

Book reviews

Finger, K. H.: Hirten- und Hütehunde. Entstehung und Nutzung der Rassen und Schläge, ihre Haltung, Ausbildung und Leistungswettbewerbe. 247 pp. 9 colour photographs. 100 b/w photographs. 20 drawings. Stuttgart: Ulm 1988. DM 58.--.

Dog breeding has a scientific basis, and many monographs exist on this subject, but sheep dogs present a special problem as their interaction with both men and animals causes specific breeding problems. While this book is more directed towards the management and training of sheep dogs, there is a chapter, complete with basic terminology, on the genetics and population genetics of dog breeding. On the international level, more than 70 races of sheep dogs can be distinguished. All of these are pictorially presented in this book, together with a detailed description of their behaviour and their specific use under various circumstances. This book is a practical guide for the people working sheep with dogs. The author, a professor of animal breeding and genetics of domestic animals, also works as a farmer and shepherd, and has raised and trained collies himself. This unique monograph is a guide not only for the dog breeder and fancier, but also for all the problems involved in the handling and training of sheep dogs all over the world.

H. F. Linskens, Nijmegen

Dodds, J. H. (ed.): Plant Genetic Engineering. Cambridge: Cambridge University Press 1985. vii/312 pp. Several figs. and tabs. Hard-cover.

This book is another example of the impact plant molecular biology and genetic engineering of plants has had on the field of botany. Unfortunately, this reviewer finds it difficult to see anything exceptionally praiseworthy in a book covering these topics which was published in 1985. It is certainly not the book people working in this dynamic field have been waiting for. I had the distinct impression that some of the contributors used manuscripts that had also appeared as chapters in other books of this kind. An exception to this is chapter 8, the only worthwhile chapter to be found in the book, even though its quality is also hampered by the fact that its contents are not up-to-date and the technical description is no longer as useful as it was. The chapters on isolation and fusion of protoplasts and isolation and transfer of organelles are a summary of work done in the late seventies and early eighties. This work did not result in any substantial findings at that time. While the authors forecast more positive results in the future, in years after this book was written, these results have not yet materialized, and a description of the fundamental reasons for the failure of these approaches is missing. In chapter 5, the *Agrobacterium* system is described as far as what was known in 1983. The more exciting knowledge on the transfer mechanism, the situation concerning monocots, and the development of vectors is also missing. It irritates me to read in chapter 6 that this chapter was written to bring the information available on the role of viruses up-to-date. Chapter 7, which describes genetic engineering of the photosynthetic process, does not go any further than to predict. As mentioned earlier, the only chapter with any substantial scientific information to offer is chapter 8, which is on seed proteins, techniques for studying them at the level of molecular identification of the genes involved in their synthesis, and regulation of gene expression. Genetic manipulation is mentioned, but not described. Also here, the absence of real up-to-date information is sadly noted.

The conclusion drawn by this reviewer is that this is not a book to run to the bookstore for: the information it contains is from too long ago and has been passed by the more recent developments in plant molecular biology described in newly published books.

G. J. Wullems, Nijmegen

Goel, N. S.; Thompson, R. L.: Computer Simulations of Self-Organization in Biological Systems. Series: Computers in Biology. London, Sydney: Croom Helm 1988. 353 pp. 93 figs. 11 tabs. Hard bound. £ 49.50.

This book handles several aspects of self-organization in biological systems in both a general as well as a more specific way. The book consists of three parts. Part I describes the general principles of modeling and self-organization in biological systems. As an introduction to modeling and self-organization in general, it is not outstanding, but easy to read. Part II presents several examples of models, ranging from the folding of globular proteins to the aggregation of cells into tissues and embryo. The chapters on the assembly of bacteriophages are especially nice examples of how modeling can be of great value in the exploration of the effects of postulated mechanisms on the total process of assembly. Part III includes final comments and perspectives.

Since I am an ecologist and not very familiar with biochemistry, molecular biology, or embryology, it was a challenge for me to try to understand what is going on in these scientific fields. As far as I am considered, the authors have more than fulfilled their wish expressed in the preface: they may feel rewarded that at least one of their readers found every topic interesting and challenging enough to stimulate his creative thinking. Part III of the book is well worth reading as it puts the topics of this book into a more general context.

In conclusion: reviewing this book has been of great pleasure to me. The authors have been very successful in writing a comprehensive and clear text for scientists from very different disciplines.

O. F. R. van Tongeren, Nieuwersluis

Kay, J.; Morgan, M. J. (eds.): Molecular Pathology, Biochemical Society's Symposia, Series No. 53. London: Biochemical Society Book Depot, November 1987. 182 pp. 67 figs. 12 tabs. Hard bound. \$ 55.00.

The reviewed edition contains a collection of papers presented at the Biochemical Society's annual symposium held in December 1986 to honour the 75th anniversary of the Biochemical Society and the 50th anniversary of the Wellcome Trust. A number of internationally recognized experts participated.

The contributions are concerned with those modern techniques in molecular and cellular biology that can be applied to clinical problems in viral, microbial, parasitic, and genetically transmitted diseases. Although this issue may just be a timely reflection of a current topic, it helps the reader – especially because of the well-arranged variety of subjects – to survey modern concepts and methodology in molecular pathology. For this reason, the book is recommended to molecular pathologists, virologists, microbiologists, human parasitologists, medical geneticists, pharmaceutical chemists, as well as biochemists and advanced students in medicine, biology and pharmacy.

M. Wehnert, Greifswald