

## BOOK REVIEWS

H. Ettl: *Xanthophyceae*, Vol 3, part 1 of: H. Ettl, J. Gerloff & H. Heyning: *Süsswasserflora vom Mitteleuropa* (begründet von A. Pascher). Gustav Fischer Verlag, Stuttgart, New York, 1978. 530 pp., 636 figs. DM. 98.—

The start of a completely revised re-edition of Pascher's famous "Süsswasserflora von Mitteleuropa" is a truly heroic enterprise in view of the fact that only a limited number of specialists do have the knowledge and experience to accomplish such a work.

The first part consists in essence of Pascher's classical monograph "Heterokonten" edited in Rabenhorst's *Kryptogamenflora* in 1939, and completed with subsequently described taxa. Most illustrations and descriptions are derived from this monograph. Most later descriptions and illustrations, many of which borrowed from other work of Dr. Ettl, in style and presentation are similar and of equally high standard as those of Pascher, and clearly demonstrate Pascher's profound influence on the eminent Czechoslovak school of phycologists.

52 pages are devoted to a general introduction, which treats aspects of the recent electron-microscopical work on flagellate algae. Unfortunately only two very simplified diagrams illustrate the EM-aspects of the Xanthophytes. This is the only criticism one could raise against this volume: it does not sufficiently emphasize the profound influence electron-microscopy has had on the taxonomy of flagellates during the last two decades. It is to be hoped that this aspect will receive more attention in the forthcoming volumes.

Phycologists and aquatic ecologists will warmly welcome the remaining volumes of this new "Süsswasserflora", for they are in great need of reliable freshwater algal flora's. For instance the identification of the Chlorococcales, Volvocales and Ulotrichales is at present a difficult task, because the numerous recent genetic revisions (many of which by Fott and other Czechoslovak phycologists) are dispersed through literature, while other groups are still to be revised.

C. VAN DEN HOEK

H. Ellenberg: *Vegetation Mitteleuropas mit den Alpen in ökologischer Sicht*. Verlag Eugen Ulmer, Stuttgart 1978. 2nd completely revised edition, 981 pp., 499 figs., 130 tables. DM 120.— ISBN 3-8001-3418-7.

The difference between first and second edition of Ellenberg's famous book on the vegetation of Central-West Europe is already visible in the subtitle; whereas in the first edition it reads: "in causal, dynamic and historical view" that of the second edition reads: "in ecological view". The author has seen it as his task to include the enormous flow of new information in the field of ecology resulting from the world-wide interest in the environment in the end of the sixties. Thus the book has been extensively rewritten. Using a smaller letter type the text is only 25 pages longer than that of the preceding edition, but each paragraph contains new parts of text, and quite often other parts have been omitted. For a standard work so well known it is hardly necessary to give information on its contents; it suffices to mention two new indexes. One gives a survey of the synsystematic taxa with an enumeration of the characteristic species of each, the second new index presents the cited species names. The latter index is especially useful because it gives for each species the six *indicator-values* (for light, temperature, climate, humidity, pH, and N-contents) and an indication of its life-form. The new book is worth its high price, and should not be lacking in any personal library of those involved in biological studies of the environment.

R. VAN DER MEIJDEN

Hans KAPPERT: *Vier Jahrzehnte miterlebte Genetik*. Herausgegeben von Wolfgang Horn und Günter Wricke. Verlag Paul Parey, Berlin und Hamburg, 1978. 184 p., 6 ill., 13 schemes, DM 24,-.

The book is a survey of the development of genetics in the period 1910–1950, during which Kappert himself was actively engaged in genetical research. In a preliminary chapter the author reviews the situation in genetics at the time (1910) that he started his career as a geneticist with Carl Correns.

In the next chapters, each devoted to one decade, Kappert analyses the main achievements in the various fields of genetics, especially chromosome-theory, inheritance of sex, applied genetics and plasmatic inheritance.

The book is primarily written from the point of view of the working geneticist. Kappert is more interested in the actual results than in the way in which these were attained. His chronological treatment, according to a rather arbitrary scheme, does not do justice to the continuity in the development of genetics. Therefore, notwithstanding the editor's claim, Kappert's book cannot be regarded as a history of genetics in the proper sense. However, with his profound knowledge of genetics, Kappert has provided the historian of biology with a wealth of very useful information which cannot be neglected in studying the recent history of genetics.

A short biography of Kappert (1890–1976) concludes the book.

R. P. W. VISSER

P. CALOW: *Life Cycles. An evolutionary approach to the physiology of reproduction, development and aging*. 164 pag., 52 figs., London: Chapman and Hall, 1978, £ 3.50, paperback.

In this well-written presentation one can read again the well known facts and events which occur during the life cycle, arranged, in this case, phylogenetically. The book makes reference to a wide variety of unicellular and multicellular organisms from the animal and plant kingdom. In this sense it is an integrated approach; it does not describe in detail or explain phenomena, but instead poses such questions as "Why do these events take place?" and "Why should they take place the way they do?". It is essentially a highly speculative approach, and not primarily a scientific one. Nevertheless and evolutionarist's first approach to a situation would be in this way.

After an introduction on Life's logic and Life as a communicational channel, the second part, on growth, views Life as an energy transforming, cellular and dynamic, steady-state system. The part on reproduction puts the fundamental questions: "Why sex?" and "Why two sexes?". Examples of reproductive strategy provide some quantitative aspects. The last part on aging is based on the hypothesis of the random, non-programmed accumulation of molecular damage. The comprehensive information obtainable from this book is concluded by a 15 page bibliography. In general, one senses that the author must be a zoologist as only a few examples of plants are mentioned. The book reads well and provides a fresh outlook on basic biological knowledge, which one should have acquired in advance elsewhere.

H. F. LINSKENS