Barbour, M.G., Billings, W.D. (ed.): **North American Terrestrial Vegetation**. 2nd Edition. Cambridge University Press, Cambridge 2000. 708 pp. GBP 80.00. ISBN 0-521-55986-3.

In recent years, a variety of space-time scales have been adopted in handbooks describing structure and function of vegetation. R.H. Groves *et al.* (*Australian Vegetation*, 2nd edition, 1994, New York) emphasised mostly the floristic composition of the isolated Australian „island“ and analysed its long-term historical changes. P. Ozenda's book (*Végétation du Continent Européen*, 1994, Lausanne) is based mainly on areas of distribution and pertinent biogeographical zonation in the western „promontory“ of Eurasia. H. Ellenberg (*Vegetation Mitteleuropas mit den Alpen*, 5. Auflage, 1996, Stuttgart) concentrated on ecological, phytosociological and developmental pattern across the narrower core of Europe. And O.W. Archibold (*Ecology of World Vegetation*, 1995, London) produced a condensed treatment of terrestrial vegetation types covering all continents. The current revised and much extended edition of the book *North American Terrestrial Vegetation* (first edition published in 1988) is a unique treatment of floristic, chorologic and ecophysiological features of plant communities encountered in continental North America, and adjacent areas of the Caribbean, Mesoamerica and Hawaiian Islands.

Compiled by 28 leading specialists in particular vegetation types, each of the 18 chapters covering over 700 pages represents a monograph which gives a comprehensive picture and rich source of data on terrestrial plant life and physical environment of North America. For example, L.C. Bliss, a leading expert in arctic ecology, contributed by a chapter containing 40 pages supported by 17 figures, 7 tables and 6 pages of references. Beside the geological, climatic and floristic diversification, the book describes a remarkable ubiquity of physical disturbance, particularly by fires, floods, landslides, earthflows, volcanic eruptions, *etc.* Humans made the North American landscapes still more diversified, in spite of their relatively short presence, if compared with Africa, Europe and Asia. The array of regional plant communities and azonal ecosystems in North America and adjacent areas, is much larger than those expected by many European ecologists and geographers after inspection of coarse-scale maps of potential vegetation (*e.g.*, charts compiled by Küchler, *etc.*).

The book is assembled with tables, charts, surface photographs, aerial views and various diagrams, such as climatic, ordination, cross-sectional, profile and space-time schemes, including some plots produced by Detrended Correspondence Analysis (DECORANA pro-

gram) and Canonical Correspondence Ordination (program CANOCO). The reader will learn a lot about the key species, such as their development, growth, production and reproduction processes. A wealth of ecophysiological characteristics is available for the dominant woody angiosperms and gymnosperms, which suggests a suitable comparison with some European tree species. Typical forest stands are described in terms of canopy cover, basal area, seedling establishment, sprouting capacity, *etc.*—again an important data bank for the current dendrologists and horticulturists, since North American trees remain a permanent for plantation in European parks. All kinds of grasslands, including the much disturbed prairies, are also described in both observational and experimental terms.

Ecologists and plant physiologists will like the up-to-date information about the behaviour plant species and plant communities in “extreme” environments, such as the warm desert, tropical forests, freshwater wetlands, salt-marshes, mangroves, arctic tundra, alpine communities and upland communities on islands. The Californian region, *e.g.*, is tackled in several chapters according to the altitude, which makes the actual distribution and ecological role of the chaparral more distinct against the wetter upland forests. (The reviewer, himself oriented towards mountain vegetation, noted the missing distinction and definitions of various treelines, but gladly received introduction of new concepts on alpine vegetation, coined by the late W.D. Billings.) The book contains examples of rather rare American biomes and explanation of ecological phenomena which are vaguely used in global textbooks and inconsistently explained in available dictionaries; some of these concepts/terms have been clarified, but others apparently will remain for some time a mystery for the non-American reader, *e.g.*, distinction between the quasi-synonyms forest/ woodland/wood, *etc.* Formalised classification and nomenclature of vegetation types comparable with the European plant sociology would enable hierarchical order at various regional scales and consequent denomination at different organisation levels. Understandably, 1) both the size and heterogeneity of the North American and Mesoamerican scenery, and 2) methodological diversity of American ecologists prevent the establishment of a single “syntaxonomical” system similar to that applied in H. Ellenberg's on Central European vegetation. In any view, the second edition of *North American Terrestrial Vegetation* is a success.

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