



RARE, VULNERABLE, ENDANGERED, AND PROTECTED BIRDS OBSERVED IN THE PARKS AND GARDENS OF CRAIOVA MUNICIPALITY

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SYNOPSIS

This work presents the bird species observed during the past 5 years in Craiova, which are registered as protected by some local or/and international legislations. This work specifies the general statute of conservation for each observed species. The purpose is to draw attention to certain species of great importance, which nesting, go through a passage period or remain sedentary in the studied habitat.

Of the 119 species, which have been monitored in the parks and gardens of Craiova, 97 are found on different national, European, and international lists of protected species. I have observed 28 species, which belong to one of the following categories: vulnerable, endangered, declining, rare and localized. *Aythya nyroca*, observed in its habitat, is a globally endangered species; it is on the global list of conservation.

INTRODUCTION

Presently, the global biodiversity is declining and the correct protection measures are difficult to apply.

From the ornithological point of view, the urban ecosystem cannot be neglected, as it is quite different as compared to the other ecosystems. Within cities, the public parks, the pleasure places or the green areas located in the districts became habitat of many species of birds. The anthropophilous birds found here favourable life conditions: safety for nesting, great feeding opportunities, shelter during bad weather.

Covering a surface of 6,676 hectares, Craiova is one of the largest cities of Romania. It is located in the South of the country, on the left bank of the Jiu River, at 44° 3' northern latitude and 21° 2' eastern longitude, at an altitude oscillating between 75 and 116 meters. The observations of the birds (Bălescu, 2003-2007) were performed in one of the following main places: Romanescu Park, "Alexandru Buia" Botanical Garden, Craiovița Lake and Park, Lunca Jiului Park, different green areas, public gardens, different districts such as Mofleni District with its peripheral puddles Șerca and Mofleni.

The protection of birds represents an issue of present interest, which concerns the competent forums. The methods of bird protection in their habitats have been differently interpreted by the national and international forums.

MATERIALS AND METHODS

In the achievement of the present paper, there was consulted a bibliographical material referring to the status of the birds from our country (Botnariuc & Tatole, 2005; Munteanu, 2004; Law of hunting and cinegetic fund no. 407/2006; Urgent Decree no. 57/2007), as well as some papers about the conservation of birds and habitats in Europe (Hagemeijer & Blair, 1997; Tucker, 1994, 1997; Birds Directive no. 79/409 EEC; Habitats Directive no 92/43 EEC). For the identification of the birds, there were used Bruun (1999) and Peterson (1984) guides for determining species.

RESULTS AND DISCUSSIONS

In the Red Book of the vertebrates from Romania (Botnariuc and Tatole, 2005), there appears an official red list with 72 birds' species, which represents an instrument of the strategies of the environment preservation at a national level. The status of each species was established on the basis of the criteria elaborated by UICN.

The Romanian legislation, when elaborating Law 407/2006 and the Urgent Decree no 57/2007, took into account two important European directives: Birds Directive 79/409 EEC on the conservation of wild birds and Habitats Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna.

Presently, we accept the criteria of the European Union regarding the conservation of species and habitats. In order to establish the vulnerability degree of the birds' species, there was elaborated the SPEC categories. It was taken into account the size of the European populations and the recent numerical and territorial decline as compared to the global situation. The species presenting a conservative concern at the European level (SPEC) were established by BirdLife International (Tucker and Heath, 1994). There were defined four SPEC categories, numbered from 1 to 4. Only SPEC 1 category comprises species of global conservative concern. The other categories comprise species that are not of global conservative concern.

Starting from the above mentioned issues (The Red Book of the Vertebrates from Romania, Law 407/2006, Urgent Decree 57/2007, SPEC categories), in table 1, there are rendered the endangerment categories for the species monitored in the parks and gardens of Craiova in the last five years (2003-2007). There were observed 119 species of birds with a certain phenology.

