

Book Review

DOI: 10.21570/EDGG.PG.38 42-43

Goldmine for plant and vegetation ecology

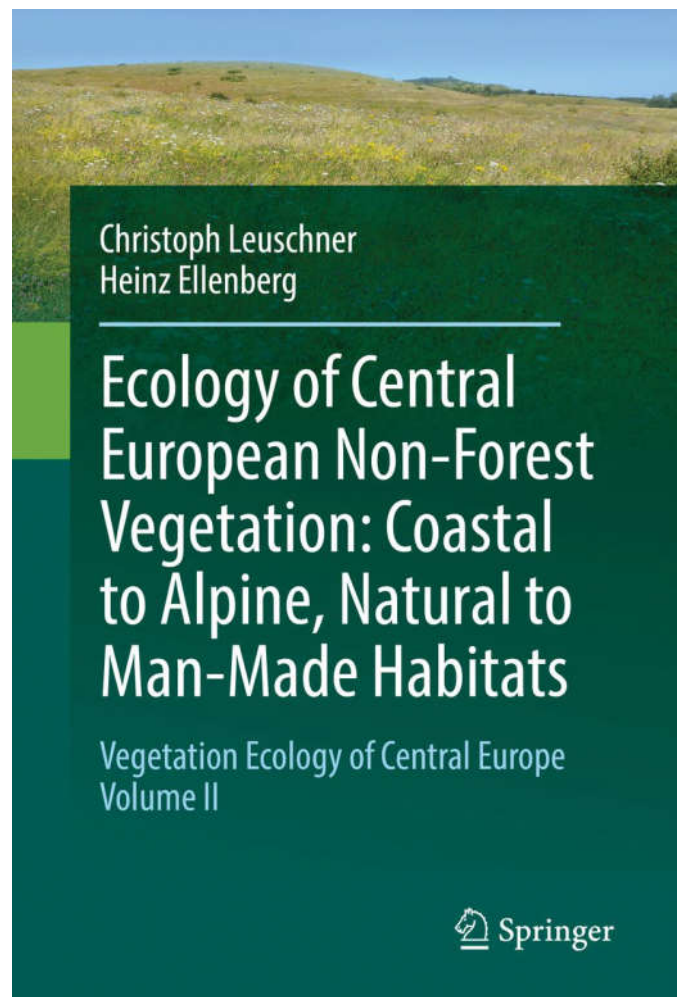
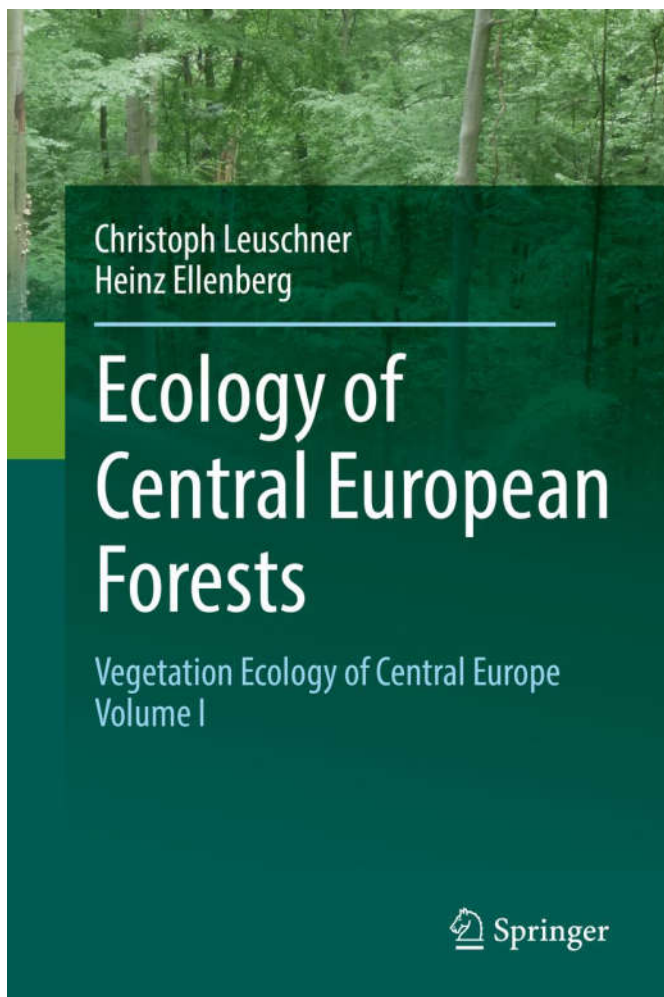
Leuschner, C. & Ellenberg, H. 2017. Vegetation Ecology of Central Europe (2 volumes): I. Ecology of Central European Forests; II. Ecology of Central European Non-Forest Vegetation: Coastal to Alpine, Natural to Man-Made Habitats. Springer Nature, Heidelberg. Hardcover, Vol. I: 219.99 €, Vol. II.: 279.99 €. ISBN 978-3-319-50710-1 (2-volume set).

