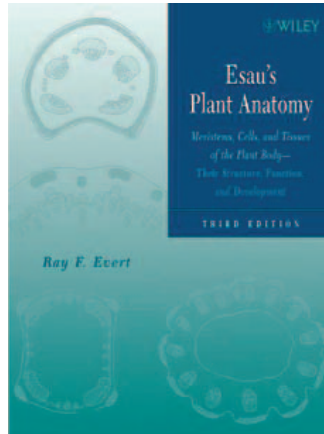


— BOOK REVIEW —



Esau's Plant Anatomy: Meristems, Cells, and Tissues of the Plant Body: Their Structure, Function, and Development, 3rd Edition

Evert R.F., 2006. John Wiley & Sons, Inc., Hoboken, NJ, USA, ISBN: 978-0-471-73843-5 (624 pp.)

This is the third edition of the classical textbook "Plant Anatomy", which was first published in 1954 by K. Esau and republished in 1965. K. Esau is the dominant Plant Anatomist of the last century with a marvelous career as a researcher and as a Professor of Botany in U.C. Davis. She was an elected member of the National Academy of Sciences, the American Academy of Arts and Sciences, the American Philosophical Society, and the Swedish Royal Academy of Science. In 1989 she was awarded with the National Medal of Science.

K.R. Sporne, reviewing the first edition of Esau's book in *New Phytologist* (1954) predicted: "as a work of reference for research workers and lectures it is indispensable and will probably remain unsurpassed for many years". Indeed, this book together with another book of Esau, the "Anatomy of Seed Plants", greatly contributed to the education of many generations of pre- and mainly post-graduate students of Plant Biology in the United States of America and in many other countries. On the other hand, the Botanists have widely used this book in order to prepare their lectures. Because of its influential role, this book could be considered as the "Bible of Plant Anatomy".

Since the second edition (1965), an enormous amount of scientific information in Plant Sciences has been accumulated. In the third edition, the book has been extensively modified and synchronized by Professor R. Evert, a former graduate student of K. Esau, a scientist with a deep knowledge of plant structure, function and development. In seventeen chapters a detailed and complete description of the structure and development of the cells and tissues of higher plants, mainly angiosperms and gymnosperms, is presented. Both the classical information and the recent advances are included. I believe that the editor correctly focuses on the interpretation of structure-function relationships, using information from Plant Cell Biology, Plant Physiology and Molecular Plant Development. For example, the chapters 2, 3 and 4, which refer to Plant Cell Structure, provide the most recent knowledge. The chapters of the previous edition dealing with the flower and the fruit have been omitted, probably because the editor plans to include them in a forthcoming book.

Overall, the text is easily readable and highly informative. It will be useful not only for the Plant Cell Biologists and Plant Anatomists but also for those working with Plant Physiology and Molecular Plant Development. The interpretation of the Physiological and Molecular data cannot be understood without an adequate background of cell and tissue structure and function as well as the function of the whole plant organism. Although many of the original micrographs and excellent diagrams of Esau are retained in this edition, a lot of new very informative and explanatory diagrams, light and Electron micrographs have been included. Their selection and reproduction is excellent. Every chapter is accompanied by the most recent literature. Besides, for further reading, a list of general references, an addendum of recent ones, mainly reviews not cited in the text and a concise glossary, very useful for a rapid reference to particular terms, have also been added.

In conclusion, it can be said that Ray Evert did a fine piece of work. I believe that the renovated third edition of the Esau's Plant Anatomy will continue to be an indispensable tool for Plant Biologists.

Basil Galatis
*Department of Botany,
University of Athens, Greece*