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Flora of Nepal Volume 3. M. F. Watson, S. Akiyama, H. Ikeda, C. A. Pendry, K. R. Rajbhandari & K. R. Shrestha. Edinburgh: Royal Botanic Garden Edinburgh. 2011. ISBN 978 1 906129 78 1. £87.
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The Himalayas are famous for the beauty and variety of their flora and have attracted intense interest from botanists, horticulturalists and travellers since the early 19th century when their riches were first revealed. Recent publications of modern floras for Pakistan, Bhutan and China (Nasir & Ali, 1970 onwards; Grierson *et al.*, 1983–2002; Wu *et al.*, 1994 onwards), have done much to update our knowledge of the plants of this region, but anyone seeking information on the flora of Nepal has had to rely on the checklist prepared by Hara *et al.* (1978–1982) with subsequent updates and a number of pictorial guides, notably that of Polunin & Stainton (1984). The appearance of the *Flora of Nepal* is thus both timely and welcome.

The *Flora* is the result of international collaboration between botanists in Scotland, Japan and Nepal, who have worked on the Himalayan flora over many years. They have been assisted by experts in specific plant families from various different institutions. When completed the *Flora* will consist of 10 volumes; the first volume to appear is number 3 covering around 600 species out of a total of around 7000. Several important families are treated including Rosaceae, Saxifragaceae, Cruciferae, Papaveraceae and Fumariaceae, which contain genera well known for their diversity in the Himalayas such as *Meconopsis*, *Corydalis*, *Potentilla* and *Saxifraga*, the last being the largest genus in the volume with 87 species. It is very much to be hoped that the other volumes will appear rapidly over the next few years.

The *Flora* provides detailed descriptions of families, genera and species with summary distributions of all three worldwide. Keys are provided for genera and species and these are set out in a clear format which should prove very user-friendly. For each species the place of original publication, Nepali name, local economic uses, full synonymy and details of distribution, habitat and flowering time in Nepal are given. A comprehensive index is also provided. The accounts are well edited and I noted few errors or inconsistencies. However, there is minimal introductory material and it is not clear what information will be included in the introductory volume. At present users have no key to families, no description of the vegetation of Nepal, only the briefest bibliography and no glossary. The absence of a glossary is

especially unfortunate as the terminology is quite technical, and some terms, such as 'submalpighiaceous trichomes', might challenge even a knowledgeable taxonomist.

An interesting and innovative feature of the *Flora* is the provision of maps of individual species showing distribution by district. As there are about 75 districts in Nepal this represents almost as detailed distribution as provided by the dot maps found in many monographs or in the recently initiated *Flora of Peninsular Malaysia* (Kiew *et al.*, 2010 onwards). In any case it is far more accessible (although no more detailed) than the text-based distribution information in the *Flora of Bhutan*.

Amongst other welcome features are the line drawings of a high technical quality illustrating typical species of all families appearing in this volume. Additionally there are illustrations of differences in specific characters which are used to delimit closely related species, the pages illustrating the leaves of *Potentilla* and details of indumentum and floral structure in *Saxifraga* being good examples. These illustrations are very useful but I am sure that many potential users of this flora will regret the absence of colour illustrations. There seems to have grown up a tradition in the botanical community that field guides use colour photographs while floras use only line drawings. Given the visual attractiveness of so many Himalayan plants and the availability of photographs, it seems a pity that the authors did not take the additional step of including colour photographs representative of at least each major genus. The additional costs today are not so great and these might have been offset by the increased sales that should result.

One of the obvious limitations of the *Flora of Nepal* is that it is clearly written for botanists and botanical students and will not be accessible to the numerous visitors to Nepal or other non-professionals with an interest in Himalayan plants. The volume is similar in weight and dimensions to those of the *Flora of China*, and is clearly planned as a reference work for use in the library and herbarium as it is far too large and heavy to be carried into the field. The authors have chosen to follow works such as the *Flora of China* and the *Flora of Peninsular Malaysia* in providing lengthy and detailed species descriptions, rather than the more synoptic descriptions of the Royal Botanic Garden Edinburgh's two completed floras, those of Turkey and Bhutan. I fear that greater length does not necessarily result in greater clarity. The account of the genus *Draba* might serve as an example of the difficulties created by lengthy descriptions. The user must know the colour of the flowers to use the key effectively. If the specimen lacks petals or if they have become discoloured (remember this is not a field flora), recourse will have to be made to comparison of the descriptions to reach a determination. This is no easy task given the depth of detail included. Surely it would be much more practical to group similar species together and provide diagnostic descriptions of the 'Very similar to *Draba lanceolata*, but differing in...' kind where the important differences are summarised. In this I prefer the approach of the *Flora of Bhutan*.

