European Vegetation Survey: update on progress

Rodwell, J.S.1*, Pignatti, S.2, Mucina, L.3 & Schaminée, J.H.J.4

1Unit of Vegetation Science, Lancaster University, Lancaster, LA1 4YQ, United Kingdom; Tel. +44 1524 65201 ext. 3564; Fax: +44 1524 843854; *author for correspondence; 2Dipartimento di Biologia Vegetale, Città Universitaria, 00185 Roma, Italy; 3Institute of Botany of the University of Vienna, Rennweg 14, A-1030 Wien, Austria; 4DLO Institute for Forestry and Nature Research, P.O. Box 23, 6700 AA Wageningen, the Netherlands

A new spirit in European phytosociology

The European Vegetation Survey is an alliance of leading phytosociologists committed to developing an overview of plant communities throughout the wider Europe. The enterprise began in March 1992, in the wake of the political changes in the East, with a renewed determination to develop scientific cooperation to understand the vegetation resources of Europe and to inform decision-making in environmental protection across the Continent. Convened by Professor Sandro Pignatti, then President of the International Association for Vegetation Science, representatives of 15 countries attended a first meeting in Rome. Since then, annual workshops have reviewed progress in vegetation survey across Europe and laid the foundation for a programme of action, through an IAVS Working Group chaired by Pignatti and with Dr. Laco Mucina of the University of Vienna as Secretary (Pignatti 1990; Dierschke 1992; Mucina et al. 1993). 25 countries are now represented in the network with a shared commitment to:

• common data standards in the provision of phytosociological information about plant associations;
• the encouragement of national programmes of vegetation survey across Europe;
• the development of software and an electronic network for data exchange;
• the production of an overview of European vegetation.

All this marks a new spirit of collaboration at a time when there is increasing interest in using the phytosociological data and insights first developed by Tüxen (1937) and Braun-Blanquet (1964), not simply for cataloguing plant communities and devising classifications,
but also for predicting and monitoring the impacts of environmental change and developing vegetation management and landscape planning.

Vegetation survey across Europe

One of the basic principles of the European Vegetation Survey is that its area of interest extends beyond the European Union to include the eastern countries, the European parts of Russia, Kazakhstan and Turkey, the Aegean Islands, the Canaries, Svalbard and Iceland; and that, within this network, all participants should enjoy equal treatment. However, the current state of vegetation survey and phytosociological research in these different countries varies widely. An early initiative of the group was therefore to circulate a questionnaire to country representatives to assess the extent and distribution of phytosociological data, the development of databases and software for vegetation data analysis and the state of national survey programmes (Rodwell in press).

18 countries have now completed this questionnaire, including Russia, Latvia, Romania and Albania, with replies currently awaited from a further seven. Responses already reveal that there are in excess of one million relevés recorded in these countries but the number and proportion of these data that are published varies greatly from country to country. Not surprisingly, those countries with a substantial tradition of phytosociology have most relevés, as in Germany (about 200,000), France (400,000), the Netherlands (160,000), Austria (100,000) Spain (150,000), Italy (40,000) and Switzerland (20,000). However, whereas in Germany 70% of these have been published (though mostly as synoptic tables), the figure for the Netherlands is only 3% (though mostly as actual relevés). Many eastern European countries, too, have numerous data, like the Czech Republic, Slovakia, Slovenia, Romania and Russia and, in some cases like the Czech Republic, most of these have been published. Other countries, like Albania, Latvia, Greece or Portugal have many fewer relevés, virtually all unpublished or in relatively inaccessible research reports. In some countries, the oldest relevés date from the 1920s; others, like Eire and the UK, began with a phytosociological approach more recently but have now accumulated substantial amounts of data, much in published sources.

The distribution of such data within the various countries is sometimes very uneven. In Portugal, for example, many relevés originate from relatively small areas in the uplands and, in Greece, coverage is also irregular. The sampling of different kinds of vegetation is also very variable within and between different countries. In the questionnaire, each respondent was asked to score the quality of coverage for the phytosociological classes like the bog vegetation of the Oxyccoco-Sphagnetea or the calcicolous pine-forests of the Erico-Pinetea. Such responses have now been mapped across Europe for over 60 classes.

Although there have been important publications on the plant communities of various European countries (Oberdorfer 1957 et seq.; Westhoff & den Held 1989; Pott 1992), when the European Vegetation Survey began its work, only four countries had a national programme of survey - Austria, Germany, the Netherlands, and the UK (Mucina et al. 1993). The UK National Vegetation Classification was the first of all such surveys to begin publication, with the first volume of British Plant Communities appearing in 1991 (Rodwell 1991 et seq.). The three volumes of Pflanzengeellschaften Österreichs have now appeared (Mucina et al. 1994), with the first two volumes of De Vegetatie van Nederland (Schaminée et al. 1995, in press) due imminently.

