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BOOK REVIEW

MULLER, W. H.: *BOTANY: A FUNCTIONAL APPROACH*. Fourth Edition. — Macmillan Publishing Co., Inc., New York; Collier Macmillan Publishers, London 1979. 687 pp. Paperback 12.50 US \$, £ 6.95, hardback 21.95 US \$.

The field of plant physiology has advanced so far that a textbooks must be revised periodically to keep pace with new data, discoveries, interpretation, hypotheses, conclusions *etc.* The reviewed book is an example of such textbook which is revised on average every five years and complemented so as to be on the top level of temporary knowledge, without substantial changing the specific approach and division of the text.

The book is written for both science and non-science students. It is focussed on basic biological concepts which help to understand plant processes and the importance of plants for all life on the earth. To facilitate an understanding of the life processes of plants, which factors influence these processes and how man can utilize and manipulate plants, the interrelationships between structures and functions are emphasized. Primary attention is directed to flowering plants, because they are not only the dominant plants in most environments but also the most utilized by mankind.

The subject is divided into 33 chapters. Six introductory ones (Life and plants; Use of plants by humans; A few basic physical and chemical principles; Cell structure; Diffusion and the entrance of materials into cells; The plant) review knowledge necessary for understanding the following special chapters. In this group of ten chapters, the chapters on function of stems, roots and leaves are linked closely to those on anatomy and morphology. After two special chapters on "Soils" and "Inheritance and variation" a brief descriptive taxonomic account of the major plant groups is given in nine chapters. The closing six chapters are devoted to phenomena, processes and subjects not directly connected with separate organs and not related to any specialized plant group (Evolution; Growth, development, flowering, and plant movements; Our environment; Populations and their problems; Pollution; The beginning). These miscellaneous items which are beyond the scope of the preceding chapters make this part of the book less well-arranged than the others.

All chapters are complemented by many illustrative figures, tables, schemes and lists of suggested references. The book is closed by a very useful "Glossary", tables with "Units of measurement" and "Index".

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