

BOOK REVIEW
POSTOLACHE G., VEGETAȚIA REPUBLICII MOLDOVA,
SECOND EDITION

The work entitled *Vegetation of the Republic of Moldova, 2nd edition*, authored by Dr. hab. Gheorghe Postolache, published at the State University of Moldova, National Botanical Garden (Institute) “Alexandru Ciubotaru” in Chișinău, Republic of Moldova, in 2024, represents a larger, revised and enriched reedition of the first edition of the same work published under the name of the same author, in 1995.

The book is structured as follows: Introduction, nine chapters, conclusions, bibliography, index of syntaxa, summaries in English and Russian, as well as the table of contents in Romanian and English. The book has 520 pages, text, tables, maps and colour photographs.

The author, Dr. hab. Gheorghe Postolache, is a well-known specialist, both botanist and phytosociologist, with long concerns in these fields, but also other related ones, with an emphasis on the complex study of the vegetal carpet of the Republic of Moldova, an ancient territory situated between the Prut River to the West and the border with Ukraine to the North, East and South.

Chapter 1. The history of vegetation research, after 1995, reviews the progress made in the phytosociological study of vegetation, in accordance with the methodology proposed since the beginning of the twentieth century by the initiator of phytosociological studies, the Swiss J. Braun-Blanquet, a methodology to which the author of this book adhered unreservedly. It is shown that other Romanian botanists have also studied the vegetation of the Republic of Moldova, such as Al. Borza, Em. Țopa, Al. Arvat, D. Mititelu, T. Chifu and others, along with local botanists, including: T. Tofan-Burac, Șt. Lazu, Al. Ruștiuc, A. Miron, P. Pânzaru, V. Ghendov and others.

Chapter 2. The general characterization of the natural conditions summarizes the characteristic features of the natural framework of the Republic of Moldova (geological structure, relief, climate, soil cover, etc.), features that directly or indirectly influence the structure and functions of the natural plant ecosystems, current or potential.

Chapter 3. General issues regarding the history of flora and vegetation clearly and concisely highlight the main stages in the past of the flora and vegetation on the territory of the Republic of Moldova, as well as the anthropogenic impacts that led to the change of the vegetation cover.

Chapter 4. The coenotaxonomic diversity of the vegetation of Moldova represents the beginning of the description of the vegetation of the Republic of Moldova, by defining the coenotaxonomic units used in the paper, followed by the presentation of the coenotaxonomic perspective of the vegetation units, a concept structured on the principles of the Floristic-Phytosociological School of Zürich-Montpellier.

Therefore, the author adopts in a completely meritorious way, justified by his long experience in the field, a modern, current, easy-to-understand coenosystem, being also passed through a personal critical “filter”, all based on the past and current data of

many authors who have studied and published a series of articles or books of greater scientific scope (monographs, collective volumes, etc.).

The phytosociological system adopted is structured as follows: vegetation classes, orders, alliances and plant associations, accompanied by numerous synonyms that clarify the syntaxa identified in the field; in absolute figures, the author identified in the field the existence of phytocoenoses, circumscribed to a number of 270 plant associations, grouped into 84 alliances, 43 orders and 23 vegetation classes.

In Chapter 5, by types of ecosystems, the 270 plant associations were systematized as follows: 58 plant associations represent aquatic and marsh vegetation, 86 plant associations were assigned to meadow vegetation (wet) grasslands, halophilic grasslands with 22 plant associations, steppe (dry) grasslands with 24 plant associations, natural forest vegetation (woody) represented by 51 plant associations, anthropogenic forest vegetation with 5 plant associations, while anthropogenic herbaceous vegetation is defined by a number of 73 plant associations.

The most consistent part of the work is dedicated, naturally, to the synthetic description of each coenotaxon, with clear, unequivocal justifications for the choice of certain names, and, what is very important, with the highlighting of the species characteristic of each one (a laborious work, which requires a deep critical approach, but so necessary for those who will use this study in the future).

