

**Companion to R. H. Beddome's Handbook to the Ferns of British India, Ceylon and the Malay Peninsula** by NAYAR, B. K. AND SURJIT KAUR. Pama Primlane, The Chronica Botanica, New Delhi-1. pp. 244, 1974. Price: Rs. 55.00 or U. S. \$ 14.00.

It is nearing ninetyfive years since R. H. Beddome (1830-1911), who belonged to the forest service of the then Presidency of Madras from 1856 to 1882 presented a comprehensive taxonomic summary of all the known Indian species of ferns in his Handbook to the Ferns of British India, Ceylon and the Malay Peninsula (1883). His further observations enabled him to add a supplement to his handbook in 1892. During the gap of ninetyfive years, several significant contributions have been made to our understanding of the ferns of the subcontinent of India, and fern taxonomy has undergone several conceptual changes, particularly with regard to generic and specific delimitations, as a result of which a number of names have undergone changes. Consequently, Beddome's Handbook and supplement have become outdated. A work incorporating all these changes is, therefore, always to be welcomed. Nayar and Kaur in their introductory note write: "This book is a step in that direction, embodying nomenclatural changes of the various species described in the Handbook, with a modern classification of the ferns along with the morphological characterisation of the various natural orders".

The various genera and species included in Beddome's Handbook are listed in the same sequence by Nayar and Kaur, with interpolation of additional species from the supplement to the Handbook. Under each generic name used by Beddome, they give the currently accepted generic names and the species assigned to each of them. The original place of publication of the generic name in each case is provided which will

help to get at the generic descriptions. They have also cited several recent publications regarding interpretation of Indian species of ferns.

Nayar and Kaur's transfer of specific names in the Handbook to various other genera are chiefly based on references to literature. Consequently, the companion repeats several kinds of mistakes committed by earlier authors. Name changes based on studies of Indian material is the need of the day.

Authors of the companion, though covered a very large number of references, have overlooked some of the recent publications. A few examples are given here. Based on the characters of the scale, Holttum [Kew Bull. No. 1: 41-45. 1957: Fl. Males. Ser. 2(1): 65-176. 1963] redefined *Schizocaena* and *Gymnosphaera* and changed their status and in 1965 (Kew Bull. 19: 463-487) he, while treating all known Asiatic species of *Cyathea*, treated *Gymnosphaera* as a section of *Cyathea*. He (1957) has also shown that Copeland (Gen. Fil. 1947) was incorrect in including *Cyathea sinuata* and *C. hookeri* under *Schizocaena*. These as well as Holttum's work on Malesian Gleicheniaceae (Fl. Males. Ser. 11. 1: 1-36. 1959) in which Malayan species included by Beddome are dealt with have not been referred to by Nayar and Kaur. Similarly, the paper of Sledge (Bull. Brit. Mus. Nat. Hist. Bot. 2: 275-323. 1962) clarifying the position of Ceylon ferns has not been referred to in the companion. Nakai in his account of a new classification of Gleicheniales (Bull. Nat. Sci. Mus. Tokyo No. 29: 1-71. 1950) has shown that Presl's *Hicriopteris* is not equivalent to *Hicriopteris* as conceived by Christensen, Ching and Copeland and therefore substituted the name *Diplopterygium* for *Hicriopteris* sensu Christensen, Ching and Copeland (non Presl). But, Nayar and Kaur follows Copeland's usage without offering any explanation.

On pp. 10 and 11 of the companion Nayar and Kaur gives two new combinations—*Mecodium polyanthos* var. *microglossum* (Bedd.) Nayar et Kaur and *M. polyanthos* var. *blumeanum* (Spr.) Nayar et Kaur. These combinations have been made earlier (Bull. bot. Surv. India 11. 186. 1969). Similar is the case with *Kaulinia dilatata* Nayar et Kaur on page 89 (Bull. bot. Surv. India 11: 431. 1969).

*Leucostegia* Presl was redefined by Copeland and he includes only two species in that genus. There is no reference to this in the companion.

Nayar and Kaur have overlooked several new names. To mention a few—*Cyclosorus zeylanicus* (Fee) Ching, *Thelypteris zeylanica* Ching, *Thelypteris squamaestipes* Ching, *Diplopterygium glaucum* Nakai, *Microsorium ovatum* (Presl) Nair et Bennet etc. A number of additions have been made to the fern flora of India after the publication of Beddome's Handbook and Supplement. These should have also found a place in the companion.

On page 17 *Acrophorus stipellatus* (Wall.) Moore is given. The specific epithet *stipellatus* is preoccupied by another legitimate epithet. The earliest validly published name for the taxon is *Aspidium nodosum* Bl. Enum. 171. 1828 which is a later homonym of *A. nodosum* Willd. Sp. Pl. 5: 211. 1810. Presl when treated it under *Acrophorus*, called it as *A. nodosus* Presl (Tent. 94, t. 3, f. 2, 1836). Here the specific epithet *nodosus* is

treated as new and, therefore, the correct one (Art. 72, nota).

On page 83 *Microsorium* is mentioned. As pointed out earlier (Bull. Bot. Surv. India 11: 431. 1969) the correct spelling is *Microsorium* (Art. 73).

On pp. 127 to 201 of the companion is given a new scheme of classification of ferns. It is an elaboration of the views expressed earlier in Taxon (19 April, 1970). In this scheme, Nayar takes into consideration both gametophytic and sporophytic characters. He does not claim it to be a truly natural system of classification but is "meant only as one which expresses affinities as judged by morphological information already available". No system of classification can be perfect. It can at best be the summary of data available to an author.

According to Nayar the homosporous ferns are a monophyletic group which will command general agreement.

The companion concludes with a useful revised nomenclature of the Thelypterid ferns based on Holttum's views (Blumea 19: 17-52. 1971).

The shortcomings and limitations notwithstanding this little book will certainly be useful to those engaged in the study of the systematics of the ferns of India and adjoining areas.

N. C. NAIR

Botanical Survey of India, Howrah