

BOOK REVIEWS

H. WALTER: *Vegetationszonen und Klima. Kurze Darstellung in kausaler und kontinentaler Sicht*. 244 p., 78 figures and photographs. Stuttgart, Verlag Eugen Ulmer. 1970. Dutch purchasing price f 16.—.

This booklet is a very concise edition of the same author's large work "Die Vegetation der Erde in öko-physiologischer Betrachtung", which comprised 1234 pp., 642 figs. and 168 tables in all.

The author realized that only a widely travelled worker could be regarded as capable of writing such a book with a sufficient basis of personal observations, and shows in the introduction that he belongs to this privileged category. Two recent trips, to the U.S. and Venezuela, even enabled him to revise and supplement, by his own observations, the paragraphs devoted to these areas.

The book has remained intelligible, in spite of the very concentrated treatment of a broad subject. In concise form it deals with the essential points of global connexions between the diversity of the plant cover and other properties of the earth, in particular the climate.

The ten chapters dealing with the relation between vegetation and climate are preceded by a theoretical introduction. This I find somewhat disappointing. As is more often the case with Walter's writings, the main lines of his arguments escape me, they seem to be crooked and lacunose. As an illustration the subtitle of the book "Brief presentation from a causal and continental viewpoint" may be cited. What is this supposed to mean?

Regrettably a true literature list is lacking. This, too, could have remained short if, e.g., only the important handbooks and essential articles would have been listed.

Libraries possessing "Die Vegetation der Erde" need not purchase the present booklet. For students in geography and biology wishing to study plant geography it can be recommended, but for the theoretical background of the subject they should consult a better book.

J. VAN DONSELAAR

DIETER HESS, *Pflanzenphysiologie*. Molekulare und biochemisch-physiologische Grundlagen von Stoffwechsel und Entwicklung. 367 p. 248 fig., 1970. Eugen Ulmer, Stuttgart. DM 19.80.

This textbook is a didactically exemplary introduction into a few chapters of the physiology of the higher plant, to wit metabolism, growth and development. It is an up to date integration of the important facts in these domains, with molecular biology at the basis.

Because of the title of the book "Pflanzenphysiologie", the author had to include at least a few chapters on other elements of this subject. These "completing" chapters, especially that on transport, are considerably below the level of the main part of the book. In some instances the argument is missing the quintessence whereas in others the treatment is inadequate or even wrong. The endodermis is not mentioned at all in the book. This omission makes a discussion of transport, root pressure etc. incomplete. The special function that is assigned to wood parenchyma in connection with the cohesion theory is incomprehensible. The teleological discussion of the diurnal changes of pH in the leaves of succulents becomes less persuasive because the disappearance of the acids during the day remains obscure.

Taking into account that this is the first edition, the number of errors in the figures is small (figs. 27, 38, 100, 117, 166, 169). Since the explanation in the text generally is very clear a few figures seem useless or require an unnecessary and even unprofitable effort (figs. 146, 170, 224).

"Pflanzenphysiologie" of HESS is warmly recommended provided it is used in combination with other, more general, works on biochemistry and plant physiology, which advice, indeed, is given by the author himself in the preface.

L. ANKER