Book Reviews

Frankel, O.H., Soulé, M.E. (eds.): Conservation and Evolution. Cambridge. Cambridge University Press 1981. 327 pp., 37 figs., 19 tabs. Soft bound £ 25.00.

This book reviews the state of our knowledge concerning preservation and conservation of genetic variability in plant and animal species. The book does not solve all problems of conservation or answer all questions concerning genetic evolution. However, it does emphasize the fact that conservation of plant and animal resources is a population problem. The authors have done a good job of providing a wealth of information useful for pointing out how little we really know about our genetic resources and methods of sampling to conserve genetic variability. The book brings to focus the fact that we still have a long way to go before we can feel confident that most of our genetic resources are being conserved for future generations. I found the text interesting, enlightening, and scientifically stimulating. It is easy to read, and I believe should be recommended reading for students and researchers interested in or working in the area of conservation of domestic and wild plant and animal species. A.L. Kahler, Brookings

Ellenberg, H.; Esser, K.; Merxmüller, H.; Schnepf, E.; Ziegler, H.; Progress in Botany. Fortschritte der Botanik, Vol. 40.

Berlin, Heidelberg, New York: Springer 1978. 495 pp., 29 figs., 4 tables. Hard bound DM 148,–.

The 40th volume of 'Progress of Botany' is composed of 5 sections (morphology, physiology, genetics, taxonomy, geobotany), 28 articles and around 6,000 references. Once again it is an excellent book on the progress in this field during the last two years. The section on genetics, which is certainly of special interest for the readers of this scientific journal, is represented by 6 articles (88 pages) and is mainly orientated on successes in the fields of viruses, prokaryotes and yeasts because the most essential progress has taken place there.

Wackernagel summarizes new knowledges about DNA replication (discontinuous chain growth of both DNA strands) and characterizes the function of DNA primases, gyrase and unwinding enzymes. Additional information is presented about initiation and termination of replication and the correlation between replication and cell division. Techniques and results in recombinant DNA research form the basis of the next article (Hollenberg), in which the author presents a summary about the results of DNA cloning experiments in pro- and eukaryotes. The review on mutation by Rhaese concentrates only on a single topic: mutation induction as a cause of cancer. He concludes that most of the mutagens are potential carcinogens, and vice versa. Progress in this field has been advanced by the introduction of two new test systems, the Amestest and the host-mediated assay.

In the following report Zimmermann presents a paper about the molecular organisation of fungal genes and the genetics of fungal carbon metabolism and its regulation. Chloroplast and mitochondrial genetics is the content of the next report from Michaelis and Pratje, whereby the results in mitochondrial genetics mainly come from the field of yeast research. The last review from Blaich over genetic control of reproduction places higher plants in the center stage and the author relates these new results in homogenic and heterogenic incompatibility to those from the book of de Nettancourt.

The papers found in the other sections are also of a high standard and therefore specialists from other fields in Botany can read this 'Progress' with the assurance of learning something new in their areas of interest. G. Günther, Potsdam (GDR)

Zankl, H.: Human Genetik. Berlin, Heidelberg, New York: Springer 1980. 132 pp., 6 figs. Soft bound DM 13.80.

This book has been written especially for students of medicine and biology in order to help them prepare themselves for examinations in human genetics. About 150 questions and answers are given dealing with biochemical genetics, chromosomes of man, chromosome disorders, Mendelian disorders, polygenic disorders, study of twins as a special method in human genetics, mutation, population genetics, biochemical disorders, genetic counseling and genetics of blood group systems.

This booklet, which is precisely written and easy to read, is ideal for the use of students of medicine and biology.

F.H. Herrmann, Erfurt