Table 1. Endangered, vulnerable, rare and protected species of birds observed in Craiova, which are found on different national and international protection lists

Code Eurying	Species	Phenological status	SPEC category	Conservation status	R.B.V.R status	Law no 407/2006	U.D. 57/2007
00070	<i>Tachybaptus ruficollis</i>	SV, RW		S		*	Annex 4B
00090	<i>Podiceps cristatus</i>	SV, P		S		*	
00120	<i>Podiceps nigricollis</i>	P, RW		S		*	
00720	<i>Phalacrocorax carbo</i>	P		S			
00820	<i>Phalacrocorax pygmaeus</i>	P, RW	SPEC 2	V	V	*	Annex 3
00980	<i>Ixobrychus minutus</i>	SV	SPEC 3	(V)		*	Annex 3
01040	<i>Nycticorax nycticorax</i>	SV	SPEC 3	D	V	*	Annex 3
01080	<i>Ardeola ralloides</i>	P	SPEC 3	V	V	*	Annex 3
01190	<i>Egretta garzetta</i>	SV		S	P	*	Annex 3
01210	<i>Egretta alba</i>	SV, RW		S	P	*	Annex 3
01220	<i>Ardea cinerea</i>	SV, RW		S		*	
01240	<i>Ardea purpurea</i>	P	SPEC 3	V	P	*	Annex 3
01340	<i>Ciconia ciconia</i>	P	SPEC 2	V	V	*	Annex 3
01520	<i>Cygnus olor</i>	P, RW		S		*	
01840	<i>Anas crecca</i>	P, RW		S			
01860	<i>Anas platyrhynchos</i>	PM		S			
01910	<i>Anas querquedula</i>	P, OV	SPEC 3	V			
01940	<i>Anas clypeata</i>	P		S			
01980	<i>Aythya ferina</i>	SV	SPEC 4	S			
02020	<i>Aythya nyroca</i>	SV, P	SPEC 1	V	V	*	Annex 3
02310	<i>Pernis apivorus</i>	SV	SPEC 4	S	V	*	Annex 3
02600	<i>Circus aeruginosus</i>	SV		S		*	Annex 3
02670	<i>Accipiter gentilis</i>	AC		S		*	
02690	<i>Accipiter nisus</i>	SV, RW		S		*	
02730	<i>Accipiter brevipes</i>	SV	SPEC 2	R	V	*	Annex 3
02870	<i>Buteo buteo</i>	AC		S		*	
03040	<i>Falco tinnunculus</i>	SV	SPEC 3	D		*	Annex 4B
03100	<i>Falco subbuteo</i>	SV		S		*	Annex 4B
03940	<i>Phasianus colchicus</i>	R		S			
04240	<i>Gallinula chloropus</i>	PM		S			
04290	<i>Fulica atra</i>	PM		S			
04550	<i>Himantopus himantopus</i>	OV		S	P	*	Annex 3
04560	<i>Recurvirostra avosetta</i>	P	SPEC 4/3	L	V	*	Annex 3
04690	<i>Charadrius dubius</i>	P		S		*	

