Journal of Vegetation Science 12: 151-152, 2001

BOOK REVIEWS

Ne'eman, G. & Trabaud, L. 2000. **Ecology, Biogeography and Management of Pinus halepensis and P. brutia Forest Ecosystems in the Mediterranean Basin**. xii + 412 pp. Backhuys Publishers, Leiden. ISBN 90-5782-055-2 (hardcover). Price: USD 120.00

This and the recent Richardson book (*Ecology and Biogeography of* Pinus, Cambridge, 1998) reflect a renewed interest in this very important arboreal component of Northern Hemisphere ecosystems and alien threat to the Southern Hemisphere. Ne'eman and Trabaud's book is a highly focused treatise on two pines important because their center of distribution lies within a region of high human population density.

The forward by Zev Naveh is a call to arms to the Mediterranean community to recognize their valuable pine resource and the threats to this important taxon. What follows are 29 chapters filled with the most up to date information presented by an outstanding cast of experts on the subject. The book has extraordinary depth in some areas of pine biology, e.g., evolution, systematics, postfire recruitment. The emphasis is heavily focused towards the eastern end of the Mediterranean Basin and there is only limited information presented on the ecophysiology of pines. More input from studies in the Iberian Peninsula would have provided better balance to the book.

If it was not for the fact that the book is of sufficient length as is, one might be tempted to complain about the fact that other Mediterranean Basin pines are largely, but not completely ignored. However, "the proof is in the pudding" and clearly there is more than enough known about *P. halepensis* and *P. brutia* to fill a single book.

Topics cover a broad range. The first section includes genetics, evolution, palaeoecology, and reproduction (including factors driving cone initiation, seed physiology, and seedling establishment, and alien invasion of the Southern Hemisphere). In the second section the book title lives up to its name in covering the 'ecology" of these pine ecosystems. This section comprises chapters dealing with diverse topics from species diversity, water balance, seed banks, mycorrhizae, soil arthropods, phytophagous insects, birds and small mammals. The third section is on fire ecology and provides the gamut of perspectives from those of ecologists to land managers. The final chapter is of particular importance in a region such as this, namely anthropogenic impacts, including forestry and pollution issues.

The book excels in two important respects, the number of high quality graphs and other illustrations (see particularly chapters by Thanos) and, consistently in all chapters, the thoroughness with which the literature has been reviewed. This book is clearly a wealth of references for anyone interested in the subject of these two dominant Mediterranean pines.

Relative to the extraordinary merits of this book, criticisms are all rather minor. There are no abstracts, which in light of the diversity of topics and level of overlap between chapters, might have been of value. Readers are only slightly short-changed by the index, which, for each topic, gives only the page number for the first mention of that topic within a chapter. Clearly, finding faults with this book was not easy.

Associated with this book is an electronic network of scientists and resource managers interested in issues of Mediterranean Basin pines (List Server: MED-PINE@POST.TAU.AC.IL) that promises to lead to even more productivity in the future. The editors have done a fine service by this book. It seems likely that we will see future volumes from the Mediterranean pine group, hopefully focusing on other pines of the Mediterranean Basin.

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Short reviews of Nordic publications by Jonas E. Lawesson

Jonsell, B. (ed.) 2000. **Flora Nordica**, Vol. 1. Lycopodiaceae to Polygonaceae. xxii + 344 pp. The Bergius Foundation and Royal Swedish Academy of Sciences, Stockholm. ISBN 91 7190 033 0 (hardcover). Price: 50 USD.

New, updated and visionary floras for most parts of the world, including the Nordic countries are for obvious reasons few, since sources of financial support for these kinds of publications are few. Public opinion and the thinking of people in granting agencies is that we know the vascular flora of northern Europe so well, that basically no further work is needed. Most botanists know all too well the recurrent frustrations of the lack of good and modern descriptions of native and alien taxa. Many modern floras have keys dealing only with floral characters, which is a major problem if only sterile material is available, e.g., in most applied ecological studies.

