

## BOOK REVIEWS

**Scarce Plants in Britain.** Compiled and edited by A. Stewart, D. A. Pearman and C. D. Preston. Peterborough: Joint Nature Conservation Committee. 1994. 515pp. ISBN 1 873701 66 7. £34 (hardback).

This is the first book devoted to the distribution and status of the 'scarce' plants of Britain (Ireland is sadly not included). These are defined as the vascular plants (including ferns) which occur in 16–100 ten-km grid squares, and until now the only readily available information on them has been in the *Atlas of the British Flora* (the various reprints all basically dating back to 1962). In recent years much effort has been expended on the status of 'rare' plants (those occurring in fewer than 15 squares) which qualify for inclusion in the Red Data Book. 'Scarce' plants, however, are also important since they can be useful indicators of habitat and climatic change, yet because of their greater number (currently standing at 254) they are much harder to monitor and were substantially under-recorded in the *Atlas*.

The book is the result of admirable collaboration between the Biological Records Centre (ITE), the Joint Nature Conservation Committee (formerly NCC) and the Botanical Society of the British Isles, with its extensive network of field-workers. The survey started in 1990, with printouts of records of species thought to be 'scarce' from the *Atlas* being sent to Vice-county recorders. This prompted a flurry of field activity in 1991 and 1992, to check on taxa and sites, resulting in a greater number of records for many species (even some declining ones) than were shown in the *Atlas*. As expected many species have been found to have decreased (particularly those in lowland and coastal habitats), others have increased and still others have shown an artificial 'increase' due to greater recording coverage.

The bulk of the volume comprises species accounts and distribution maps. The notes on the 325 alphabetically arranged taxa included are by a wide range of professional and amateur botanists, and make fascinating reading, describing what is known of the species' ecology and reproductive biology with comments on changes in distribution. The maps need to be interpreted with care, due to the increased level of recording which is explained in a chapter entitled 'Changes in our knowledge of the distribution of species, 1962–1992'. For most species a single map is given in which pre- and post-1970 records (and introductions) are distinguished. For some, that have changed in distribution, additional maps are given to show records at various dates, and others have maps of tetrad distribution to give an indication of frequency within ten-km squares. An interesting chapter deals with the scarce species on a habitat basis.

To give a flavour of the book I will take some examples of the many interesting patterns that emerge, with a particular emphasis on Scotland. As

expected, many species have declined and nine appear to have gone into the 'rare' category (e.g. *Cystopteris montana*). For some species the reason for decline is known—most commonly habitat change, for example loss of arable weeds such as *Centaurea cyanus*. Changes in woodland composition/management seem to account for the decline in *Cephalanthera longifolia*, for which western Scotland now seems to be a stronghold. Shading by scrub has led to the loss of *Asplenium septentrionale* from many sites, while drainage of wetlands has led to the decline of species such as *Andromeda polifolia*. The reason for the dramatic decline of *Gnaphalium sylvaticum* is mysterious.

Not all is doom and gloom, however, and some species have genuinely increased, for example *Scrophularia umbrosa*. Whereas *Elatine hydropiper* has decreased in England it has dramatically increased in central Scotland where it was unknown before the 1960s. A few species have been able to increase by colonizing new habitats, for example *Juncus filiformis* on reservoir margins. Some examples of apparent increases due to more thorough searching are *Corallorhiza trifida*, *Alopecurus borealis*, *Carex rupestris* and *Juncus alpinoarticulatus*. Certain species, previously thought to have been declining, are shown to be exploiters of unstable or temporary habitats—coastal (*Mertensia maritima*) or arable (*Papaver argemone*)—and are probably not causes for concern. Other patterns indicate fashions in taxonomy or human foibles, for example the apparent decrease in *Cochlearia scotica* is ascribed to 'botanists' loss of confidence in the existence of the species'!

The work is a model of clarity and the editors are to be congratulated on the formidable task of editing the work of so many different authors and presenting such a large dataset in an accessible form. The book is remarkably good value and is attractively produced with a stunning colour photo of *Mertensia* on the front cover. There is no doubt that it will be of enormous value in monitoring future changes in the distribution of these scarce species and demonstrates the vital need for a completely new *Atlas*.

H. J. Noltie

**Siebold's Florilegium of Japanese Plants.** Edited by Y. Kimura and V. I. Grubov. Tokyo: Maruzen Co. Ltd. 1993. Limited edition of 450 copies. 980,000 yen (c.£7000).

**C. P. Thunberg's Drawings of Japanese Plants.** Edited by Y. Kimura and V. P. Leonov. Tokyo: Maruzen Co. Ltd. 1994. ISBN 4 8395 0118 1. \$333.00.

The Library of the Royal Botanic Garden Edinburgh (RBGE) has recently been honoured to receive, as a gift from the publisher, two extremely valuable and interesting works relating to the history of the Japanese flora. To celebrate their 125th anniversary, the Maruzen Publishing Co. of Tokyo enterprisingly undertook to make available the important collections of unpublished illustrations of Japanese plants commissioned by Thunberg and Siebold. Both