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04930	<i>Vanellus vanellus</i>	SV		S		*	
05010	<i>Calidris minuta</i>	P		S		*	
	<i>Tringa sp.</i>	P		S		*	
05820	<i>Larus ridibundus</i>	R		S		*	
05910	<i>Larus fuscus</i>	P	SPEC 4	S		*	
05927	<i>Larus cachinnans</i>	R		S		*	
06260	<i>Chlidonias hybridus</i>	SV, P	SPEC 3	D		*	Annex 3
06270	<i>Chlidonias niger</i>	P, SV	SPEC 3	D		*	Annex 3
06651	<i>Columba livia domestica</i>	R		S			
06700	<i>Columba palumbus</i>	WV	SPEC 4	S			
06840	<i>Streptopelia decaocto</i>	R		S			
07240	<i>Cuculus canorus</i>	P, SV		S		*	
07950	<i>Apus apus</i>	SV		S		*	
08310	<i>Alcedo atthis</i>	WV, P	SPEC 3	D		*	Annex 3
08410	<i>Coracias garrulus</i>	SV	SPEC 2	(D)		*	Annex 3
08460	<i>Upupa epops</i>	P		S	V	*	Annex 4B
08560	<i>Picus viridis</i>	R	SPEC 2	D		*	Annex 4B
08630	<i>Dryocopus martius</i>	WV		S		*	Annex 3
08760	<i>Dendrocopos major</i>	R		S		*	
08780	<i>Dendrocopos syriacus</i>	R	SPEC 4	(S)		*	Annex 3
08830	<i>Dendrocopos medius</i>	R	SPEC 4	S		*	Annex 3
08870	<i>Dendrocopos minor</i>	R		S		*	
09720	<i>Galerida cristata</i>	R	SPEC 3	(D)		*	
09920	<i>Hirundo rustica</i>	SV	SPEC 3	D		*	
10010	<i>Delichon urbica</i>	SV		S		*	
10090	<i>Anthus trivialis</i>	P		S		*	
10110	<i>Anthus pratensis</i>	P	SPEC 4	S		*	
10170	<i>Motacilla flava</i>	SV		S		*	Annex 4B
10190	<i>Motacilla cinerea</i>	WV		(S)		*	Annex 4B
10200	<i>Motacilla alba</i>	SV, P		S		*	Annex 4B
10660	<i>Troglodytes troglodytes</i>	WV		S		*	
10990	<i>Erithacus rubecula</i>	WV	SPEC 4	S		*	Annex 4B
11040	<i>Luscinia megarhynchos</i>	SV	SPEC 4	(S)		*	
11210	<i>Phoenicurus ochruros</i>	P		S		*	Annex 4B
11370	<i>Saxicola rubetra</i>	P	SPEC 4	S		*	
11390	<i>Saxicola torquata</i>	P	SPEC 3	(D)		*	
11870	<i>Turdus merula</i>	R	SPEC 4	S		*	
11980	<i>Turdus pilaris</i>	WV	SPEC 4	S			
12000	<i>Turdus philomelos</i>	P	SPEC 4	S			
12010	<i>Turdus iliacus</i>	WV	SPEC 4	S			

12020	<i>Turdus viscivorus</i>	AC	SPEC 4	S			
12380	<i>Locustella luscinioides</i>	P	SPEC 4	(S)		*	Annex 4B
12430	<i>Acrocephalus schoenobaenus</i>	SV	SPEC 4	(S)		*	
12500	<i>Acrocephalus palustris</i>	P, SV	SPEC 4	S		*	
12510	<i>Acrocephalus scirpaceus</i>	P, SV	SPEC 4	S		*	
12530	<i>Acrocephalus arundinaceus</i>	SV		S		*	
12550	<i>Hyppolais pallida</i>	P	SPEC 3	(V)		*	
12740	<i>Sylvia curruca</i>	SV, P		S		*	
12750	<i>Sylvia communis</i>	P, SV	SPEC 4	S		*	
12760	<i>Sylvia borin</i>	SV, P	SPEC 4	S		*	
12770	<i>Sylvia atricapilla</i>	SV	SPEC 4	S		*	
13080	<i>Phylloscopus sibilatrix</i>	P	SPEC 4	(S)		*	Annex 4B
13110	<i>Phylloscopus collybita</i>	P		S		*	Annex 4B
13120	<i>Phylloscopus trochilus</i>	P		S		*	Annex 4B
13140	<i>Regulus regulus</i>	P, WV	SPEC 4	(S)		*	Annex 4B
13150	<i>Regulus ignicapillus</i>	P, WV	SPEC 4	S		*	Annex 4B
13350	<i>Muscicapa striata</i>	SV, P	SPEC 3	D		*	Annex 4B
13480	<i>Ficedula albicollis</i>	P	SPEC 4	S		*	Annex 3
13490	<i>Ficedula hypoleuca</i>	P	SPEC 4	S		*	
14370	<i>Aegithalos caudatus</i>	P, RW		S		*	Annex 4B
14620	<i>Parus caeruleus</i>	R	SPEC 4	S		*	
14640	<i>Parus major</i>	R		S		*	
14790	<i>Sitta europaea</i>	R		S		*	Annex 4B
14860	<i>Certhia familiaris</i>	WV		S		*	
15080	<i>Oriolus oriolus</i>	SV, P		S		*	Annex 4B
15150	<i>Lanius collurio</i>	SV	SPEC 3	(D)		*	Annex 3
15390	<i>Garrulus glandarius</i>	R		S			
15490	<i>Pica pica</i>	R		S			
15600	<i>Corvus monedula</i>	R	SPEC 4	(S)			
15630	<i>Corvus frugilegus</i>	R		S			
15670	<i>Corvus corone cornix</i>	R		S			
15820	<i>Sturnus vulgaris</i>	PM		S			
15910	<i>Passer domesticus</i>	R		S		*	
15980	<i>Passer montanus</i>	R		S		*	
16360	<i>Fringilla coelebs</i>	WV	SPEC 4	S		*	
16380	<i>Fringilla</i>	WV		S		*	

