

**A NEW PROJECT OF VEGETATION MAP OF EUROPE
(A CONTRIBUTION OF CENTRAL AND EAST EUROPEAN COUNTRIES)**

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The vegetation mapping in all socialist countries of Central, Eastern and Southeastern Europe developed strongly in the last two decades. Maps of great, middle or small scales and a great amount of information on natural and anthropogenous vegetation exist in all these countries today. Therefore when Prof. Dr. P. OZENDA (Grenoble) and Prof. Dr. W. TRAUTMANN (Bonn) applied to the geobotanically oriented institutions for cooperation on a new project of vegetation map of Europe in 1977, was this proposal welcomed in Central and East European countries. The Botanical Institute of the Czechoslovak Academy of Sciences in Průhonice took the initiative and after a consultation with specialists from other countries organised the 1st International Colloquium, where the questions of this new project of vegetation mapping of Europe were discussed in details. A report on this Colloquium, including the important contributions and discussions was published (NEUHÄUSL R. ed. in *Folia Geobotanica et Phytotaxonomica* 15/17: 155-206).

Basic information on the proposals concerning the conception, working methods, forms of cooperation and results reached so far on this project are presented in the following part of this contribution .

CONTENT OF THE VEGETATION MAP

The newly projected vegetation map should express the natural plant communities labeled in the geobotanical literature as reconstructed natural vegetation, potential natural vegetation, climax or permanent vegetation etc. The vegetation types created by human activity (e.g. weed communities, meadows, forest plantations etc.) should be expressed by the corresponding types of natural vegetation. Edaphically conditioned vegetation, azonally distributed most often, e.

g. riverside forest, peat bogs etc., is evaluated just as the climax vegetation on the base of phytocoenological characteristics.

Using the scale 1/3 000 000 enables us to use the higher categories of vegetation in the legend of the map. The legend will be hierarchized: a formation unit (the formation till the class of formations) was recommended as the highest categorie expressing the zonal or, if needed the subzonal categories of vegetation or the basic types of azonal vegetation; the type of phytocoenose with the specific structure and floristic composition (approximately on the association level in the sense of the Middle european floristic sociological school or on the level of association group in the sense of the soviet phytocoenology) was recommended as the lowest unit. The units of the hierarchized legend won't be based on one definite character of vegetation only such as e.g. physiognomy structure or floristic composition etc., but on the whole complex of structural and floristic characters of phytocoenoses which would express both the zonal subzonal, vertical, edaphical and regional dependences of vegetation and extra-zonal phenomena optimally as well as the most important florogenetically conditioned differences in the vegetation distribution. The highest units of the map will correspond to the zonal or subzonal communities, the lower units will represent altitudinal belts and further edaphical and regional differences of the vegetation structures.

Although almost every mapping unit in this concept represents a complex including besides the basic type of vegetation an admixture of other communities as well, it was recommended to construct a map based consistent on typological principles in which the elements with little area of distribution could be either neglected or used for differentiation of selfstanding mapping units, if the presence of an admixed

vegetation element is of great importance. The combinations of different phytocoenoses which occur in the mosaic pattern on large areas, will be held for selfstanding mapping units (e.g. a complex of Continental pine forests with forested peat bogs). The mapping units established on the phytocoenological basis (on the characters of the phytocoenoses only) will be named, if possible by the names of plant communities and species. It is possible to use the synmorphological, ecological or geographical suffixes as auxiliary markings. The typological units and vegetation complexes wouldn't be replaced by topological units, that means by regional categories with a characteristic complex of different plant communities (e.g. the type "Vegetation of Westcarpathian mountains" including the specific communities of Western Carpathian belonging to several altitudinal belts and edaphic series).

METHODICAL PRINCIPLES

As is stated above, the mapping units will be delimited by means of phytocoenological methods on the base of vegetation characters only and not by the means of geographical, geological or other environmental conditions. None of the existing phytosociological schools or traditions will be given precedence when the mapping units will be delimited. The syntaxons of different systems (the soviet classification, the scandinavian systematical units, units of the BRAUN-BLANQUET school etc.) can be used for explanation of the content of mapping units. A list of characters used for delimitation of mapping units was proposed. This enables us to transfer mutually the units of different European phytosociological systems.

The group of two, maximally three basic units which appear in mosaic patterns in great areas and all components take approximately an equal area, will be mapped as the vegetation complexes (combined units). Even those complexes in which a certain unit covers more than 50% of the area are held for "pure" units only in the case, that the other most frequent community won't cover more than 40% of the area. Only exceptions are the cases, when in the complex appears a vegetation element of great importance from the ecological, florogenetical or chorological point of view regularly on small areas. Here it is possible to create a parallel unit besides the pure one, where is the complementary element accentuated (e.g. besides the genuine "Continental pine forest" the "pine forests with elements of peat bogs").

ORGANISATION OF THE PROJECT

Prominent botanical institutions of European socialist countries which with the help of their staff could provide both the methodical and the conceptual preparation of the project as well as the mapping of their state territories are prepared to cooperate on this matter. The representatives of Scandinavia (Prof.Dr.E.DAHL, Prof.Dr. Leena HÄMET-AHTI) will work on this project. The mapping of western and southwestern Europe is ensured by the initiators of this project (Prof.Dr.P.OZENDA and Prof.Dr.W.TRAUTMANN). The mapping of the socialist countries is registered as a partial task of the problem "Protection of ecosystems (biogeocenoses) and landscape" of the common project of CMEA countries. It was discussed whether this task should be incorporated into the UNESCO Programm MAB and IUBS is asked for sponsorship.

UPTODATE RESULTS

The preparatory phase culminated by the colloquium in Liblice (Czechoslovakia) in april 1979. The last proposals of the small scale vegetation mapping in Europe were reviewed and the basic information on the state and perspectives of the vegetation mapping in European socialist countries were presented during this meeting. Further the basic conception of a new project of this map principles for the construction of a unific legend were proposed and accepted. The ways of cooperation were established as well as the organisational structure of cooperation. Both proposals of national legends for the European socialist countries and Western Germany as well as drafts of parallelization of the units from different countries were worked out recently. The proposals of uniform legend for arctic and boreal zones of Europe, for the territory of Middle and Eastern Europe and Balkan excluding Greece will be submitted to the co-workers on the 2nd Colloquium in 1980 for discussion.

PERSPECTIVES

The works on uniform legends of socialist countries are continuing according to the timetable; therefore we suppose that the first proposal of a legend will be finished before the end of 1980. Its function will be verified by backward application to national legends and by the first versions of uniform mapping

It is necessary to solve some technical and methodical problems concerning the interpretation of the legend in the maps (topographical bases, colour scale, differentiation and hierarchization of the legend, the expressing of important phenomena in small areas etc.) Nevertheless we can take for granted that till 1985 the first draft of a uniform map elaborated by means of international collaboration for the European socialist countries will be ready.

This map will contribute greatly to the integration of different phytocoenological schools and will initiate further development of phytocoenology. It could be further used for pedagogical purposes, applied research, landscape planning, nature and environment protection as well as for the extrapolation of ecological results into the broader area.

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