Thomas, 1946. Pp. xi + 237. (Illustrated.) \$5.00.

GILMORE, CHARLES W. *A new carnivorous dinosaur from the Lance formation of Montana.* (Smithsonian Miscellaneous Collections, Vol. 106, No. 13.) Washington, D. C.: Smithsonian Institution, 1946. Pp. 19. (Illustrated.)

HEWITT, RICHARD M., NEVLING, A. B., ECKMAN, JAMES R., and SMITH, M. KATHERINE. (Eds.) *Collected papers of the Mayo Clinic and the Mayo Foundation.* Philadelphia-London: W. B. Saunders, 1946. Pp. ix + 899. (Illustrated.) \$11.00.

LEITHAUSER, DANIEL J. *Early ambulation and related procedures in surgical management.* Springfield, Ill.: Charles C. Thomas, 1946. Pp. vi + 232. (Illustrated.) \$4.50.

OPENHEIMER, JAMES M. *New aspects of John and William Hunter.* New York: Henry Schuman, 1946. Pp. xviii + 188. \$6.00.

POLYAK, STEPHEN L., MCHUGH, GLADYS, and JUDD, DELBERT K. *The human ear in anatomical transparencies.* (Published under the auspices of Sonotone Corporation.) New York: T. H. McKenna, 1946. Pp. 136. (Illustrated.) \$10.50.

SKRODER, CARL E., and HELM, M. STANLEY. *Circuit analysis by laboratory methods.* New York: Prentice-Hall, 1946. Pp. xvi + 288. (Illustrated.) \$5.35.

WORRALL, R. L. *The outlook of science—modern materialism.* New York-Toronto-London: Staples Press, 1946. Pp. 187. 12/6d.

ZOETHOUT, WILLIAM D., and TUTTLE, W. W. *Textbook of physiology.* (9th ed.) St. Louis: C. V. Mosby, 1946. Pp. 723.

———. *Nucleonics.* Washington, D. C.: Progress Press, 1946. Pp. 38. (Illustrated.) \$1.00.

———. *What industry owes to chemical science—a symposium.* (1st Amer. ed., based on a scheme by Richard B. Pileher and Frank Butler-Jones, with 50 contributors.) Brooklyn, N. Y.: Chemical Publishing Co., 1946. Pp. viii + 372. \$5.00.