However, even bearing in mind that it is written for botanists, there are a number of matters which merit review. The order of species in each genus seems arbitrary,

being sometimes alphabetical and sometimes systematic although closely related species are not always placed next to each other where order is not alphabetical; in a rare comment on relationships, *Lindera assamica*, for example, is said to be most similar to *L. nacusua* but the two species are not placed together. There is also the question of the lengthy synonymy provided for many species. The number of synonyms cited is often extensive and includes varieties and formas. Examples of where the citation of synonyms seems to be excessive are many but include *Rubus* in the Rosaceae and the genera *Rorippa*, *Braya* or *Dontostemon* in Cruciferae. A single referenced synonym is provided for *Cardamine flexuosa* in the *Flora of Peninsular Malaysia* while 13 unreferenced synonyms are given for the same species in the *Flora of Nepal*. What are the criteria for including all these names? Are they relevant to students of the flora of Nepal? I could not trace many of the synonyms in either the *Enumeration of the Flowering Plants of Nepal* or the *Flora of Bhutan*. If it is decided to include an extensive synonymy, references should be given to where the name has been used as in the *Flora of Peninsular Malaysia*.

The authors claim that the *Flora of Nepal* makes use of 'biodiversity informatics to record, manage and communicate data, in print and electronically. To find out more visit www.floraofnepal.org'. I have no reason to doubt this statement, but a visit to the website did not enlighten me about the 'new approach to floristics' being used, providing instead general information about Nepal, its flora and activities leading up to the *Flora* project. However, I suspect reliance on databases may have led to a very mechanical manner of describing the wider distribution of each species. This is given using 10 geographical regions, which are illustrated on the book's endpaper. Compare the distribution given for *Rhodiola wallichiana* in the *Flora of Nepal*, 'Nepal, W Himalaya, E Himalaya and Tibetan Plateau' with that given by Polunin & Stainton (1984), 'Kashmir to Bhutan'. The latter is both more precise and more informative. I also worry about the term 'Tibetan Plateau', this referring to the political entities of Xizang and Qinghai, rather than the plateau proper. I would expect quite a few plants recorded in the *Flora* from the 'Tibetan Plateau' actually occur only in one of the very few temperate or subtropical valleys penetrating into southern Tibet, rather than on the plateau itself.

The scope and depth of information provided in a flora is ultimately a question of individual preference and editorial decision, and several of the issues raised here could be raised about almost any modern flora project. There are always difficult decisions to be made about the range of information and the level of detail to be included, both of which have to be considered within the constraints of budget and the need to complete a multi-volume work within a reasonable timescale. The Royal Botanic Garden Edinburgh has a good record in completing flora projects and it is hoped the *Flora of Nepal* will follow the same pattern. There is no doubt that the *Flora* constitutes a major advance in Himalayan botany and will remain a fundamental work of reference for many years to come. The botanical community will look forward to seeing additional volumes over the following years.

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JOHN R. I. WOOD

An Introduction to the Trees from the North of the Republic of Congo. David Harris, Jean-Marie Moutsamboté, Emile Kami, Jacques Florence, Samuel Bridgewater & Alexandra Wortley. Edinburgh: Royal Botanic Garden Edinburgh. 2011. 208 pp., 93 colour plates. ISBN 978 1 906129 80 4. £20.

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This book reaches out to non-botanists and tries to make them enthusiastic about a group of plants that do not have a high ‘panda-index’ – trees – and even then, not from a large region, but from a very specific area: the northern part of the Republic of Congo. Not many people go there, at least not many tourists, apart from those seeking remote rain forests with lots of elephants and lowland gorillas. But the introduction states this publication is also meant for students, foresters, ecologists and zoologists, so also those with a professional interest in trees.

The book deals with 93 species, carefully selected, and leaves out the most common ones such as the *parasolier*. After a brief introduction covering how to use the book, some ecological information, how the book was put together and some peculiarities of the region, each species is treated with one page of text. This gives its most characteristic features and a brief statement on its ecology, distribution and sometimes uses. On the opposite page is a colour plate with 4–8 photographs showing leaves, flowers and fruits, often with helpful details that will aid proper identification. Slash characters are generally depicted as well. Remarkable is the fact that fruits nearly always show up, but flowers are regularly lacking – probably because they are rarer to observe, and so also more difficult to catch on camera. All photographs are, without exception, of high to very high quality, and informative. It is clear that they were taken by a taxonomist (David Harris in the majority of cases) with a good knowledge about the characteristic features of the species.

The fact that the book was composed by taxonomists has also perhaps led to some weaknesses. For example, the sequence in which the species are treated is that of APG III, whereas for non-botanists a much more practical solution would have been