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BOOK REVIEWS

WATERS, M. D., NESNOW, S., HUISINGH, J. L., SANDHU, S. S., CLAXTON, L. (ed.): APPLICATION OF SHORT-TERM BIOASSAYS IN THE FRACTIONATION AND ANALYSIS OF COMPLEX ENVIRONMENTAL MIXTURES. — Plenum Press, New York—London 1980, 588 pp. US \$ 49.50.

The mutagenic and carcinogenic effects of various chemical products, *e.g.* pesticides, drugs and food additives, have been the cause of much public concern and recent scientific study. Their effects may well escape notice until serious and permanent damage has occurred. This evokes the necessity of developing short term bioassays to detect the possible mutagenic effects of all new chemical products and environmental chemicals. This book was published as Volume 15 of the series Environmental Science Research and represents the proceedings of a Symposium convened at Williamsburg, Virginia, U.S.A., February 21–23, 1978. At the symposium 24 contributions were presented which fell under 3 heads. The introductory papers of the proceedings deal with various bioassays used as monitors of environmental mutagens, *e.g.* microbial assay systems (Ames test, DNA repair deficient *E. coli* system, *Saccharomyces cerevisiae* mitotic recombination assay), mammalian cell systems with metabolic activation (Chinese hamster embryo cells, human alveolar macrophages), *in vitro* transformation assays, higher plant monitoring systems (*Tradescantia*, *Osmunda*, *Vicia*) and *Drosophila* screening tests. These papers are followed by a section dealing with the collection and chemical analysis of environmental samples (polluted atmosphere, drinking water). The largest part of the proceedings contains papers on current research into the mutagenic effects of complex organic mixtures. Complex mixtures studied include ambient air and water, drinking water, shale oil, synthetic fuels, automobile exhaust, diesel particulate, coal fly ash, cigarette smoke condensates and food products. All papers are well supported by pertinent and recent references. Readership: all interested in the mutagenic and carcinogenic activities of environmental chemicals.

T. GICHNER (*Praha*)

ROST, T. L., BARBOUR, M. G., THORTON, R. M., WEIER, T. E., STOCKING, C. R.: BOTANY. A BRIEF INTRODUCTION TO PLANT BIOLOGY. — John Wiley & Sons, New York-Santa Barbara-Chichester-Brisbane-Toronto 1979. 344 pp., £ 10.00.

This abridged and extensively revised version of the fifth edition of the identically titled publication by Weier, Stocking and Barbour is one of the prettiest textbooks which has appeared in the field of plant biology. Being supplied with numerous quite original and unusual drawings and photographs, written in a clear style and employing the up-to-date knowledge, it demonstrates how the modern botany book should look like. The book guides the reader through the plant kingdom by giving all important information on cytology, anatomy, morphology, physiology, ecology, taxonomy and evolution of plants. The main topics are logically assorted and attractively discussed and the whole text is well organized pedagogically. For better understanding and orientation of the reader, an extensive glossary is added, which frequently defines the used terms and shows their etymological derivation. The book is provided with a table of metric equivalents, index of plant genera, and a detailed subject index. The excellent graphic and colourful arrangement and the care devoted to the print substantially contribute to the high quality of the book.

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