

Preliminary Information on the Vertebrate Fauna (Animalia: Vertebrata) of the NATURA2000 Site "Rice Fields Tsalapitsa" (Bulgaria)

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Abstract. The study was carried out by tree visits in different areas of the Natura 2000 site "Rice Fields Tsalapitsa" BG 0002086 (West of Plovdiv city, near village of Tsalapitsa). Our preliminary research showed that in the area vertebrates with high conservation status occurred included in the Bulgarian Biodiversity Act, Appendix II and III, Appendix II of the Bern convention, Natura 2000 species list, the Bonn convention, Appendix II, the Convention of the International Trade of Endangered Species, and the list of the International Union for Conservation of the Nature. This information will help in future preparation of the management plan of the Natura 2000 site and showed the need of studies focused on such areas which will help undertaking adequate measures for their proper way of conservation.

Key words: Natura 2000, rice fields, Amphibia, Reptilia, Aves, Mammalia

Introduction

In the more and more rising problem with the water resources on Earth more attention is paid on the anthropogenic wetland habitats. Some of them are considered as a high priority for conservation holding a specific and rich biological diversity. In spite of that in Bulgaria there were no studies focused exactly on the rice fields and their fauna and flora, but in the mean time such habitats were determined by some foreign authors as very important for a variety of vertebrate animals (TRÉCA, 1992, FUJIOCA *et al.*, 2004).

In this paper we represent first data on the species diversity of vertebrate animals and their conservation status in the rice fields "Tsalapitsa" in Bulgaria.

Materials and methods

The study was carried out by tree visits on 17 and 18.06.2010 in different areas of the NATURA 2000 site "Rice Fields Tsalapitsa" BG 0002086 (West of Plovdiv city, near village of Tsalapitsa).

Most of the species were registered by direct observations (using binoculars), and some by their tracks and signs (as excrements and pellets). The small mammals (insectivores and rodents) were registered by analyzing pellet contents of Barn Owl (*Tyto alba* Mill.) collected in the region. These species we consider as "possibly inhabiting the area", because of the specifications of the behaviour and the size of the hunting territory of these owls.

The habitats where the species were registered were also noted down: 1. water basins with rice (*Oryza sativa*), 2. canals with rush (*Typha* sp.), 3. maize (*Zea mays*) crops, 4. dykes with grass vegetation and single trees, and 5. undetermined habitat (for the small mammals found in owl pellets).

Results and Discussion

During our visits of NATURA 2000 site "Rice Fields Tsalapitsa" in June 2010 we have registered 52 species of vertebrate animals: 3 amphibian species, 2 reptiles, 37 birds, and 10 mammals (Table 1 and 2).

According to their conservation status the species included in the Bulgarian Biodiversity Act, Appendix III, strictly protected species predominated (34), followed by those in Appendix II of the Bern convention (29). The NATURA 2000 species of priority were 19, and those with habitats with a priority for conservation (Bulgarian Biodiversity Act, Appendix II) were 14. The species included in the Bonn convention were from Appendix II - 13 species. Relatively small number of species figured in the Convention of the International Trade of Endangered Species (CITES) - 6 species. In the list of the International Union for Conservation of the Nature (IUCN) 2 species were registered and 6 species in the area were without any conservation status.

In the study area we registered breeding of 19 bird species (Table 1), some of them with high conservation status as *Glareola pratincola* and *Himantopus himantopus*. For some other birds the rice

fields was an important feeding site like *Ciconia nigra*, *Ciconia ciconia*, *Nycticorax nycticorax*, *Ardea cinerea*, and *Egretta garzetta*.

Conclusions

Our preliminary research showed that in the area of the NATURA 2000 site "Rice Fields Tsalapitsa" BG 0002086 vertebrates having high conservation status occurred included in the Bulgarian Biodiversity Act, Appendix II and III, Appendix II of the Bern convention, NATURA 2000 species, the Bonn convention, Appendix II, the Convention of the International Trade of Endangered Species, and the list of the International Union for Conservation of the Nature.

This information will help in future preparation of the management plan of the NATURA 2000 site and showed the need of studies focused on such areas which will help undertaking adequate measures for their proper way of conservation.

References

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Table 1. List of the bird species registered in the Natura 2000 site “Rice Fields Tsalapitsa” BG 0002086. Abbreviations and habitat numbers were explained in the text.