	<i>montifringilla</i>						
16490	<i>Carduelis chloris</i>	R	SPEC 4	S		*	Annex 4B
16530	<i>Carduelis carduelis</i>	R		S		*	Annex 4B
16540	<i>Carduelis spinus</i>	P, RW	SPEC 4	S		*	Annex 4B
17100	<i>Pyrrhula pyrrhula</i>	WV		S		*	
17170	<i>Coccothraustes coccothraustes</i>	WV		S		*	Annex 4B
18570	<i>Emberiza citrinella</i>	WV, P	SPEC 4	(S)		*	
18660	<i>Emberiza hortulana</i>	P	SPEC 2	(V)		*	Annex 3
18770	<i>Emberiza schoeniclus</i>	WV		S		*	
18820	<i>Miliaria calandra</i>	SV, P	SPEC 4	(S)		*	Annex 4B

Legend: Phenological status: R = resident, SV – summer visitors, WV – winter visitors, P – passage visitors, PM – partial migrant, Ac – accidental species (species seen seasonally and sporadically in the city), RW – rarely during winter. SPEC category: SPEC 1 – species of global conservation concern, SPEC 2 – unfavourable conservation status concentrated in Europa, SPEC 3 – unfavourable conservation status not concentrated in Europa, SPEC 4 – favourable conservation status concentrated in Europa. Conservation status: E – endangered, V – vulnerable, D – declining, L – localized, S – secure. R.B.V.R. – The Red Book of the Vertebrates of the Romania. Law no 407/2006: * – protected species. U.D= Urgent Decree no. 57/2007: Annex 3 – species that require the nomination of the special areas of avifauna conservation (species of community concern), Annex 4B – species of national concern

Starting from the above table, there can be drawn the following aspects.

- the avifauna of Craiova comprises 57 species of birds (47.9 per cent) included in the 4 SPEC categories;

- a species included in SPEC 1 category, which requires a special protection, as it is globally endangered, is *Aythya nyroca*;

- 6 species in SPEC 2 category – concentrated in Europe, with an unfavourable status of conservation: *Phalacrocorax pygmaeus*, *Ciconia ciconia*, *Accipiter brevipes*, *Coracias garrulus*, *Picus viridis*, *Emberiza hortulana*;

