

REVIEW

K. KUBITZKI, J. G. ROHWER & V. BITTRICH (Volume eds.): Flowering Plants: Dicotyledons – Magnoliid, Hamamelid, and Caryophyllid Families. In: K. Kubitzki (ed.): The Families and Genera of Vascular Plants. Volume II. Springer Verlag, Berlin etc., 1993, x + 653 pp., 141 figs., 11 tables. Hardcover. Price DM 478.00. ISBN 3-540-55509-9 (and ISBN 0-387-55509-9, Springer Verlag, New York).

This review marks the appearance of Volume II, after the publication of Volume I, Pteridophytes and Gymnosperms, in 1990; several more volumes are expected in the future before completion of the Vascular plants as a whole.

The present volume contains 73 families out of some 250–500 families which can be recognized within the Angiosperms, depending on the taxonomic concepts applied. The 73 families represent three major blocks of comparatively 'primitive' dicotyledons: Magnoliid, Hamamelid, and Centrosperma families. The families are treated in an alphabetical order, with among the larger families Aizoaceae (127 genera, with c. 2500 species), Annonaceae (128 genera, with c. 2300 species), Amaranthaceae, Cactaceae, Caryophyllaceae, Chenopodiaceae, Lauraceae, Ranunculaceae, and Urticaceae. Each family treatment consists of a family description, and key(s) to the genera, with descriptions, and concise summaries of the modern state of knowledge of: Characters of rare occurrence, Vegetative morphology, Anatomy, Inflorescences, Flower morphology, Embryology, Pollen morphology, Pollination, Fruit and Seed, Dispersal, Phytochemistry, Subdivision and relations within the family and Affinities (to other families), Distribution and Habitats, Economic importance or other miscellaneous uses, and Paleobotany. Often divisions into subfamilies, tribes, 'groups', or (for the genera) into sections are dealt with. Illustrations are schemes, line-drawings of plants (with habits and details), photographs of pollen, and microphotographs of plants growing in situ or in their habitat.

Preceding the family treatments are chapters concerning (1) the origin and early radiation of Angiosperms, and (2) the phylogenetic relationship of the families included in the present volume (by Kubitzki, pp. 1–3), as well as (3) an essay on the phylogenetic relationship among the major Angiosperm groups (by Kubitzki, pp. 4–12), including an outline of the classification of the families treated in the present volume, thus providing a framework for the alphabetically arranged families; (4) the interrelations within Centrospermae separately discussed (by Bittrich, pp. 13–19), and (5) a chemotaxonomic overview of Magnoliidae, Ranunculidae, Caryophyllidae and Hamamelidae (by Gottlieb, Kaplan and Zicher, pp. 20–31). There is an ample list of general references (pp. 32–33), but the introductory chapters and the family/genera treatments are sustained with selected bibliographies as well.

For this second volume I heartily follow Kalkman's recommendation for Volume I, given in *Blumea* 35 (1991: 384), and again we may thank the editor and co-editors, and the 35 more specialist contributors from all over the world for their tremendous achievement, a large step ahead in completing this modern encyclopaedia as a broad source of reference on the green land plants.

The book is of fine printing and binding quality. It is expensive, though a must for all institutions and individuals working on plants.

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