

student, home-owner, nurseryman, landscape architect, and professional arborist.

General maintenance practices are brought up-to-date in part 1. Topics such as soil, transplanting, fertilizers, pruning, treatment of wounds and cavities, and bracing are adequately covered. Major revisions have been made in the chapter on trees suitable for various locations; tall-growing trees are given only passing attention, and more emphasis is placed on low-growing trees suitable for use about low, modern homes and also for streetside plantings.

Specific abnormalities of trees are discussed in part 2. Three main chapters deal with the diseases and insect pests that attack low-growing, tall-growing, and evergreen trees. Each group of trees is arranged in alphabetical order according to the common names. The diseases are presented in logical order—symptoms, cause, and control. Next each insect pest is identified by a description of its damage to the tree and a brief description of the various stages of development. The description is followed by a discussion of appropriate control measures. New diseases and insect pests and the latest methods of controlling them are included.

A new topic is presented in the appendix, which should appeal to professional workers. It is a method for evaluating shade trees from a monetary standpoint adopted by the National Shade Tree Conference and the National Arborist Association in 1957. This is followed by a 19-page, selected bibliography that is especially useful to the student.

Pirone has successfully presented his subject in a manner midway between the technical and the popular levels of presentation.

WILLIAM F. KOSAR
*U.S. National Arboretum,
Washington, D. C.*

Radiation Hygiene Handbook. Hanson Blatz, Ed. McGraw-Hill, New York, 1959. 926 pp. Illus. \$27.50.

Hanson Blatz writes in the preface of this *Handbook* that it is the first comprehensive handbook in the field that they chose to call "radiation hygiene" and that the handbook has been dependent upon the contributions, advice, and inspiration of many of the American leaders in this "relatively new branch of science."

The new description of the field as "radiation hygiene" seems very opportune and is a good substitute for the less apt term "health physics" which, if we consider the meaning of "physic," seems at times to be somewhat more appropriate to the field of patent medicines. Disappointingly, however, the information in the handbook seems sometimes to be insufficiently up-to-date to do justice to the newness of this "relatively new branch of science," but this is probably due to the delays that are inevitable in publishing a large and comprehensive work. It is, however, somewhat incongruous to find 102 pages devoted to nuclear data tables "based principally on the work of J. M. Hollander, I. Perlman and G. T. Seaborg" which appeared in *Reviews of Modern Physics* in April 1953 when a very full and complete revision of that work appeared in the same journal in April 1958. Nor is any reference made to the intervening encyclopedic publications of the Nuclear Data Group of the National Research Council (K. Way, C. L. McGinnis, *et al.*).

In the table on fundamental constants in the section entitled "Reference data," it is curious to find the "rutherford," which was stillborn some 9 or 10 years ago. In passing, one might question the validity of including quantities such as the roentgen and curie (and even millicurie and microcurie) as *fundamental constants* along with Avogadro's number, Planck's constant, and the velocity of light.

Apart, however, from the shortcomings of which the foregoing are examples (doubtless they are due to the time elapsed between setting pencil to paper and the ink drying on the printed page), this volume contains a wealth of information in its 23 sections which range from "Exposure standards and radiation protection regulations" through "Interaction of radiation with matter" and "Radiation attenuation data" to "Liquid and solid waste disposal" and "Personnel control." Sections are also devoted to sources of radiation (including natural and artificially induced radioactivity, particle accelerators, and reactors), radiation detection and measurements, and applications to industry, research and medicine. Each section of the book is contributed by an authority in his field.

One omission is, however, noteworthy. In the descriptions of counting equipment much space is devoted to how counters operate but none at all, as far as I can determine, to how to

use them. Thus, references are made to the efficiency of counters and formulas are quoted which include efficiency terms, but no clue to the determination of efficiencies is given, nor, indeed, is any difference drawn between geometric and intrinsic efficiency. Such efficiencies are normally determined by the use of radioactivity standards, but a careful search of the subject index and of the most likely parts of the text reveals not one single reference to radioactivity standardization. This is a topic that might well have merited a section of its own, when one considers how the older field of health physics depended so much on radioactive metrology.

That this new and interesting book will be of great value cannot be doubted, and it will be a most valuable asset for any radiation laboratory. It may, however, be of more use to the experienced radiation hygienist, who already knows his way around the field, than to the beginner. There is much that will be of value to the beginner, and the book is stimulating enough to make one look forward to the second edition which could well prove to be a much needed work of authority for all workers, both inexperienced and experienced, in radiation hygiene.

W. B. MANN

*Radioactivity Section,
National Bureau of Standards*

J. M. Charcot, 1825-1893, His Life—His Work. Georges Guillain. Edited and translated by Pearce Bailey. Hoeber, New York, 1959. 202 pp. + plates. \$7.

This is a pleasant little book with a Gallic flavor that is maintained in the translation and with a binding that attracts the eye and hand. How nice to see a little gilt filigree on a cover again.

This is the first English biography of Jean-Martin Charcot, father of modern clinical neurology and one of the medical luminaries of the 19th century. Charcot belongs to that select group of clinicians who have advanced medicine through meticulous, persevering observations of patients throughout the course of their illness and on to autopsy.

Charcot was fortunate in his environment. His work was his life, and he was not disturbed in his pursuits. A proud Parisian, he made the collection of human discards at Salpêtrière his