It is thus of much comfort to see the first, much awaited volume of the prestitious and ambitious Flora Nordica (*Lycopodiaceae-Polygonaceae*). The chief editor of the flora, Bengt Jonsell, Stockholm, and staff, are to be congratulated on successfully obtaining the funding required for such an enormous enterprise, and for orchestrating the more than 30 taxonomists and 15 illustrators contributing to this flora (in English).

The introductory chapter describes the taxonomic concepts applied in the flora, from species to varieties, the nomenclature and how the descriptions are made. According to the introduction, the occurrence of taxa in Norden is recorded from all historical sources, as it appeared to be impossible to obtain consistent, up-dated data on the modern frequency and status of the species. This is a frustrating problem to all scientists and managers working in the area.

The bulk of the volume, obviously deals with detailed, taxonomic descriptions of taxa belonging to families ranging from the *Lycopodiaceae*, *Selaginellaceae*, *Isoëtaceae*, *Equisetaceae*, and the many fern families of the *Filicosida*, to important, but small-numbered tree families like *Pinaceae*, *Salicaceae*, *Betulaceae*, *Ulmaceae*, and *Fagaceae* to the large herbaceous *Polygonaceae*.

Each description contains the proper nomenclature and synonymy, with the designated type, and its location. Then follows (in most cases) the vernacular names in each Nordic language. A long and very detailed description of the taxon in question is then provided, including chromosome numbers, and the distribution as regards the nemorale to arctic zones. Some very useful paragraphs on habitat, taxonomy, variation in the taxon, possible hybrides, and closely similar taxa are also given.

A map indicating the distribution of the taxon is also given, with different-sized dots to respect the so-called biological provinces, which however are not explained further. The dots are consistently placed in the same place in the provinces, and thus indicate occurrence in provinces, rather than the exact geographical location within a province. In this respect, the maps are less informative than those in the recent Nordic flora by Mossberg & Stenberg (1994). The description of the distribution of a taxon in the text in some cases deviates from the maps, such as the one for *Lycopodiella inundata*.

A rather short literature list is then given, followed by indices to the venacular names and scientific names.

The book is bound strongly together in a hard cover, contains a high number of line drawings of entire plants or parts thereof, distribution maps of most species, which generally are of high quality. The geographical map provided on the inner cover is fairly accurate, but surprisingly no lakes are marked in Jutland.

The taxonomy and the descriptions of the species are probably accurate in most cases. Oddly, the occurence of *Fagus orientalis* (or *Fagus sylvatica ssp. orientalis* according to Flora Europeae) in Danish plantations remains unnoticed. Nor are the findings of the eastern-continental *Betula humilis* in Sweden a century ago mentioned.

The authors attempt the important task of classifying the flora in Norden into alien and native taxa and whether a taxon is considered resident, i.e. that it has been in the area since before the year 1700 (if only after that year, it is termed new). However well-known cultivars, such as *Asarum europaeum*, in this way are indicated as native in the distribution map, despite the description of its introduction to the region for ornamental purposes. In other cases, well-known native species, that has been introduced recently after having become extinct (e.g. *Pinus sylvestris* in Denmark, and *Quercus robur* in eastern Finland) are now called aliens. This appears to be a somewhat confusing way of asigning the phytogeographical origin to species.

The authors show a strong taxonomic orientation. More could have been made of the very substantial ecological and phytogeographical research carried out during the latter decades, primarily in Sweden and Norway, e.g. by Sjörs, Dahl, Diekmann, Moen, Bradshaw, Kullmann, Birks, Brunet and many, many others. An example is the information provided on *Fagus sylvatica*, which is based on Ødum (1968) only, despite that numerous modern ecological treatments of beech forests including Norden are available.

It is to be hoped that the forthcoming general volume containing treatments of the vegetation and phytogeography of Norden will include the ecological literature.

In conclusion, the Flora Nordica is a major step forward in the studies of the flora of northern Europe, although there is room for further improvements. Not-withstanding the minor criticisms noted above, it certainly merits a wide distribution, and it is certainly to be a standard publication when working with flora and vegetation in Norden.

Reference

Mossberg, B. & Stenberg, L. 1994. *Den store nordiske flora*. GEC GAD, København.

Ødum, S. 1968. Udbredelsen af træer og buske i Danmark. *Bot. Tidskr.* 64: 1-118.

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