

REVIEW

T. ANANDA RAO: *Compendium of foliar sclereids in Angiosperms – Morphology and Taxonomy*. Wiley Eastern Ltd, New Delhi, India, 1991. viii + 278 pp., 61 half-tone plates. ISBN 81-224-0067-1. Price US\$ 75.00 (cloth).

With over 80 original publications on foliar sclereids, published in the last 30 years, Dr. T. Ananda Rao is a well qualified author for a compendium on the subject. The book consists of a general and a special part. The former includes a historical and methodological introduction, a major chapter on the morphological classification of the various types of sclereids and tracheoids and their distribution patterns, and sections on their taxonomic significance as well as their ontogeny and (presumed) functions. The special part is an 'abstract review' of literature records and original observations on 121 families of angiosperms, arranged according to the Takhtajan system. The book is richly illustrated with line drawings as well as numerous half-tone plates.

Especially the review by family makes this book a useful source of reference. I could not help being somewhat disappointed by the first chapters, in which the various types are defined and classified. A comparison of the illustrations and the fairly vague definitions in the text soon make it impossible for the reader to see the distinctions between, for instance, several of the 5 main types and 9 subtypes of the so-called polymorphic sclereids (all astrosclereids in the good old terminology of Tschirch, 1889). The author would have done us a real service if in a series of drawings the permitted variation range and defining characteristics of each type would have been unambiguously illustrated. Now the subtle differences between trichosclereids, zosterosclereids, and ophiuro-sclereids as illustrated in plate 3.3 and defined on pp. 10–12 will elude most. With full respect for the view that some more terms are needed than the mere four which Tschirch introduced in his classification, I feel that Rao has gone too far to the other extreme by recognizing most types, at one time or another introduced by zealous authors who wished to make their mark on anatomical history by introducing a superfluous name for a sclereid type. The author himself is perhaps not entirely without blame: his 'gnarliform sclereids', elevated to the super-rank of the sole 'cacomorphic type' seems to me as well described as "an astrosclereid with irregularly curved or curly branches." Do we need new terms for each aberrant type? In this respect I feel that an opportunity has been missed to clean up the confusing terminology in the literature even further by a really unambiguous and concise classification of types (of course with full recognition of intermediate forms). Another criticism is aimed at the publisher as much as the author: the number of uncorrected major printing errors exceeds all acceptable levels, and even makes reading of the general chapters difficult and irritating.

In the special part the discrepancy between amount of detail and information for different sclereid-bearing families is rather striking. As emphasized by the author, much work remains to be done to elucidate the full systematic significance of idio-blastic sclereids. This book will be an indispensable starting point for such studies, and a welcome compendium for all students of comparative botany.

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