

Book Review

Flora Malesiana. Series 1: Spermatophyta. Flowering Plants, Vol. 10, Part 2

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This note is less a conventional review of the latest part of Flora Malesiana than an assessment of its value to South African botanists. First, however, it should be said that the new part follows the well-established format of Flora Malesiana and reaches the high standards that we now expect in this work. That these standards have become the accepted norm for Flora Malesiana is a tribute to the late Dr C.G.G.J. van Steenis, who was the General Editor and the driving force and inspiration of the Flora from its beginning until his death in May 1986.

This part contains 7 families: Chloranthaceae (Verdcourt, 4 genera and 9 species), Sphenostemonaceae (van Steenis, 3 and 8), Elaeagnaceae (Veldkamp, 1 and 3), Menispermaceae (Forman, 25 and 83), Monimiaceae (Philipson, 11 and 86), Trimeniaceae (Philipson, 1 and 3), Alseuosmiaceae (van Steenis, 1 and 1). These families are of particular interest as most of them are thought to be among the more primitive of dicotyledons. One valuable feature of Flora Malesiana, and one shared with another great work, Hegi's Flora von Mitteleuropa, is the extensive introductory account of each family. This alone gives the work significance far outside the boundaries of Malesian botany.

Chloranthaceae is a small family of only four genera: all occur in Malesia, but none are found in present day mainland Africa. Yet Coetzee (1981) has recorded the fossil monosulcate pollen *Clavatipollenites* from the Cape Peninsula, and this is generally believed to be from a plant related to the modern Chloranthaceae *Ascarina*, which has one living species in Madagascar and the rest in the Malesian-Pacific region. *Clavatipollenites* is also known from America, Europe, Australia and New Zealand, arguing for a wide former distribution of the family. Recently Leroy has focused attention on *Hedyosmum*, a genus of this family with one species in Malesia and about 35 in Central and South America. He has interpreted the male structures, previously regarded as an inflorescence of bractless flowers each reduced to one stamen, as a single strobiloid male flower bearing several hundred spirally arranged stamens: such a flower would be one of the most primitive amongst angiosperms. All this information, and much more, is given in Verdcourt's admirable introduction to the family, which he rightly says is 'one of great importance in the study of primitive flowering plants'. I know of no better place to begin learning about it.

Menispermaceae is represented in Malesia by 25 genera and 83 species; in South Africa there are 7 genera and 13 species, but all the South African genera except *Antizoma* also occur in Malesia, the species of *Stephania* and *Tinospora* in greater numbers there, so that Flora Malesiana gives a better idea of these genera than South African literature. Again Mr Forman's introductory account is a mine of information about the family as a whole, which is becoming of some importance

because of its secondary chemical products.

A fascinating feature of Menispermaceae lies in the fruits. These are drupes with a hard bony endocarp that shows a wide range of structure and sculpture: many of these are illustrated. Forman had previously (1974) written on the endocarps of *Cocculus*, showing that the endocarp of the one species to reach South Africa, *C. hirsutus*, has a very prominent, almost wing-like, dorsal ridge; the only other species showing a similar high ridge is the shrubby and spiny *C. balfourii* of Socotra and Arabia. What the biological significance of endocarp sculpturing may be seems to be quite unknown, and unfortunately there seems to be no information on seed germination.

When we turn to Monimiaceae and Trimeniaceae we find that the practice adopted here is in disagreement with that current in South Africa. The one South African genus, *Xymalos*, was placed in Trimeniaceae by Hutchinson and is retained there by Dyer (1975); however in Flora Malesiana Dr Philipson clearly restricts Trimeniaceae to the genus *Trimenia*, and, by implication, *Xymalos* is returned to Monimiaceae. A critical study of the limits of these two families was carried out by Money, Bailey & Swamy (1950), and they decided that *Xymalos*, despite certain features reminiscent of *Trimenia*, was better referred to Monimiaceae, and their decision has been very generally accepted, most recently by Cronquist (1981). Hutchinson quoted the paper, but gave no reasons for overriding their recommendation. Again it is to Philipson's introductory account that I would now turn first for information on Monimiaceae.

Thus it should be realized that a regional flora of Malesia is by no means irrelevant to botanists in South Africa, and when it is of this high standard and broad scope it may well be the best source of contemporary knowledge of the families revised.

To don the reviewer's mantle again, there is one Flora Malesiana convention that can be confusing. This is that a single initial letter in the synonymy always stands for the accepted generic name, even if it follows a synonym of a different genus with the same initial. For instance, under *Matthaea sancta* (p. 323) there is cited *Mollinedia sancta* followed immediately by *M. latifolia*. But that is *Matthaea latifolia*, not *Mollinedia latifolia*. Another example occurs on p. 266 under *Dryadodaphne novoguineensis*. This space-saving device should surely be relaxed in such cases.

The account of *Dryadodaphne* is 'based on' Schodde's unpublished thesis (1969), and includes *D. crassa* Schodde sp. nov. Is this to be cited as Schodde in Philipson, and therefore in brief as Schodde, or as Schodde ex Philipson and therefore in brief as Philipson? There is nothing to show that Schodde was consulted. Readers will reach different conclusions and confusion will result.

Production is good except for one or two weak figures (e.g. 8, 16, 19) in Menispermaceae. In the introduction to that family there are two places (pp. 159, 165) where *Cocculus orbiculatus* has slipped through under its old name *C. trilobus*.

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