the text and there are some attractive line drawings which break-up the introduction and separate sections.

The introduction outlines the purpose and approach of the book and includes discussion on reliability of records, nomenclatural and taxonomic principles adopted, and the importance of ecology and distribution. The taxonomic work (694 pages) forms the core of the publication, with genera and species treated alphabetically in each major section. There is a useful bibliographic index and annotated checklist which also includes a few 'fungi imperfecti' and 'phycomycetes' recorded during the mapping scheme. In addition an up-to-date enumeration of the Myxomycetes of the Netherlands is presented.

Of interest to many will be the chapter giving a summary of the macrofungi, in which the data are more accessible than they are in the main text. The synonymy focuses on names which appeared previously in Dutch lists; the text cannot and should not be taken as a checklist. In fact there are a few errors, e.g. *Tricholoma subpulverulentum* (Pers.) Singer — a combination made long before the attributed authority. But those spotted so far are minor.

With governments' interest being turned to the Rio Convention it is good to see a chapter devoted to threatened fungi, with tables of information arranged in the categories of threat universally defined. The editors with their colleagues have been leaders in this area in Europe.

Despite being in Dutch this is an easily understood publication for English speakers because of the very nature of its contents; a brief English summary is given. The Netherlands Mycological Society must be congratulated on the production of this book; it is a tribute to the many amateurs in the society who made it possible by supplying records, and is an extremely useful publication.

R. Watling

**Wind and Trees**. Edited by M. P. Coutts and J. Grace. Cambridge: Cambridge University Press. 1995. 485pp. ISBN 0 521 46037 9. £65 (hardback).

This book contains a selection of 27 papers about meteorological, mechanical and physiological knowledge relating to trees and tree growth that were presented at the conference *Wind and Wind-related Damage to Trees* held at Heriot-Watt University, Edinburgh in July 1993. The conference brought together about a hundred scientists from seventeen countries and enabled interdisciplinary discussions between physicists, aerodynamicists, foresters, engineers, physiologists, ecologists, pathologists and modellers.

The book is divided into five sections: *Airflow over topography and in forests*; *Mechanics of trees under wind loading*; *Tree physiological responses*; *Impacts of wind on forests and ecology*, and *Risk assessment and management response*. Each section begins with a review followed by papers on special topics. On the whole the book covers wind-related damage well, but there are some weak-

nesses, e.g. the importance of roots is not emphasized much except in the section on physiological responses where it dominates unduly.

All the papers are well illustrated with diagrams, graphs and the occasional black and white photograph. In the first section detailed bioclimatological information on wind velocity moments and turbulence in various canopies is given. This combines well with the next paper dealing with wind and tree movement in forest canopies. In the following three papers edge effects and wind tunnel studies in forest clearcuts are explained, and a linear airflow model (Flowstar) tested for flow over complex terrain. Acording to the conclusions this model appears to be useful for forest planning. The last paper of the section is devoted to the difficult task of predicting windspeeds in complex terrain to avoid the necessity for long-term, on-site wind measurements.

The second section gives detailed information on the forces trees have to endure in a natural stand. Both modelling data and experimental analysis are dealt with, including failure modes of trees and experimental testing of the effects of mechanical loading on conifers planted on wet mineral soils. New methods (Metriguard Stress Wave Timer and the Fractometer) for the assessment of wood quality are explained in the last paper of this section.

Physiological responses to wind are dealt with in only four papers. In the first (a review) some information on the effect of wind on trees as a whole is given, but the other short papers in this section relate solely to roots. Root growth responses to wind in young trees, distribution of biomass in root systems of Sitka spruce clones, and the development of buttresses in rainforest trees are dealt with using an experimental approach.

The fourth section contains 50 pages of information mainly about hurricane and other catastrophic wind damage to forests and the estimation of such damage by various methods.

The final section on risk assessment and management responses gives practical advice for forestry planning, for example, for Norway spruce stands under various ecological conditions. The last few papers describe windthrow damage in British Columbia and New Zealand.

In conclusion, the book contains a mass of information on wind damage to trees. The inter-disciplinary approach makes the book somewhat heavy reading, but at the same time makes it a good reference source for professional foresters and modellers.

K. V. Fagerstedt

**Flora of the Pico das Almas, Chapada Diamantina – Bahia, Brazil.** Edited by B. L. Stannard. London: Royal Botanic Gardens, Kew. 1995. 853pp. ISBN 0 947643 76 1. £36.00 (hardback).

This book summarises the results of an exhaustive study of the flora of a site in central Bahia, Brazil, carried out by a team of botanists from the Royal