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BOOK REVIEW

NAGL, W., HEMLEBEN, V., EHRENDORFER, F. (ed.): GENOME AND CHROMATIN: ORGANIZATION, EVOLUTION, FUNCTION. — Springer Verlag, Wien—New York, 1979. 284 pp., 101 figs. Cloth AS 1060.—; DM 148,—; US \$ 81.40.

Plant systems are mostly under-represented on symposia dealing with eukaryotic chromosomes. This was one of the main reason for holding a special symposium to review the present state of knowledge of botanical chromosome research. The symposium held at the University of Kaiserslautern from 13–15 October 1978 was attended by 40 participants from German speaking countries. The proceedings of the symposium were, however, published in English as a supplement volume to the journal Plant Systematics and Evolution.

The aim of the organizers was 1) to discuss and demonstrate technical details which cannot be found in published papers (so called tricks) and 2) to present results of the organization, evolution and function of the plant genome at the levels of the DNA, chromosome and karyotype. The introductory lecture given by prof. Nagl, presents an overview of diversification in phylogenesis and ontogenesis of plants on the molecular basis. This is followed by a section on genome organization and evolution (reassociation studies, repetitive DNA in primitive angiosperms, restriction mapping of ribosomal RNA genes) and by a section on DNA replication (cytrophotometric measurements of DNA, chromatin condensation, selective DNA replication). The section also contains results of experiments conducted on *Drosophila*, *Hedera helix* and on guinea pig cells. The chapter under the heading: Gene numbers and transcription presents results of sequence analysis in RNA of higher plants, DNA-RNA hybridization and on synthesis and release of RNA by isolated nuclei of plant cells. The last section of the book contains papers on chromatin structure and on fundamental differences between plant and animal cell nuclei. Readership: all interested in plant evolution.

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