The chorological data of each plant association are also important, so that the paper proves useful, in addition to the theoretical aspect, of problematization, but also as part of the foundation of the coenotaxonomic system adopted by the author, to emphasize the practical aspects for establishing the current conservation areas or possible other protected areas in the future.

The author included numerous colour photographs of some phytocoenoses, which argues the multiple valences of this work.

Even more important are the direct personal contributions, by including in the text the work of a significant number of coenotaxa described by the author himself, phytocoenotaxa new to science or called “de novo” by others (e.g. the association *Cotino-Quercetum roboris* (Borza 1937) nom. novum h. l., on page 251).

Including, with the appropriate citation, of some coenotaxa proposed/ validated by science, by contemporary authors/ phytosociologists (e.g. P. Pânzaru, V. Cantemir, Belous, A. Ruschuk, Smetana, etc.), gives a plus of relevance and even modernity to the present work.

In Chapter 6, Vegetation map, for geobotanical region, the author benefited from the highly professional support of the forestry engineer, Dr. N. Doniță, an illustrious researcher of the vegetation of Romania. Therefore, we appreciate that the floristic and geobotanical regionalisation of the vegetation of the Republic of Moldova was made on objective bases, correctly scientifically argued. Each vegetation area/ floor is described in detail and supported by the presence of certain coenotaxa (vegetation classes) or idiotaxa (plant species). The map inserted on page 271 is particularly useful for future vegetation studies, at the level of detail, aimed at a judicious conservation of the plant resources of the Republic of Moldova.

For the vegetation zonation, the features of the natural framework were taken into account, with the reflection of climatic influences, geology and pedology, anthropogenic factors, etc..

The author summarizes those plant groups that imprint the defining nuances of each floor, region, subregion, microregion of vegetation, noting also some nomenclatural novelties adopted in this paper (e.g. the micro-exhibition of the sessile oak forest ..., page 279).

The map on page 283 faithfully depicts the zoning and stratification of the natural vegetation of the Republic of Moldova, the chosen colors making it easy to identify each unit.

In Chapter 7, *In situ* and *ex situ* conservation of plant diversity, the author reviews the aspects of conservation of plant species on the territory of the Republic of Moldova, highlighting those included in the Red Book (in the 5 editions).

Also of great value is the map of the distribution of rare species in the territory (page 325), a map that has become a useful tool for popularizing in schools, town halls, forestry units, etc., the intrinsic value of the conservation of the country's natural heritage, a map that has been distributed in the relevant institutions in Romania, since its appearance in Chişinău.

In Chapter 8, Protected natural areas in Republic of Moldova, protected nature reserves are presented, with their comprehensive description, by legislated categories, such as: a) national parks, b) biosphere reserves, c) scientific reserves, d) forest nature reserves, e) landscape reserves on stony substrates, and f) areas with multifunctional management, etc.

In Chapter 9, Natural and anthropogenic impacts, the evolution and dynamics of flora and vegetation in forests, grasslands, meadows, aquatic vegetation and marshes are presented, as well as the measures adopted by the national authorities regarding the protection of all these types of vegetation, but also of plant species threatened with extinction in the Republic of Moldova.

In conclusion, I state that the present work has a monographic character, being a work with a high scientific content, corresponding to the current state of knowledge of the country's vegetation carpet, with an obvious integrative character of the older scientific literature with the newest one, from the last decades, with the application of the current methodology of studying European vegetation, the author thus crowning the scientific accumulations "of a lifetime". We believe that this scientific work will become a landmark both for the students of the faculties in the field, and for the public interested in nature, in the most comprehensive sense of this term, but especially for the state, central or local authorities, with decision-making power, who can and must develop norms, laws, methodologies, etc. for responsible conservation, in the long term, of the natural heritage of the Republic of Moldova.

I congratulate Mr. Gheorghe Postolache and wish him good health and inspiration in the future studies he will undertake and in the scientific works he will publish.

Iasi,

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