

THE ASSESSMENT OF VERTEBRATE FAUNA FROM NEAMȚ DISTRICT NATURAL RESERVES WITH CONSERVATIONAL ASPECTS

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This paper presents the situation of the Neamț District natural reserves, from the vertebrates' point of view. The investigation of 11 natural reserves showed 287 vertebrate species. Among them, 23 are comprised in the W.C.M.C Red List for Romania.

Introduction

The regional faunal studies were often proved to be of a great importance. Such studies were carried out for Ceahlău Mountains and for Bistrița River Drainage Basin, focusing on the geographical location of certain species [2].

Our study aims to present, not only the vertebrates' fauna from the Neamț District natural reserves, but also, to emphasise the presence of some red list-contained species.

Material and Methods

Our investigations spanned one year, 1999. During this time, we had probed 11 natural reserves from Neamț District: Ceahlău Mountain, Dumbrava Roșie, Dealul Vulpii, Bâta Scroafei, Pârâul cu Brazi – Pângărați, Pădurea Goșman, Pădurea Vânători-Neamț, Pădurea de Aramă, Pădurea de Argint, Peștera Toșorog, Nemțișor Schitul Icoana – Dealul Jacote.

The most utilised field method was direct observation and line-transect. The data were compared with the ones from the literature for a better accuracy.

For comparison, we used the Red List for Romania given by W.C.M.C (World Conservation Monitoring Centre). This list is a database ordered according to I.U.C.N.N. (International Union of Conservation of Nature and Natural Resources) criteria.

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Results and Discussion

The results of data processing showed that the vertebrate fauna of Neamț District natural reserves contains 287 species belonging to 82 families, 34 orders and 6 classes. The best-represented class is Aves, with 17 orders and 47 families, followed in descending order by Mammalia, Osteichthyes, Amphibia, Reptilia, and Cyclostomata (Table 1.).

We processed these data according to the Red List for Romania after W.C.M.C. The I.U.C.N.N. sorting criteria are extinct (EX), extinct in the wild (EW), critically endangered (CR), endangered (EN), vulnerable (VU), lower risk (LR), and deficient data (DD). According to the Red List for Romania, the terrestrial vertebrates fall into the following categories: CR - 2 species, VU - 25 species, EN - 3 species, LR - 27 species, and DD - 2 species (Table 2.).

Among our records, we found 23 species, which are included on the Red list for Romania:

- Cl. Cyclostomata
 - Ord. Petromysoniformes
 - Fam. Petromysontidae
 - *Eudontomyzon danfordi* - LR;
- Cl. Osteichthyes
 - Ord. Acipenseriformes
 - Fam. Acipenseridae
 - *Acipenser ruthenus*) - VU, introduced in Bicaz Accumulation Lake in 1966;
 - Ord. Clupeiformes
 - Fam. Salmonidae
 - *Hucho hucho* - EN;
 - *Coregonus lavaretus* - DD;
 - Ord. Cypriniformes
 - Fam. Cyprinidae
 - *Carassius carassius* - LR;
 - *Cyprinus carpio* - CR;
 - *Aspius aspius* - DD;
 - *Gobio kessleri* - DD;
 - *Gobio uranoscopus* - DD;
 - Cl. Amphibia
 - Ord. Caudata
 - Fam. Salamandridae
 - *Triturus cristatus* - LR;
 - Ord. Anura
 - Fam. Hylidae
 - *Hyla arborea* - LR;
 - Cl. Reptilia
 - Ord. Testudines

- Fam. Emydidae
 - *Emys orbicularis* – LR;
- Cl. Aves
 - Ord. Anseriformes
 - Fam. Anatidae
 - *Aythya nyroca* – VU;
 - Ord. Falconiformes
 - Fam. Accipitridae
 - *Circus macrourus* – LR;
 - Ord. Gruiformes
 - Fam. Rallidae
 - *Crex crex* – VU;
- Cl. Mammalia
 - Ord. Artiodactyla
 - Fam. Bovidae
 - *Bison bonasus* – EN (regarding its status, we must add that this species exists only in Tg. Neamț natural reserve; thus it must be considered as extinct in wild, for Romania, at least);
 - Ord. Rodentia
 - Fam. Sciuridae
 - *Sciurus vulgaris* – LR;
 - Fam. Dipodidae
 - *Sicista betulina* – LR;
 - Fam. Muridae
 - *Chionomys nivalis* – LR;
 - *Mus spicilegus* – LR;
 - Fam. Myoxidae
 - *Dryomys nitedula* – LR;
 - *Myoxus glis* – LR.
 - Ord. Chiroptera
 - Fam. Rhinolophidae
 - *Rhinolophus hipposideros* – VU;
 - Fam. Vespertilionidae
 - *Myotis myotis* – LR;

The comparison between the total number of found species from each class and the number of species contained in the red list, from each class, is rendered in Table 3.

As it can be seen, most of the local species fall into the low risk category. This means, that after approximately 5 years, they can evolve in such manner that will result in the taxon qualifying for an endangered category. Regarding the vulnerable species, they can disappear in the wild within a few decades.

Due to unknown reasons, some huntable species with small populations do not appear in the W.C.M.C. Red List for Romania. Therefore, this kind of species must be monitored in the future.

Conclusions

In conclusion, we may say that Neamț District natural reserves contain many species, which are monitored on a global scale. Therefore, it is necessary for this species to become subject for further studies. Such studies could support the updating of the national red list and the proper environmental policy adoption if the situation of these species become critical.

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Table 1.

CLASS	ORDERS	FAMILIES	SPECIES
CYCLOSTOMATA	1	1	1
OSTEICHTHYES	5	7	22
AMPHIBIA	2	5	12
REPTILIA	3	5	10
AVES	17	47	198
MAMMALIA	6	17	44
TOTAL	34	82	287

Table 2.

ORDER	No. of species	CR	VU	EN	LR	DD
CHIROPTERA	13		7		6	
CARNIVORA	2		1	1		
ARTIODACTYLA	1			1		
RODENTIA	16		6		10	
PELECANIFORMES	2		1		1	
ANSERIFORMES	4		4			
FALCONIFORMES	5		3		2	
GRUIFORMES	3		2		1	
CHARADRIIFORMES	3	1			2	
PASSERIFORMES	1					1
SERPENTES	2	1		1		
TESTUDINES	3		1		2	
ANURA	2				2	
CAUDATA	2				1	1
PERCIFORMES	13	1	2			10
CYPRINIFORMES	12	1			2	9
SALMONIFORMES	3		1	1		1
ACIPENSERIFORMES	6	2	1	3		
CYCLOSTOMATA	3				2	1
TOTAL	96	6	29	7	31	23

Table 3.

CLASS	No. of records	No. of red list species
CYCLOSTOMATA	1	1
TELEOSTEI	22	6
AMPHIBIA	12	2
REPTILIA	10	1
AVES	198	3
MAMMALIA	44	10
TOTAL	287	23