- 15 species in SPEC 3 category – they are not concentrated in Europe and have an unfavourable status of conservation; for example, *Ixobrychus minutus*, *Nyctycorax nyctycorax*, *Ardeola ralloides*, *Ardea purpurea*, *Anas querquedula*, *Falco tinnunculus*, *Chlidonias hybridus*, *Chlidonias niger*, *Alcedo atthis*, *Galerida cristata*, *Hirundo rustica*, *Saxicola torquata*, *Hyppolais pallida*, *Muscicapa striata*, *Lanius collurio*. Except for the crested lark that is sedentary, the other species are summer and passage visitors for Craiova. The underlined species breeding in the studied habitat;

- 35 species in SPEC 4 category – concentrated in Europa and with a favourable conservative status; for example *Aythya ferina*, *Pernis apivorus*, *Larus fuscus*, *Columba palumbus*, *Dendrocopos syriacus* etc. (see the table);

- 61 species are in the NON-SPEC category – their populations are not concentrated in Europe; they have a favourable status in Europe, being secure (S). For their protection, there are not necessary special and immediate measures.

There were noticed 22 species that displays a certain endangerment status: - 9 vulnerable species: *Phalacrocorax pygmaeus*, *Ixobrychus minutus*, *Ardeola ralloides*, *Ardea purpurea*, *Ciconia ciconia*, *Anas querquedula*, *Aythya nyroca*, *Hyppolais pallida*, *Emberiza hortulana*; - a rare species: *Accipiter brevipes*; -11 declining species: *Nycticorax nycticorax*, *Falco tinnunculus*, *Chlidonias hybridus*, *Chlidonias niger*, *Coracias garrulus*, *Picus viridis*, *Galerida cristata*, *Hirundo rustica*, *Saxicola torquata*, *Muscicapa striata*, *Lanius collurio*; - a species with a limited area of localization: *Recurvirostra avosetta*.

Of the 72 species included in the Red Book from Romania, 13 species of birds observed in Craiova hold the status of endangered species (*Egretta garzetta*, *Egretta alba*, *Ardea purpurea*, *Himantopus himantopus*) and vulnerable species (*Phalacrocorax pygmaeus*, *Nycticorax nycticorax*, *Ardeola ralloides*, *Ciconia ciconia*, *Aythya nyroca*, *Pernis apivorus*, *Accipiter brevipes*, *Recurvirostra avosetta*, *Upupa epops*).

97 of the 119 species monitored in the habitat are protected at a national level by Law no. 407/2006, but the sanctions through contravention for shooting protected species are insignificant.

24 species of the observed birds are mentioned in the Urgent Decree as species the conservation of which requires the nomination of the special areas of conservation and of the areas of special avifauna protection: *Phalacrocorax pygmaeus*, *Ixobrychus minutus*, *Nycticorax nycticorax*, *Ardeola ralloides*, *Egretta garzetta*, *Egretta alba*, *Ardea purpurea*, *Ciconia ciconia*, *Aythya nyroca*, *Pernis apivorus*, *Circus aeruginosus*, *Accipiter brevipes*, *Himantopus himantopus*, *Recurvirostra avosetta*, *Chlidonias hybridus*, *Chlidonias niger*, *Alcedo atthis*, *Coracias garrulus*, *Dryocopus martius*, *Dendrocopos syriacus*, *Dendrocopos medius*, *Ficedula albicollis*, *Lanius collurio*, *Emberiza hortulana* (Annex 3). The parks and gardens of Craiova do not make the object of the nomination of special areas of avifauna conservation. But, we inform the ornithologists about the presence of certain birds' species of great avifauna importance, which in other national and European regions are rare, vulnerable and declining. They are found on different protection lists. At the same time, 25 species observed in the habitat are mentioned in Annex 4B of the Decree as species of national concern that require a strict protection: *Tachybaptus ruficollis*, *Falco tinnunculus*, *Falco subbuteo*, *Upupa epops*, *Picus viridis*, *Motacilla flava*, *Motacilla cinerea*, *Motacilla alba*, *Erithacus rubecula*, *Phoenicurus ochruros*, *Locustella luscinioides*, *Phylloscopus sibilatrix*, *Phylloscopus collybita*, *Phylloscopus trochilus*, *Regulus regulus*, *Regulus ignicapillus*, *Muscicapa striata*, *Aegithalos caudatus*, *Sitta europaea*, *Oriolus oriolus*, *Carduelis chloris*, *Carduelis carduelis*, *Carduelis spinus*, *Coccothraustes coccothraustes*, *Miliaria calandra*.