Meanwhile, the support of the European Vegetation Survey has been of critical importance in securing government funding for the Czech and Slovak vegetation surveys. Italy and Spain have surveys in progress and Slovenia is also starting a national programme, with Switzerland, Latvia and Romania undertaking studies of particular regions or major vegetation types. However, not all of these programmes yet have proposals for publication of their results.

Databases and software

Parallel with such programmes, many countries now make extensive use of software for the analysis and display of relevé data, particularly with the increasing availability of PCs (van der Maarel et al. 1980; Mucina & van der Maarel 1989). A wide variety of existing programs is used, notably TWINSPIAN (Hill 1979) and CANOCO (ter Braak 1990) but new software has also been specially developed by some groups (e.g. Malloch & van der Maarel 1989). A wide variety of existing programs is used, notably TWINSPIAN (Hill 1979) and CANOCO (ter Braak 1990) but new software has also been specially developed by some groups (e.g. Malloch & van der Maarel 1989). A wide variety of existing programs is used, notably TWINSPIAN (Hill 1979) and CANOCO (ter Braak 1990) but new software has also been specially developed by some groups (e.g. Malloch & van der Maarel 1989). A wide variety of existing programs is used, notably TWINSPIAN (Hill 1979) and CANOCO (ter Braak 1990) but new software has also been specially developed by some groups (e.g. Malloch & van der Maarel 1989). A wide variety of existing programs is used, notably TWINSPIAN (Hill 1979) and CANOCO (ter Braak 1990) but new software has also been specially developed by some groups (e.g. Malloch & van der Maarel 1989). A wide variety of existing programs is used, notably TWINSPIAN (Hill 1979) and CANOCO (ter Braak 1990) but new software has also been specially developed by some groups (e.g. Malloch & van der Maarel 1989). A wide variety of existing programs is used, notably TWINSPIAN (Hill 1979) and CANOCO (ter Braak 1990) but new software has also been specially developed by some groups (e.g. Malloch & van der Maarel 1989). A wide variety of existing programs is used, notably TWINSPIAN (Hill 1979) and CANOCO (ter Braak 1990) but new software has also been specially developed by some groups (e.g. Malloch & van der Maarel 1989).
Reports and Short Notes

A European overview of vegetation

Developing an overview of European vegetation cannot wait for the completion of the various national survey programmes. For one thing, a robust framework of vegetation classification with supporting data and descriptions is urgently needed to inform the implementation of environmental legislation like the European Union Habitats Directive. While the EU’s own CORINE Biotope Classification (Anon. 1991) offers a framework of sorts, it is not sufficiently informative or sturdy to serve as a basis for predicting and monitoring environmental impacts and managing vegetation in protected sites, nor even for providing a reliable guarantee that a representative selection of European plant communities will be protected by the legislation (Waterton et al. 1995; Pearce 1995). For example, an overview of pastures and meadows undertaken for the European Vegetation Survey, based on relevé data from Ireland, the UK, the Netherlands and Germany, across to Slovakia and Romania and down through France to Spain and Portugal, reveals many grassland types that are simply unrecorded in the CORINE classification, some of great scientific, landscape and nature conservation value (Zuidhoff et al. in press).

As an initial step towards such an overview, a first approximation of European vegetation types pitched at the level of alliances will be prepared and published early in 1996. Meanwhile, a more ambitious publication, The Vegetation of Europe, is also underway with an editorial team under the coordination of Mucina. Here, the emphasis is very much on the ecology, not the classification and syntaxonomy, of the vegetation types, with sections of text on floristic composition, eco-physiology, community structure and population ecology, climatic, soil and biotic relationships of the vegetation, florogenetic processes and palaeoecology, distribution, vicariance and regional differentiation across the range. For this volume, to be outlined in draft by 1996, the vegetation types of Europe have been amalgamated into major groups of classes such as bogs, mires and fens, Mediterranean matorral, temperate and boreal coniferous forests, krummholz and so on.

The way forward

At the 4th Workshop of the European Vegetation Survey held in Rome last March, over 50 delegates from 18 European countries met for 3 days of presentations and discussions, with formal participation for the first time by Greece, Sweden and Denmark and, from further afield, the United States and Japan. Professor Elgene Box, the present President of the IAVS, Professor Eddy van der Maarel, Editor of the Journal of Vegetation Science and Dr. Udo Bohn, coordinator of the Vegetation Map of Europe project, also attended.

Definitive progress was made in a number of important areas: new contacts were established in countries so far unrepresented in the network, arrangements were made for extending the TURBO(VEG) network and agreement reached on the preparation of the overview and the Vegetation of Europe. The 5th Workshop, which will receive the completed overview and draft of this book will meet in Rome in March 1996 and a special session will be devoted to the European Vegetation Survey at the IAVS International Symposium at Lancaster in September 1996.

Meanwhile, as a token of its unity and hope, the European Vegetation Survey has adopted the logo shown at the head of this article. The ring of open flowers echoes the symbol of Europe, young flowers continuing to join the circle. The illustration is based on Allium neapolitanum - its specific epithet an appropriate summary of this new and lively collaboration.
References


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