EuroVegChecklist: a *post mortem*

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Background & Aims: The EuroVegChecklist is a long-term voluntary project shared by 33 vegetation scientists from Europe, USA, Asia and Australia. The aim of the project is to review the status of the syntaxonomic system of Europe+ (incl. Atlantic and Arctic islands groups, Cyprus, Caucasus and Greenland) at the level of alliances, orders and classes. Syntaxonomic classification is widely used for vegetation survey in Europe (and beyond). The long history of its use has produced many concepts and names of vegetation units that need to be revised and integrated into a single classification system. The time has come to collate this information, clarify the concepts, and create the first, comprehensive syntaxonomic vegetation system for biotic communities, dominated by vascular plants, bryophytes, lichens and algae. The aims of this project were to (1) present a new, hierarchical syntaxonomic system of alliances, orders, classes of the Braun-Blanquet syntaxonomy for vascular plant, bryophyte, lichen and algal communities of European vegetation, (2) to characterize all accepted syntaxonomic concepts in ecological and geographical terms, (3) to link all available synonyms to these concepts, and (4) to provide a list of diagnostic species for all classes of European vegetation.

Methods of Data Compilation: We reviewed about 10 000 bibliographic sources to compile the syntaxonomic systems of classes, orders and alliances, and species lists characterizing all classes. All known syntaxonomic concepts were critically evaluated by experts and their names revised according to the International Code of Phytosociological Nomenclature.

Results: The newly compiled EuroVegChecklist is a syntaxonomic conspectus that consists of systems of classes, orders, and alliances for the communities dominated by vascular plants (EVC1), bryophytes and lichens (EVC2), and algae (EVC3). EVC1 comprises 110 classes, 300 orders and 1088 alliances (with 4067 synonyms for all ranks); EVC2 27 classes, 53 orders and 137 alliances (with 410 synonyms for all ranks); EVC3 13 classes, 24 orders and 53 alliances (with 188 synonyms for all ranks). 13 289 diagnostic taxa were assigned to classes of EVC1, 2099 to classes of EVC2 and 346 to classes of EVC3. Information on each accepted syntaxonomic concept was made accessible through the software tool EuroVegBrowser. An expert system for an automatic identification of class membership based on the proportion of character species was also developed.

Conclusions: The Conspectus is the first comprehensive and critical account of syntaxa synthesizing more than 100 years of classification effort of European phytosociologists. It aims to stabilize the nomenclature of the syntaxa and of classification concepts for practical uses such as calibration of habitat classification used by the European Union, standardization of terminology for environmental assessment studies, management and conservation of nature areas, landscape planning and education.

Outlook: The new syntaxonomic is poised to serve as a core of several major tools of European Union legislature in the field management and conservation of natural resources. EuroVegChecklist, although static in terms of definite imminent printed publication, will remain a living, developing body of knowledge open to improvement. Several web-based applications featuring the products from the EuroVegChecklist are in the pipeline.

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