

The interesting "History of the Physiological Society" during its first fifty years (1876-1926), written by Sir Edward Sharpey-Schafer, was brought out as a supplement to the *Journal* last December (*vide* review, NATURE, Mar. 31, p. 491), and now an author index to volumes 1 to 60 of the *Journal* (1878-1928) has been issued as a supplement to its June number. These two supplements have appropriately appeared close together, for they cover practically the same—the Augustan—period of British physiology, during almost the whole of which the *Journal* was under the editorship of the two Cambridge professors, Michael Foster and J. N. Langley.

Turning over the pages of this important record, the reader finds that though no one has contributed to every volume of the *Journal*, the late Prof. Langley's name appears in all but six, being absent from vols. 21, 26, 32, 34, 44, and 55; that Sir Edward Sharpey-Schafer had papers in vols. 3 and 60, with many in between, and that Sir Charles Sherrington's name first appears in vol. 5 and steadily continues to nearly the end. A distinction is made between papers in the *Journal* and communications in the *Proceedings of the Physiological Society*, which first appeared in vol. 4 of the *Journal*; thus among the 128 entries under the late Prof. Langley's name there are no less than 82 papers in the *Journal*, the remaining 46 being in the *Proceedings* of the Society. His successor in the Cambridge chair of physiology, Prof. Joseph Barcroft, makes his first appearance in vol. 25 (in 1900), and so far has made 63 contributions, of which 36 are papers in the *Journal* and 27 communications to the Physiological Society.

A noticeable feature is the large number of combined papers; thus there are thirteen by Profs. Starling and Bayliss. There is also much evidence of the stimulating influence of the senior on the junior worker in combined authorship; this is shown, for example, in 49 out of the 63 entries under Prof. Barcroft's name, in 35 out of Dr. J. S. Haldane's 48, in 41 out of the 128 entries under Prof. Langley's name, in 19 out of Sir E. Sharpey-Schafer's list of 35, and in 20 out of the 45 standing to the credit of the late Dr. Sidney Ringer, a most constant contributor to the first eighteen volumes.

This author index is a most interesting record, an extremely useful source of reference, and a monument, if it were needed, to the work of British physiologists.

H. R.

### Our Bookshelf.

*What Botany really Means: Twelve Plain Chapters on the Modern Study of Plants.* By Prof. James Small. Pp. 200. (London: George Allen and Unwin, Ltd., 1928.) 5s. net.

A GLANCE at the illustration at the beginning of this book, which illustrates the adventures of running sap, is sufficient to show that the book is constructed on unusual lines. Upon critical examination, probably any regular reader of NATURE could find some section which might undergo alteration in the interest of accuracy. At the same time, most readers would regretfully disclaim the capacity to produce such a book, and the vast majority would agree with the reviewer that its production is a definite gain to botany as well as to the community.

The text has evolved out of a series of broadcast talks from the Belfast station of the British Broadcasting Corporation, and something of the vividness and spontaneity of the original spoken phrase adheres to this slightly more formal presentation of the subject matter. In trans-Atlantic phraseology, Prof. Small seems to possess the rare faculty of "getting his ideas across" to a general audience of all ages. For one thing, he sees the romance behind the routine task of the grower, the manipulator and the vendor of plants. His book may be recommended very warmly to the general reader. It reminds the average man to what extent his life is based on the growth and activity of the plant, and at the same time it reveals very interesting glimpses of the fascinating and fundamental problems that arise as soon as his interest is aroused in them. The comparison of the plant with an internal combustion engine is particularly well worked out.

Prof. Small claims that only three technical terms are employed in his twelve chapters, enzymes, osmosis, and gametes. The language is certainly very simple and non-technical, in view of the fact that fundamental problems in plant physiology are squarely faced. Diffusion, if regarded as technical, would have been a welcome additional term. It might have avoided the implication on p. 92 that the sugar solution draws not water merely, but salt also, into the osmotic cell.

*Electric Rectifiers and Valves.* By Prof. Dr. A. Güntherschulze. Translated and revised by Norman A. de Bruyne. Pp. ix + 212 + 10 plates. (London: Chapman and Hall, Ltd., 1927.) 15s. net.

ELECTRIC valves have been rapidly coming to the front during recent years for many and varied purposes. For example, the building of large alternating current power stations to replace direct current stations scattered over a wide area has raised the problem of whether it is possible to utilise the old machinery. The invention of the mercury arc rectifier has in several cases prevented the old machines being scrapped. For broadcasting use there has been a great demand for small rectifiers. Valves are also used to produce high frequency