

BOOK REVIEW

Umbelliferae (Apiaceae) of India. P. K. Mukherjee and L. Constance. New Delhi: American Institute of Indian Studies and Oxford & IBH Publishing Co. Pvt. Ltd; distributed in USA by International Science Publisher, New York. 1993. 279pp. ISBN 1 881570 26 6. £61.75 (hardback).

The long-awaited publication of *Umbelliferae (Apiaceae) of India* by Prasanta Mukherjee and Lincoln Constance represents a milestone in the study of the family in Asia. It covers India, Nepal, Bhutan and Bangladesh, and is the first major work to deal with this area since C. B. Clarke's account in Hooker's *Flora of British India* in 1879. With its appearance almost all the countries of the continent can boast modern treatments of the family: only Burma remains.

Our initial reaction is one of surprise at the comparative slimness of the volume, and the explanation lies in the lack of any illustrations. Nowadays this is a major criticism, especially in a family whose members are notorious for all looking the same and difficult to describe concisely and vividly. As all the genera start on a new page there are often large blank areas which could easily have been used for selective drawings. Given this lack, it is inexcusable not even to refer to available illustrations, in many cases amply provided in existing Floras. The artificial key to groups of genera would certainly have benefited from an illustration of fruit types, as it is very dependent on fruit characters. However, thereafter the clear and concise keys, first to genera within each group, and then to species within each genus, manage to step back wherever possible from this dependence and are a welcome feature of the book.

Sixty-eight genera and about 240 species are treated, seven of the genera being endemic. Studies of umbels in the region have been bedevilled by botanists who have dabbled in small areas using inadequate material and without considering wider implications. This, and the penchant for nineteenth-century workers to fit umbels worldwide into 'European' genera, has resulted in a complicated synonymy. Rather than add to this, Mukherjee and Constance have used a fairly conservative taxonomic approach, not always accepting the results of recent research (as with the inclusion of *Tetrataenium* in *Heracleum*, a treatment which they justify). Furthermore they deliberately leave the major problems of typification and assignment of incomplete material to future researchers: their paragraph on lectotypification is to be applauded. In some cases (e.g. *Hydrocotyle*, *Selinum*, *Heracleum*) this may have led to over-simplified accounts and others may prove contentious; the problems surrounding *Meeboldia* and *Pternopetalum* for instance may not be resolved. There are several smaller points with which we might take issue: the distribution given for *Chaerophyllum villosum* is arguable and that for *Prangos pabularia* too restricted; *Bupleurum subuniflorum* Boiss. & Heldr. is confined to SW Asia, the plant from Afghanistan eastwards being *B. nematocladum* Rech.f.; no account is taken of *Peucedanum acronemifolia* described by Wolff from Sikkim.

Several representative specimens are cited under each species, but it is a pity that these are largely restricted to Indian herbaria and the University of California at Berkeley. Despite Mukherjee's reference in the Preface to his visits to the rich holdings of various European herbaria, few specimens are cited from these. The following example illustrates this well. When Mukherjee published the E Himalayan species *Acronema pseudotenerum* (Mukherjee 1978: 52) he gave only a one-line description and cited a holotype from Calcutta (CAL). In the present work the description is amplified but it is stated that this species is still only known from the

single type collection. However, three specimens at Edinburgh (E) bear determination slips by Mukherjee as *Acronema pseudotenerum* dated July 1986. The long gestation period of the manuscript accounts for such slip-ups, but such omissions from his own species throw doubts on the accuracy of other accounts. We have found this a particular problem with the E Himalayan species where most of the available type and other material is in the UK (K, BM and E).

A list of collectors is appended giving a guide to areas of exploration but omitting dates. Without too much trouble this could have become a useful list of exsiccatae and its compilation would help in tracking down the European top sets of the cited Indian herbarium material. An exsiccatae list would also have drawn attention to certain anomalies, e.g. *W. W. Smith* 3361 cited on p. 123 as *Acronema bellum* and on p. 124 as the type of *A. nervosum*, or *Lall Dhowj* 50 on p. 101 as *Schulzia hameliana* and on p. 131 as the type of *Sinocarum normanianum*.

The Introduction is very scanty, liberally scattered with Indian umbel statistics, but with little discussion of Indian Umbelliferae in a world context. Nothing is said on the economic or medicinal use of the family in India. A useful bibliography follows the generic accounts, though several pertinent references, e.g. Krahulik & Theobald's account of the family for the *Flora of Ceylon* (1981) and Huq & Rahman's treatment of Hydrocotylaceae for *Flora of Bangladesh* (1990), are omitted.

Reference has already been made to recent accounts of Asian Umbelliferae. It is now imperative that studies of the area as a whole are undertaken reconciling these different treatments and utilizing modern techniques. The present work will, as stated by Mukherjee, 'provide a useful framework for more detailed studies of anatomy, cytology, phytochemistry, and other branches, which may lead to a better understanding of individual taxa as well as the group as a whole'. Despite various shortcomings, the combination of Mukherjee with his wide field knowledge and Constance bringing his wisdom and long experience from a dispassionate distance has resulted in a work which certainly justifies their aims and will prove invaluable for all future researchers on the family in Asia.

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