

Sorin GEACU, 2021. *Teriofauna din sud-estul Moldovei. Condiții de mediu, populații, răspândire, impact antropic (The Teriofauna of South-eastern Moldavia. Environmental Conditions, Populations, Spread, Anthropic Impact)*. Romanian Academy Publishing House, Bucharest. 239 pages, 101 figures, 53 tables, 319 bibliographical references, summary in English. Preface by Acad. Dumitru Murariu.

The paper is an extensive contribution to the study of mammal fauna in Romania, in a region understudied in this respect, but interesting from a zoogeographical point of view, located at the contact between steppe and forest-steppe areas and mesoxerophilous and mesophilous deciduous forests, which is reflected in the complex character of the faunal composition. The paper is based on extensive field research, in addition to information provided by forestry staff, hunters and locals, as well as information taken from Forestry Office archives and other sources of documentation. A special merit of the author is their openness to work with people with a lot of experience in forestry and hunting, which substantially fill in the perspective over the structure and dynamics of mammal fauna within the researched area, which is quite difficult to consistently follow in all its complexity. Additionally, the laborious research of the rich documentary material from the archives of forestry offices and other institutions with responsibilities in the field of wildlife, as well as the study of an extensive bibliography, led to obtaining valuable additional information on various aspects concerning the relationship between animal populations and environmental factors, or with anthropic actions, as they developed over time, since the first part of the 20th century and in some cases since even more distant times. The author's special ability stands out, that of correlating and integrating a multitude of informative data into an overarching perspective based on both solid zoological knowledge and a geographical, spatial-temporal interpretation.

The author highlights the role of natural factors in the current distribution of mammal species, as well as the strong anthropogenic influences, both indirect, caused by the anthropogenic change in landscape and the various agricultural practices, and direct, caused by actions on wildlife, hunting or combating species deemed to be harmful on the one hand and, on the other hand, through colonization, the provision of food for game animals and other protective measures. In the case of large herds (the hare, the red fox, the wild boar, the roe deer), a number of animals were also extracted, to be removed to other areas.

The most substantial part of the book is the presentation, in a systematic order, of each species. These presentations indicate the bio-ecological characteristics

and the geographical dissemination or, for rare species, observational data (often the places where the species are reported are also shown on the map of the region). For the more abundant species, the living and hunted numbers are also added and sometimes, for the species better known by the locals, even the toponyms that attest to the presence of the species at various points in more distant times. For some species (e.g., the hare, the common hamster, the common mouse, the Asiatic jackal), the damage they inflict is also included. For the species that are of hunting interest, yearly tables are presented, comprising the number of hunted specimens. In particular, the situation of the fallow deer is under analysis, a species introduced to the region, which has fluctuated greatly in numbers and areas it occupies. The roe deer has also seen a sharp decline in numbers in the first half of the 20th century, followed by repopulation and expansion of its living area, and subsequently by a further decline of the area and large fluctuations in numbers, both due to anthropogenic pressure and to natural causes (droughts, heavy snowfall, very low temperatures, floods). Among the species that have recently appeared in the Romanian fauna through spontaneous expansion are the muskrat, the raccoon dog and the jackal. The author analysed in detail the way they entered the region and expanded their area, as well as the numerical fluctuations of the general population.

Another chapter contains detailed and well-documented information on various mammals that have disappeared from the region under investigation or that have randomly appeared. Ever since the 19th century, most reports refer to the large number of wolves, that caused damage and against which substantial control measures were taken. Subsequently, as a result of intense counter-measures, their numbers decreased to the point of becoming extinct from the constant fauna. Currently, only sporadic specimens from outside the region are to be found. The occasional intrusion of the elk, the red deer, and the European mink is also analysed.

Yet another chapter is dedicated to the mammals that inhabited the region during the Pliocene and Pleistocene, known due to the discovery of fossil bones in natural openings, loessoid deposits or in the terraces of rivers that flow through the region. The presentation of the Holocene paleofauna is also conveyed, largely based on the remains discovered following archaeological research, highlighting the high frequency of macromammals in the forest biotope, which indicates a greater expansion of the forest in past historical eras. The chapter on the protection of the teriofauna mentions the various normative acts by which a series of mammals are protected, given that they hold the status of vulnerable, endangered or even critically endangered species.

The conclusions are quite significant, as they highlight the causes that determine the dynamics of mammal populations, and can provide valuable guidance on the best possibilities for the protection of species of zoogeographic interest and management of species that may become a danger to the balance of natural biocenoses or may even impact economic activities. Thus, a number of species that are in decline are mentioned, alongside the "population explosions" of various

rodent species, as well as the effects of the expansion of non-native species such as the jackal or the muskrat. The effects of restricting the physical range of some species are also highlighted, sometimes leading to a vulnerability to the point of extinction. The lack of connectivity between some areas (the case of the pine marten) can also have a negative impact on genetic diversity. So, in addition to the valuable theoretical and zoogeographical contribution, the work of Dr. Sorin Geacu is also of practical interest for all those who concern themselves with the implementation of effective actions to protect both the biocenoses, and nature as a whole.

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