

when, being part of a scientific encyclopædia, it must presumably be intelligible to those whose general scientific knowledge is only limited. From this point of view, the book is well written, and the author, while necessarily introducing a good deal of text-book matter—as in Chap. i., which deals largely with tests and properties of various nitrogen containing compounds—has yet found space enough to make reference to more than two hundred original papers. These have been well surveyed, and, in most cases, actual experimental numbers are given. The various stages of the cycle are worked out somewhat on monograph lines in Chaps. ii.-v. under the self-explanatory headings of nutrition, digestion, and transformation. The sixth and last chapter is devoted to the *bêtes noires*, or those nitrogen containing bodies which do not find a definite place in the cycle. The conflicting data and opinions of various authors are given, and the reader advisedly left to form his own. A complete bibliography concludes a very readable and useful book. E. R.

*The Lilies of Eastern Asia: a Monograph.* By Ernest H. Wilson. Pp. xiv + 110 + 17 plates. (London: Dulau and Co., Ltd., 1925.) 25s. net.

It is not often that a writer on plants has the advantage of having had experience of seeing them in their native habitats, of cultivating them, and of studying them from herbarium material. Mr. Wilson is fortunate in having combined these, and shows in his introduction what good use he has made of his opportunities, so as to arrive at an estimate of the value of the various characters for taxonomic purposes. He has made three journeys through those parts of eastern Asia which may be regarded as the headquarters of lilies, and has also studied the material preserved in the chief herbaria of the world. The result has been the production of a volume containing detailed descriptions of the species and varieties, references to literature and synonymy, indication of habitat and notes on their cultivation, together with seventeen plates, of which several are reproductions of photographs taken by the author, of the plants in their native habitats. The book will be of great assistance to students of lilies, and gives references to the scattered literature which has accumulated since the publication in 1880 of Elwes' "Monograph of the Genus *Lilium*."

C. H. W.

*Wireless Valve Transmitters: the Design and Operation of small Power Apparatus.* By W. James. Pp. viii + 271 + 8 plates. (London: Iliffe and Sons, Ltd., 1924.) 9s. net.

THE aim of the author is to deal in turn with the various parts of a complete radio transmitting equipment so as to enable the amateur to set up and operate his own transmitter. A great deal of interesting and instructive work can be carried out by a "non-radiating" aerial, and certainly this type should be used by the beginner. The circuit arrangements described are either standard practice or of proved practical utility. The author's diagrams make his descriptions easy to follow. Those whose experiments are carried out mainly by trial and error will do well to read this book. Amateurs have recently had many successes to their

credit, and they deserve every encouragement. Rigorous mathematicians would not allow some of the proofs given in the book. For example it is stated (p. 7) that the skin effect is greater the larger the cross-section ( $S$ ), the higher the frequency ( $f$ ), and the better the permeability ( $\mu$ ). It is less for conductors with a high specific resistance ( $\rho$ ). "Thus" the skin effect is proportional to  $S\mu f/\rho$ . It is conceivable that some readers might think that this was a proof.

*Choosing your Life Work.* By William Rosengarten. Second edition. Pp. xxii + 323. (New York: McGraw-Hill Book Co., Inc.; London: McGraw-Hill Publishing Co., Ltd., 1924.) 12s. 6d. net.

THIS book sets out with the aim of helping a young boy to choose a career. According to the author, psychological tests are so new and uncertain that for practical purposes they are almost as untrustworthy as phrenology and physiognomy. Therefore the youthful aspirant for a career is recommended to analyse himself according to the *questionnaire* appended and then to turn to the various occupations and select according to his fitness. A chapter is devoted to each of the common occupations, and the requirements, emoluments, and drawbacks to each are described. It is distressing to learn that the telegraphist, although he fulfils a very important function, is unlikely to win high financial reward. As a handbook to various trades, the book may be useful; its style is verbose and the information it gives would not have been impaired by judicious compression. The blend of moral "uplift" and commercialism is not attractive to the English reader.

*The Dust Hazard in Industry.* By Dr. William E. Gibbs. (Chemical Engineering Library: Second Series.) Pp. 168. (London: Ernest Benn, Ltd., 1925.) 6s. net.

THE subject dealt with in this book is one of great importance. Industrial dust is frequently a source of danger, either to health, or to life and property by causing explosions. Although much valuable information is available, the publications are scattered, and the author has performed a useful service in collecting and arranging the material in a readable form. Particular attention is paid to dust explosions, on which much useful information has been obtained at the Home Office Experimental Station at Eskmeals. American results, of great value, have also been fully considered, and the book is authoritative. Some of the information will be of interest to medical men as well as to chemical engineers. The name of the chief authority on explosions, Prof. H. B. Dixon, does not appear in the book, although many of his results are quoted.

*Mechanical Mixing Machinery.* By Leonard Carpenter. (Chemical Engineering Library, Second Series.) Pp. 138. (London: Ernest Benn, Ltd., 1925.) 6s. net.

ALTHOUGH this book deals with dry mixing, it overlaps in parts the volume on the same subject by Mr. Seymour in the same series. It is not altogether clear why the publishers should have thought it necessary to have had two volumes dealing with the same subject in the same series, but the two books will no doubt appeal to different classes of readers. The treatment is practical, and the book is well illustrated.