Book reviews

Sharma, A.K.; Sharma, A. (eds.): Chromosomes in Evolution of Eukaryotic Groups, Vol. II. Boca Raton, Fla: CRC-Press 1984. 269 pp., several figs. and tabs.

Volume II of "Chromosomes in Evolution of Eukaryotic Groups" consists of 10 chapters dealing with conservation of linkage groups during the evolution of mammals (S. Ohno), chromosomes of reptiles (J. W. Bickham), Coleoptera (N. Virkki), Nematodes (A.C. Triantaphyllou), Pteridophytes (T.G. Walker), Tradescantieae (K. Jones, A. Kenton), Heteroptera (S.K. Manna), and Hominoidea (A. Sharma, G. Talukder). Two chapters, designated 'overviews' on chromosome evolution in monocotyledons and corresponding trends in the whole plant kingdom, written by the editor(s), are mixed between them.

The chapters on non-vertebrates and Pteridophytes contain valuable compilations of chromosome numbers and "cytotypes" from a mostly very limited number of species. Their content could deserve the term "karyotaxonomy" but the body of available karyological data is not sufficient enough for striking evolutionary conclusions as stated by the authors themself.

Even in the relatively small and intensively studied group of Tradescantieae, where there are some nice examples of intra- or interspecific changes of karyotypes, it is difficult to establish a general trend in karyotype evolution.

The 'overviews' are too cursory and sometimes even ignorant or misleading. Point VI of chapter 9 (a general comment on the evolution of chromosome structure) would habe been better omitted for these reasons. "Limitations in space and time" (foreword and p. 170) are no convincing apology for these shortcomings.

Unfortunately this reviewer had neither the possibility to read Volume I (a table of contents of the preceeding volume would have been desirable) nor possesses any information on the topics of future issues of this series. Therefore, the principles for selection of just these topics and their cumbersome sequence remain unintelligible to him.

I. Schubert, Gatersleben

Lásztity, R.: The Chemistry of Cereal Proteins. Boca Raton, Fla: CRC Press 1984. 203 pp., several figs. and tabs.

In this book the author has reviewed the literature on the protein chemistry of the major cereal grains. Chapter 1 introduces the subject, Chapter 2 deals with "The Importance and General Characterization of Cereal Proteins", and Chapters 3 to 10 cover wheat, rye and triticale, barley, maize, oats, rice, sorghum and millet proteins, respectively. Chapter 11 cites future research needs and trends in cereal chemistry.

The main emphasis of this book is on the biochemistry of the proteins of these cereals. The cereal proteins are divided into the storage and cytoplasmic proteins and the structure and functionality of these two groups are discussed. Each chapter covers the following: the quantity and distribution of the proteins in the grain, isolation techniques, and characterization of the various classes of grain proteins. There is also some information on the nutritive value of the various cereal proteins. An attractive feature of the review in this book is the critical evaluation by the author of the literature, thereby generating ideas for further investigations.

Most of the book is devoted to wheat proteins. This should especially be useful to wheat protein chemists since the author provides updated information in much detail especially at the molecular level. Of the book's 191 pages (not including the index), 89 of these pages (including references) are devoted to wheat proteins. Compared to the information on wheat proteins, the other chapters would seem to be a bit condensed. Perhaps, an alternative idea would have been to publish a book with chapters contributed by experts working on the proteins of the other cereals listed in this book. Nevertheless, the information provided in this book is adequate for reference purposes.

Two unattractive features of the book are the many typographical errors and the many instances of unusual English language usage. Despite these shortcomings the book is well-written, adequately referenced, illustrated with tables and figures, and is certainly a very useful source of information on cereal proteins.

K. Khan, Fargo