

Flora of Mussoorie Vol. I. by M. B. Raizada, F.N.A. and H. O. Saxena. M/s Bishen Singh Mahendra Pal Singh, Dhera Dun. 14 × 21.5 cm, i—lvi, 1-645. 1978.

The work deals with the Flora of Mussoorie Hills in the State of Uttar Pradesh in India. The 'INTRODUCTION' deals with the description of the area studied, its climate, vegetation, analysis of the flora and some phytogeographical and ecological aspects. It also describes the various vegetation types in the forests of the area and provides an artificial key to the families of the flowering plants of the area.

The arrangement of the families is broadly according to Bentham & Hooker's System of Classification and the present volume deals with the families Ranunculaceae to Labiatae. For each family, key to the genera, and under each genus, key to the species is provided. The account of the species includes the name, original citation and references to the floras by Collett, Kanjilal *et al.*, Hooker *et al.*, and a few others. The vernacular name, brief description of the plant, flowering and fruiting seasons, distribution and uses are given. Some specimens are also cited. A reference to illustration is given in several cases.

In a general way, therefore, the flora follows the conventional form and should be very helpful in identifying the plants of the area. Mussoorie is an important hill-station in northern India and regularly attracts teachers and students of botany and many naturalists. The work should be useful for all of them. Duthie's work on the flora of the adjacent large Gangetic plains deals with plants of the plain-regions. There was no recent flora for identification of plants of the hilly regions in Uttar Pradesh, and hence the present work should fill this gap.

A number of mistakes have, however, crept into the work. A few are mentioned below:

On page xlix, the clue J is 'Leaves bipin-

nate', clue JJ is 'Leaves 2-pinnate'; the difference is not clear. On page xlv, the clue H is 'Calyx polysepalous', whereas the clue subordinate to this at K and KK states 'Calyx-lobes valvate/imbricate'. On the same page, clue M is 'Fls. on simple pedicels'; the meaning of the word 'simple' here is not clear. Again on page xlvi, the clue II is 'Fls. regular', whereas a clue subordinate to this at K is 'Calyx irregular'.

In a few cases, the alternate clue is wanting; e.g. on page 322, the clue F is missing, but its alternate clue FF 'Pappus none' is given on line 1, page 323. Similarly on page 324, the alternate clue for G ('Ray-florets pink') i.e. GG, is not seen in the key. In many places the keys have become trichotomous.

On page 247 under Melastomataceae, though the title is: Key to the genera, it includes key to the species of *Osbeckia* also. On page 297, the key to the species of *Randia* gives three species, whereas in the text only one species is treated under *Randia* and the remaining two species are relegated to the synonym of *Xeromphis spinosa* (page 298). On page 314, *Hedyotis vestita* is treated in the text, but is missing in the key on page 312.

In a number of cases, the names seem to have been corrected or updated in the text but the replaced names are left as such in the keys; e.g. on page 219, *Rosa brunonii* (*R. moschata*), on page 345 *Lactuca dolichophylla* (*L. longifolia*) and on page 435 *Cynanchum canescens* (*C. glaucum*).

On page 235, the combination *Bergenia ciliata* (Royle) Raizada, 1759 (1959?) should be substituted by *B. ciliata* (Haw.) Stern. based on *Megasia ciliata* Haw. (1821). *Bryonopsis laciniosa* (page 260) is now named as *Diplocyclos palmatus* (Linn.) Jeffrey. On page 390, *Youngia japonica* (Linn.) DC. subsp. *genuina* should according to Code, be called subsp. *japonica*. On page 450, *Gentiana pedicellata* Wall. ex Don (1837) *pro. syn.* has been shown as the legitimate name of

the taxon; the names proposed as synonyms (*pro. syn.*) are not even validly published.

Autonyms such as on page 62, *Eurya acuminata* DC. var. *acuminata*, and on page 63, *Actinidia callosa* Lindl. var. *callosa* are unnecessary as no other infraspecific taxa are simultaneously treated.

At many places, the expressions and language in the notes and introductory passages need much improvement e.g. on page xxviii, para 3, line 8-9: "Quite a few of these 'early species' have not been collected....."; page (xxxvi), para 5, line 1: "Man's influence 'shifts' vegetation from the mesophytic to the.....".

In spite of the corrigendum of 2 pages, there are several more spelling mistakes e.g. on page xix, in table 2, the name of the

family No. 1 and 6 which seem to be Leguminosae and Scrophulariaceae.

Another curious thing to strike the reader would be the use of the word I and my at several places of the book such as in the notes on pages 17, 23, 34, 49, 521, 563, etc. Remembering that the work is under the authorship of two persons, obviously these notes prepared by one of the authors and evidently by the junior author have gone into the manuscript without editing.

There seems to be no mention of price of the book at the usual places.

In spite of the above shortcomings in the work, several of which are of editorial or typographical nature, the work would be useful to students of Botany in India.

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