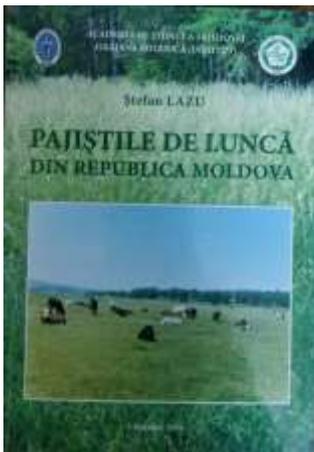


BOOK REVIEW



RIVERSIDE MEADOW FROM MOLDAVIAN REPUBLIC

by PhD biol. LAZU Ștefan

Review made by **PhD proff. IOAN ROTAR**

Taking part to the annual reunion of The Romanian Society for Grassland organized in Brasov I meet Mr. Phd.biol. Ștefan LAZU from Chisinau which gave me as gift a wonderfull book entitled “Riverside meadows from Moldavian Republic”. I was delighted to receive this gift, especially because I knew little about the natural grasslands from Moldavia and what I knew were general information acquired during the visits made in the last decade in Bessarabia. The book mentioned is divided into 11 chapters, the last two being reserved for conclusions and recommendations.

Chapter 1 is reserved for a complete presentation of the grasslands from Moldavia, information accorded to the cadastre from the year 2007. According to this paper in Bessarabia natural grasslands occupy 15.1% of the total agricultural land, having in general a low productivity of 25 q/ha DM in riverside meadows and of only 5 q/ha DM in hilly regions. The low productivity is the result of several reasons, some of them being mentioned by the author: occupy degraded land that could not be used as arable land, does not benefit from a properly management animal- grassland, they don't have a proper fertilization system etc. As a result of this situation the author proposes in this paper a study of meadows in Bessarabia, including a description of flora where the author highluights the species included in the red list of species, identifies the indicator species but also the invasive ones and establishes some management measures meant to improve the situation of these meadows.

Chapter 2 presents the natural conditions of Moldavian Republic being described the main geomorphological structure and issues related to climate and soils. We note that the author is not confined to a descriptive statement of the relief, seeking to capture the factors that led to their formation by describing factors of tectonic and exogenous order which are considered to be essential in shaping the geomorphological structure of Bessarabia.

For vegetation studies Braun method has been used, analyzing the surveys for vegetation differentiation and recording parameters concerning the structure (natural setting, height), registering some phytocenotic parameters such as stratification, overall coverage, abundance-dominant species, frequency-consistency, sociability, vitality etc.

A chronological sequence of the references studied is presented in *Chapter 3* which highlights the works of some Russian and Romanian researchers who studied the flora of Bessarabia with special focus on the meadows. The author notes the major changes that have occurred in the vegetation of meadows from Bessarabia mainly due to anthropization, such that some species which were dominant like *Lepidium crassifolium* or some species representative for wetlands reduced their participation or are lacking (*Chapter 5*). However some authors which dealt with the taxonomy of lowland meadows from Bessarabia region identified 478 species of vascular plants in the years 1988-2000 but today there are only 881 vascular plant species belonging to 376 genera and 72 families, the most common being from *Asteraceae* and *Poaceae* families. Elemental analysis shows that the first place is occupied by the Eurasian with 48.09% followed by 9.4% European, Central European and circumpolar 6.7% but with an important share of 10% and 13.5% by southern %. The structure of flora from meadows relies that hemicryptophytes species are dominant with a share of 46.3%, followed by terofite with 32.3%, hemiterofite with 6.1% etc. The author highlights a strong anthropogenic influence on the meadows from Bessarabia and proposes a management for the grassy carpet meant to allow the recovery of the original's parameters. Given the necessity of ecological reconstruction of meadows from Bessarabia degraded particularly because of the plan grubbing meadows applied in the last century, in the sixth decade, a number of species adapted to floodplain in order to remake the phytodiversity and obtain forage quality and in sufficient quantities (*Chapter 6*). Data concerning the content of cations and anions of meadow soils and the content in the main elements of different species of meadow are equally valuable for practitioners they also demonstrating the hard work by the author.

The presentation of phytocenosis made in *Chapter 7* is made in close correlation with the climatic conditions, with the content of soil in salty elements etc. It stresses that floodplain grasslands intensively exploited for a long period by grazing, mowing, collecting herbs, technical, food, led to the degradation of

„climax balance" situation which allowed the installation of ruderal plant species, not quite often leading to the emergence of synanthropic phytocenosis.

Thus if alongside the anthropic influence we take into account the global warming we notice that meadow grassland ecosystems will be affected by the installation habitats of plants and restricting the ability subtermale mezotermofitelor and microtermofitelor, due to changes in habitat conditions.

In *Chapter 8* a number of issues concerning the floodplain meadows taken under state protection are described, in *Chapter 9* the renaturalising aspects thru ecological reconstruction of meadows are presented and *Chapter 10* is reserved for some of the most important conclusions.

From our brief analysis there are some ideas that we want to point out in the end:

✚ First we would like to emphasize that the study entitled „Riverside meadows from Moldavian Republic" is a valuable scientific work which demonstrates a in-depth knowledge of the topic dealed by the author and his great ability to synthesize ideas and equally to give practical reccomendations.

✚ Secondly this work is deeply rooted in the literature being quoted those researchers which studied the grasslands from Bessarabia.

✚ Thirdly the author performs an analyse of the dynamics of riverside meadows in closely correlation with the environmental factors but also to the anthropogenic factors and of climate, aspects which allows him to draw relevant conclusions equally valuable to scientific work but also for those who manage fragile ecosystems capable to respond to any outside stimul.

✚ We salut the emergence of this work which we consider representative for grassland science from Moldavia and Romania, a work of an outstanding professionalist and we warmly recommend this book not only to researchers from Romania and Moldavia but also to all those interested in grasslands science.