Central-European vegetation is extremely diverse at multiple spatial scales, so it is no big surprise – especially to vegetation ecologists – that the syntaxonomical viewpoint, which includes within its ranks so many eminent vegetation scientist from J. Braun-Blanquet, R. Tüxen, to R. Soó was established there (see also Braun-Blanquet 1964 or Dierschke 1994). Many other schools of vegetation science – some founded at the same time or even bit earlier – were established around the world, often with different concepts, viewpoints and methods (Hagen 2010), but all

vegetation scientists agree that patterns and processes and the link between them are strongly influenced by the community in question (Watt 1947). This view is clearly one of the central concepts of this handbook by Leuschner and Ellenberg.

It is very hard or even impossible to review such a work in a few dozen sentences, as we are talking about a text of more than 1,500 pages, with an extensive literature of more than 5,500 references.

The present English edition is based on the 6th German edition of the classical textbook of Heinz Ellenberg, first published as “Vegetation Mitteleuropas mit den Alpen” in 1963. It is not a simple translation; instead for the English edition the literature was extended with about 400 new and relevant citations and the text reshaped with the inevitable contribution and help of Laura Sutcliffe, who acted not only as translator but also as the scientific and linguistic editor of the book. Given that the German-speaking literature of vegetation ecology, strongly influenced by the



Braun-Blanquet school, developed somewhat independently from Anglo-Saxon vegetation ecology, it was no small task to harmonise and unify the terminology and to shape the text accordingly as part of the task of translation.

The work is in two volumes: the first volume deals with forest vegetation, the second rather thicker volume with open habitats including urban areas. In the first section, consisting of the first two chapters of the first volume, the authors provide a physio-geographic delineation of the work, providing essential background information on the development of the natural environment, introducing the abiotic background of the vegetation and the life forms and growth types of Central European plants. In the second part they evaluate the role of the developing human population on vegetation development and history.

The third part of the book – its most voluminous – introduces the general ecology of forest habitats in Central Europe. These seven chapters provide a thoroughgoing exposition of the forest and shrub formations of Central Europe. The first volume closes with a syntaxonomic overview of forest and scrub formations.

The second volume continues with five chapters in the same vein, starting with natural and near-natural formations: first salt affected habitats, then open sand vegetation and mires, followed by freshwater habitats and the vegetation of the alpine and nival belts. Then come heathlands and most of the grassland formations, which are included in this second part of the volume since they are largely created and/or maintained by regular human influence in a form of livestock grazing or mowing in this region (Dengler et al. 2014). Because of very specific circumstances of their development, the vegetation of heavy-metal-rich soils is described in a separate chapter. The last habitats to be described are those of heavily disturbed ruderal and man-made urban vegetation. As with the first book, this volume also ends with a syntaxonomic overview, this time of non-forest vegetation types.

I have to mention that the regional coverage of the handbook is limited to the territory of Germany, Poland, the

Netherlands, Belgium, Luxembourg, Switzerland, Austria, Czech Republic and Slovakia; large areas of the eastern part of Central Europe e.g. most of the Pannonian basin, are not considered in the book. I hope the editors could consider this in a future edition. The book would benefit from the inclusion of the substantial volume of recent published work from that region, especially so in the sections dealing with salt or sand vegetation, but also those on xeric oak forests and forest steppes (for the latter see for example the very recent review of Erdős et al. 2018).

To sum up, for me, these two volumes are not just a handbook on the ecology of Central European vegetation but a goldmine for vegetation ecological research, which helps to identify gaps in knowledge and ideas for further research. In spite of the book being rather expensive, it is necessary to have it, at least on the virtual bookshelf of a vegetation ecologist.

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