Species	Biodiversity Act	IUCN red list	BERN	BONN	CITES	Natura 2000	Habitat	Breeding in the region
Aves								
<i>Ixobrychus minutus</i> Linnaeus,1766	II, III		II	II		*	2	yes
<i>Nycticorax nycticorax</i> Linnaeus,1758	II, III		II			*	1	no
<i>Egretta garzetta</i> Linnaeus,1766	II, III		II			*	1	no
<i>Ardea cinerea</i> Linnaeus,1758	III		III			*	1	no
<i>Ciconia ciconia</i> Linnaeus,1758	II, III		II	II		*	1, 2, 3	no
<i>Ciconia nigra</i> Linnaeus,1758	II, III		II	II	II	*	1, 3	no
<i>Anas platyrhynchos</i> Linnaeus,1758			III				1	?
<i>Circus aeruginosus</i> Linnaeus,1758	III		II	II		*	2	?
<i>Buteo buteo</i> Linnaeus,1758	II, III		II	II	II	*	5	no
<i>Falco tinnunculus</i> Linnaeus,1758	III		II	II	II	*	5	?
<i>Perdix perdix</i> Linnaeus,1758			III				4	?
<i>Gallinula chloropus</i> Linnaeus,1758	III		III			*	1, 2	yes
<i>Himantopus himantopus</i> Linnaeus,1758	III		II	II		*	1, 3	yes
<i>Glareola pratincola</i> Linnaeus,1766	II, III		II	II		*	1, 3	yes
<i>Vanellus vanellus</i> Linnaeus,1758	III		III	II		*	1, 3	yes
<i>Tringa ochropus</i> Linnaeus,1758	III		II	II		*	1, 3	?
<i>Larus cachinans</i> Pallas,1811			III			*	1, 5	no
<i>Cuculus canorus</i> Linnaeus,1758	III		III				2, 4	yes
<i>Tyto alba</i> Scopoli,1769	III		II		II		4	?
<i>Athene noctua</i> Scopoli,1769	III		II		II		4	yes
<i>Alcedo atthis</i> Linnaeus,1758	II, III		II			*	1	?
<i>Upupa epops</i> Linnaeus,1758	III		II				4	?
<i>Alauda arvensis</i> Linnaeus,1758	III		III				3, 5	yes
<i>Galerida cristata</i> Linnaeus,1758	III		III				3, 5	yes
<i>Hirundo rustica</i> Linnaeus,1758	III		II				1, 2, 3	yes
<i>Motacilla flava</i> Linnaeus,1758	III		II				1, 2, 3	yes
<i>Luscinia megarhynchos</i> Brehm,1831	III		II	II			4	yes
<i>Acrocephalus arundinaceus</i> Linnaeus,1758	III		II	II			2	yes
<i>Hippolais pallida</i> Hemprich & Ehrenberg,1833	III		II	II			4	yes
<i>Lanius minor</i> Gmelin,1788	II, III		II			*	4	yes
<i>Pica pica</i> Linnaeus,1758			III				2, 3, 4	yes
<i>Corvus corone</i> Linnaeus,1758							3, 5	?
<i>Sturnus vulgaris</i> Linnaeus,1758			III				4, 5	?
<i>Passer hispaniolensis</i> Temminck,1820	III		III				4	yes
<i>Carduelis carduelis</i> Linnaeus,1758	III		II				4, 5	?
<i>Emberiza calandra</i> Linnaeus,1758	II, III		II				3, 4	yes
<i>Emberiza melanocephala</i> Scopoli,1769	III		II				4	yes

Table 2. List of the bird species registered in the Natura 2000 site “Rice Fields Tsalapitsa” BG 0002086. Abbreviations and habitat numbers were explained in the text. With grey color were marked the species found only in pellets of Barn Owl (*Tyto alba*) and considered as “possibly inhabiting the area”.

Species	Biodiversity Act	IUCN red list	BERN	BONN	CITES	Natura 2000	Habitat
Amphibia							
<i>Bombina bombina</i> Linnaeus, 1761	II		II			*	1
<i>Rana ridibunda</i> Pallas, 1771							1, 2, 4
<i>Hyla arborea</i> Linnaeus, 1758	II, III	*	II				2
Reptilia							
<i>Podarcis taurica</i>			II				4
<i>Lacerta trilineata</i>			II				4
Mammalia							
<i>Crocidura leucodon</i> (Hermann, 1780)			III				5
<i>Neomys anomalus</i> Cabrera, 1907			III				5
<i>Mustela nivalis</i> Linnaeus, 1766	III		III				4
<i>Lutra lutra</i> Linnaeus, 1758	II, III	*	II		I	*	1, 2
<i>Vulpes vulpes</i> Linnaeus, 1758							3
<i>Lepus europeus</i> Pallas, 1778			III				3
<i>Myocastor coypus</i> (Molina, 1782)							1, 2
<i>Mus musculus</i> Linnaeus, 1758							5
<i>Arvicola terrestris</i> (Linnaeus, 1758)							2
<i>Microtus arvalis</i> (Pallas, 1778) - complex							5