

The author seems to have an aversion to the use of capital letters for proper names or adjectives derived therefrom (wardian cases, para rubber). I also strongly object to his use of the collective noun 'botanic gardens' for all such institutions, especially when abbreviated to 'gardens', as in 'in 1884 a gardens was established'. This could be avoided by using the phrase 'Botanic Garden' or 'Garden'; it is the concept that is important, rather than the physical make-up (which may or may not be composite). The use of 'economics' for plants of economic value sounds simply slangy.

I regret having to make these criticisms as the book is a genuinely useful addition to the literature on the history of Botanic Gardens and can be thoroughly recommended. Though historical it contains much of contemporary relevance, for example funding difficulties and varying fortunes depending on how and by whom administered; conflicts between art and science in planting schemes (Mueller at Melbourne), and much else besides.

H. J. NOLTIE

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**Medicinal Plants: Can utilization and conservation coexist?** Jennie Wood Shelton, Michael J. Balick & Sarah A. Laird. *Advances in Economic Botany*, Volume 12. Series Editor Charles Peters. New York: New York Botanical Garden. 1997. 104pp. ISBN 0 89327 406 2. Softback.

This volume, the latest issue of *Advances in Economic Botany*, maintains the series' high standards of quality and topicality. After more than a decade of conservationists' promotion of non-timber forest products – and particularly of medicinal plants – as the potential salvation of the world's tropical forests, it is becoming increasingly clear that the reality of the situation is considerably more complicated than had originally been perceived. Conflicts of interest have become apparent, and the problems associated with balancing supply and demand (and their effects on sustainability and overharvesting) require solutions.

The book, which began as a White Paper for the Rainforest Alliance Periwinkle Project, examines the relationships between medicinal markets and some of the plant species on which they depend, focusing primarily on the situation in tropical forest regions. After a brief introduction to the book and to the role of plants in medicine, the majority of the text is made up of a series of case studies, chosen to illustrate the key points of the argument. These begin with a comparison of wild-collected medicinal plants with cultivated species, drawing on the examples of bloodroot (*Sanguinaria canadensis*) and the rosy periwinkle (*Catharanthus roseus*) respectively, and continuing with a discussion of the sustainability of harvesting of species collected for their leaves (*Pilocarpus* spp.), bark (*Prunus africana*) and roots (*Panax quinquefolius*).

The next chapter deals with the changing role of plants in traditional medicine, focusing on three projects which are actively attempting to combine conservation

with the promotion of traditional phytotherapy systems: the Belize Ethnobotany Project, the WWF ethnobotany programme in Madagascar, and the Ametra 2000 project in Peru. This is followed by an analysis of the international market for herbal medicines, addressing supply issues and their consequences for wild and cultivated sources, and by a discussion of the role of plants in the pharmaceutical industry focusing on each phase of the process: acquisition of raw materials, research and development, production and manufacturing, and synthesis. Lastly, the authors explore the links between medicinal plants and conservation, and make some basic recommendations as to how the two can be of mutual benefit.

The text in this book is uncomplicated and accessible (although an index would have been useful), and its content is interesting. The case studies, which are in many ways its most valuable asset, have been discussed in an intelligent and informative manner, and address the oft-ignored economic and legislative issues which relate to them. Overall, we are provided with a readable and informative introduction to a subject of considerable interest and relevance.

W. MILLIKEN

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**Biosystematic Monograph of the Genus *Cucumis* (Cucurbitaceae), Botanical Identification of Cucumbers and Melons.** J. H. Kirkbride, Jr.; US Department of Agriculture. Boone: Parkway Publishers. 1993. 159pp. ISBN 0 9635752 0 1. £49.00 (hardback plus 5<sup>1</sup>/<sub>4</sub>" diskette).

Species of *Cucumis* have been in cultivation since the time of the ancient Egyptians and Romans. Whilst the Romans contented themselves with a single name for both the cucumber (*Cucumis sativus*) and melon (*C. melo*), taxonomists in this and the preceding two centuries have managed to ascribe 72 species names to *Cucumis melo* alone. In addition to widespread species such as the canteloupe melon and cucumber, the West Indian gherkin (*C. anguria*) and kiwano (*C. metuliferus*) are two locally important vegetable crops, the kiwano having been introduced as a vegetable in the USA five years ago (see <http://www.produceoasis.com/>) where its brightly coloured flesh and long shelf-life (up to 6 months) make it a popular speciality product.

Kirkbride's monograph contains five chapters: Taxonomic History, Morphology, Biosystematic Data, Materials and Methods, and Taxonomy. It is accompanied by a 5<sup>1</sup>/<sub>4</sub>" MS-DOS diskette on which is a collections database, a character database and an identification key. *Cucumis* has been previously revised by Naudin (1859) and Cogniaux (1881, 1924). The principal taxonomic changes made by Kirkbride in his revision are the description of two new sections, five new series and four new species, and reduction of 20 species names into synonymy. In all, he recognizes 32 species belonging to *Cucumis*. The systematics of the genus is not dealt with in any great depth and there is a curious division of characters into morphological and 'biosystematic' (i.e. biochemical and molecular). Pollen characters, so informative