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Received 4 September 2011
Revision received 3 April 2012
Accepted 4 April 2012

C h y t r ý M.(ed.)

Vegetace České republiky 3. Vodní a mokřadní vegetace
[Vegetation of the Czech Republic 3. Aquatic and wetland vegetation]

Academia, Praha, 2011, 827 pp., ISBN 978-80-200-918-9

The third volume of the Czech national vegetation classification, dealing with aquatic and wetland vegetation, sets a new landmark in European vegetation research. On the one hand, it stands in the long tradition of European classification studies, starting about a century ago with the work of Josias Braun-Blanquet and followers (see Rodwell et al. 2002), on the other hand it reflects new developments – and raises the benchmark – in applying modern computer techniques to understand and document the variation in plant communities. Records taken from

the field still form the basis, the so-called vegetation relevé: a description of a vegetation stand at a certain time, recording all species and their cover-abundance values. Based on a total set of 95,660 vegetation records in the Czech National Phytosociological Database, a vegetation classification at the level of association was performed using the supervised classification method Cocktail (Bruelheide 1995; Koči et al. 2003). After stratification, all together 10,279 relevés were assigned to associations of aquatic and wetland vegetation. This dataset was used for creating synoptic tables and determining diagnostic, constant and dominant species. The consequent way in which the data have been analysed reflects the critical attitude of the authors in nowadays vegetation research, in the same way as they proceeded in the previous two volumes of the overview, on grasslands and heathlands (Chytrý 2007) and on ruderal, weed, rock and scree vegetation (Chytrý 2009), respectively.

The overview of the Czech aquatic and wetland vegetation comprises three formation groups: aquatics, wetlands sensu stricto, and springs and mires. These groups comprise 10 formations, varying from free-floating aquatic plant communities, communities characterized by aquatic plants rooted in the bottom and stonewort communities, to plant communities of marshes, springs and bogs. They are classified in 10 classes, 37 alliances, and 176 associations. Given the fact that natural lakes are almost absent in Czech Republic, this diversity is surprisingly high. Natural habitats are concentrated in river floodplains (aquatic and wetland vegetation) and in precipitation-rich mountainous areas (spring and mire vegetation), whereas at other places artificial biotopes occur, including currently about 25,000 fishponds, ranging in size from a few hundred square metres to nearly 500 hectares.

The descriptions of the associations form the core of the book, following a standard format. Each description starts with the scientific name of the association, with code and author citation (according to the latest International Code of Phytosociological Nomenclature; Weber et al. 2000), followed by the vernacular name. In a small text box, synonyms are presented, as well as a list of diagnostic species and its formal definition. In separate paragraphs, attention is paid to items like vegetation structure, ecology, succession, management, distribution, variation and classification. At the end of the association descriptions, a summary in English is given. The distribution of each association is mapped in a geographical grid with cells of 5 minutes of geographical longitude by 3 minutes of latitude (approximately 5 × 5.5 km). Synoptic tables are given for groups of closely related associations, and the same applies for environmental factors, like Ellenberg indicator values (Ellenberg et al. 1992), altitudinal range and the cover of the herb layer. The book is illustrated with high-quality colour photographs. The book closes with more than 60 pages of references and an index of species and syntaxon names.

From the 1990s onwards, vegetation research in the Czech Republic has clearly gained ground in Europe once again after a rather long period of relative silence. This is illustrated by an impressive amount of scientific papers (e.g. on software development and on multivariate computer techniques), a number of successful international meetings organized in the country, and the prominent position of Czech vegetation scientists in international journals, organizations and working groups, like the European Vegetation Survey. The publication of the third volume of the Vegetation of the Czech Republic furthers this development. My only concern is that the book is written in the Czech language. As a consequence, the international public has to derive its information from the tables, maps, graphs, photographs and short summaries, or... has to learn how to read Czech.

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