

The contents of this supplementary volume are divided in the following manner. The supplement to vol. 4 is concerned with the chemistry of tissues and organs, including blood and lymph, skeletal and epidermal structures, muscle, the apparatus of circulation and respiration, the nerves and sense organs, and the chemistry of tumours. The supplement to vol. 5 deals with the glands and secretory organs, which are classified into those involved in digestion and those involved in reproduction. The supplement to vol. 6 covers the general field of nutritional processes, including digestion, absorption and excretion. Finally, vol. 7 is brought up to date under the sub-headings of nutrition, gas exchange and general metabolism.

It is clearly impossible to do more than indicate here in a quite general way the field surveyed in this book; the largeness of the field is in itself a measure of the vastness of territory mapped in the original work to which this is the second supplementary volume.

A. L. B.

*Radio round the World.* By A. W. Haslett. Pp. vii+196+7 plates. (Cambridge: At the University Press, 1934.) 5s. net.

THIS volume presents an interesting account, in a form suitable for the layman, of the main facts accompanying the application of electric waves to radio communication. A brief, historical account of the earliest discoveries of these waves includes a reference to the doubts and difficulties which accompanied the pioneer workers of some thirty years ago. The story of the propagation of electric waves of all lengths round the world, by the aid of the ionised layers in the earth's atmosphere, is then developed in a straightforward and skilful manner. A chapter entitled "The Sun calls the Tune" is noteworthy in this portion of the book, and directs attention to the various ways in which the possibilities of long-distance radio communication are controlled or limited by solar influence.

Later chapters utilise an account of the trend of modern developments to indicate the future possibilities of radio technique, particularly in the application of ultra-short waves to secret communication for war purposes, to television, and, by no means least important, to the introduction of a new phase of curative medicine.

On the whole, the author has obviously taken a good deal of trouble to get his facts correctly stated, although p. 160 contains, in a loosely worded sentence, a bad misrepresentation of the possibilities of radio direction finding. A reviewer in another country might complain that in certain portions of the book undue stress is placed upon recent British work in radio research; while in other places, the author has omitted to mention the Radio Research Board, from the publications of which so much of the material has obviously been derived. These are, however, minor blemishes in an otherwise successful effort to show the general reader how very much more there is in the science and practice of radio communication than the mere dissemination of broadcast programmes.

*Annales Bryologici: a Year-Book devoted to the Study of Mosses and Hepatics.* Edited by Fr. Verdoorn. Supplementary Vol. 4: *Studien über Asiatische Jubuleae (de Frullaniaceis 15-17) mit einer Einleitung: Bryologie und Hepaticologie, ihre Methodik und Zukunft.* Von Fr. Verdoorn. Pp. viii+231. (The Hague: Martinus Nijhoff, 1934.) 6 guilders.

A SKETCH of the progress of hepaticology occupies the first thirty-six pages; a knowledge of early authors is considered essential in questions of nomenclature and in dealing with types of genera; Evans, Howe, Lindberg, Schiffner and Spruce are authors favourably mentioned, but Stephani's "Species Hepaticarum" is very frankly criticised; its errors and other faults are considered to be so grave, that setting it aside as "opus excludendum" is discussed; in view however of its wide acceptance, that course is inexpedient and revision is recommended. Improved methods, geographical, cytological, genetical, experimental morphological, etc., are urged in the study of liverworts; the weakness of much recent bryological literature is referred to. Revision is the most urgent need of to-day; progress will largely depend on the study of the smaller groups, which are insufficiently understood.

De Frullaniaceis xv-xvii (pp. 40-224) carries on work published in earlier supplements. Dealing with the Lejeuneaceae, original diagnoses are reproduced as being often inaccessible to workers in Asia; there is a clavis to the fourteen genera, with notes on variability distinguishing characters, distribution and stations. Section xvi is a revision of the Asiatic Tamariscineae; a restricted but definite specific value is given to the Ocelli and a clavis to the six Asiatic species relies upon characters of the lobi, amphigastria and ocelli. Section xvii deals with some recent collections and the distribution of Indomalayan Frullaniaceae and Holostipae.

*Strahlung und Lichterythem.* Von K. W. Hausser und seinen Mitarbeitern. Herausgegeben von C. Ramsauer und R. Kollath. (Ostwald's Klassiker der exakten Wissenschaften, begründet von Wilhelm Ostwald, neu herausgegeben von Wolfgang Ostwald, Nr. 239.) Pp. iv+89. (Leipzig: Akademische Verlagsgesellschaft m.b.H., 1934.) 4 gold marks.

THOSE who knew the late Dr. Hausser will find much pleasure in the fact that the memory of this brilliant young physicist, who died in 1933 at forty-six years of age, is honoured by the publication of his original papers on the action of sunlight on the human skin as one of "Ostwald's Klassiker". Hausser was a pioneer in this branch of biophysics, for he was the first to realise the importance of using monochromatic light of measured intensity in the investigation of the causes of erythema and sunburn, by means of his large quartz prisms. He was responsible for the discovery of the fact that the human skin is particularly sensitive to two regions of the violet portion of the spectrum, one of which is normally absorbed by the atmosphere. All interested in biophysics would do well to possess this little book.