REVIEW

RICHARD C. KEATING: **Anatomy of the Monocotyledons. Volume IX. Acoraceae and Araceae.** Oxford University Press, 2003. xi + 327 pp., illus. ISBN 019-854-5355. Price: GBP 125, EUR 201.04 (hardback).

This book forms part of the series Anatomy of the Monocotyledons, initiated by C.R. Metcalfe in 1960 with a by now classical volume on the grasses, as a companion series to the two Anatomy of the Dicotyledons volumes (Metcalfe & Chalk, 1950; since 1979 appearing as a totally updated 2nd edition series). Both series on Dicots and Monocots hail back to German roots from the late 19th and early 20th century by Solereder and Solereder & Meyer, respectively. In 1928 Solereder & Meyer needed 69 pages, including a limited number of line drawings, to ably summarise the then available knowledge of the vegetative anatomy of the aroids. This much more bulky volume, richly illustrated with 115 half-tone plates of LM micrographs, shows a huge increase in our knowledge, not just because the amount of literature to be summarised was substantial, but especially because the author has added a wealth of original observations on c. 380 specimens (mostly liquid preserved) belonging to 105 out of the total 106 currently accepted genera of Araceae plus *Acorus* in the 244 pages of standardised generic anatomical descriptions of leaves, petioles and stems (occasionally also with some notes on roots). For the Araceae that range in habit from 'normal' herbs to the planktonic duckweeds (subfamily Lemnoideae, formerly in a family on their own), to tropical forest lianas of the genus *Monstera* or to the giant species of *Amorphophallus* of which the petioles can mimic tree stems, including their epiphytic lichen flora, the anatomical diversity gives much food for thought about functional anatomy, especially in relation to biomechanics.

The introductory chapters review vegetative and reproductive growth and morphology, the palaeobotanical record, chromosomes, biogeography, chemistry, aroids and humans, the anatomical literature, anatomical character transformations and their phylogenetic significance, the currently adopted and recent classifications of the Araceae, and the evolutionary position of the Araceae (heavily inspired by recent molecular phylogenies). The generic descriptions are preceded by a chapter clarifying and illustrating the characters recorded in the descriptions. Immensely useful lists of genera in which certain diagnostic anatomical features occur, a full bibliography and an index conclude the book. The authors and editors are to be congratulated with the excellent execution of this 9th volume in the Monocot series.

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