Following attentively the table, one can notice that while certain species of birds are rare, vulnerable (the little bittern, the garganey) or declining (the crested lark, the swallow) for Western Europe etc., in our country, they are common. On the other

hand, while some species are vulnerable (the hoopoe) or endangered (the egrets, the black-winged stilt) in our country, they have a favourable situation in the West of Europe.

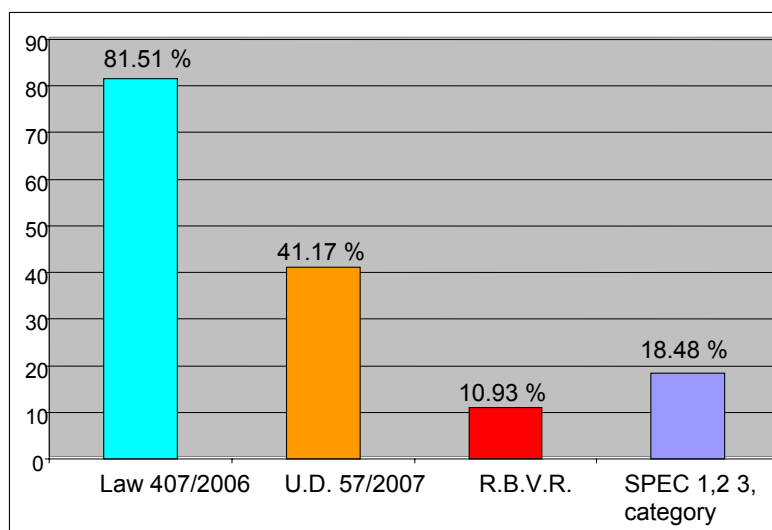
Of the total number of noticed species, 97 (81.51 per cent) are nationally protected by Law 407/2006, 13 (10.92 per cent) are included in the Red Book of the Vertebrates from Romania, 49 (41.17 per cent) are mentioned in Annexes 3 and 4B of the Urgent Decree no. 57/2007, 22 (18.48 per cent) are included in SPEC 1, 2, 3 categories as they have a certain status of endangerment (Graph 1).

CONCLUSIONS

Craiova, through its parks and gardens supplies optimum conditions for birds' presence.

Within this habitat, there have been observed certain species of birds that are found on different national and international lists of conservation.

The monitoring of the ornithofauna from the urban ecosystem has to continue in order to follow the evolution in time of the birds' dynamics and to take the most important measures for their protection.



Graph 1. The percentage of the birds' species from Craiova mentioned in the national and European protection legislation

REFERENCES

BĂLESCU CARMEN (2003): Preliminary data regarding the bird fauna in "Alexandru Buia" Botanical Garden in Craiova. *Analele Universității Craiova*, vol. VIII (XLIV), Seria Biologie, Horticultură, Tehnologia prelucrării produselor agricole, pp: 70-75.

- BĂLESCU CARMEN (2004): Preliminary data regarding bird fauna of the Craiovița Lake – Municipality of Craiova. *Analele Științifice ale Universității "Al.I.Cuza Iași", Seria Biologie Animală*, Tom L, pp: 319-336.
- BĂLESCU CARMEN (2004): Contributions to the knowing of the birds within the Romanescu Park -Craiova. *Analele Universității Craiova*, vol. IX (XLV) Seria Biologie, Horticultură, Tehnologia prelucrării produselor agricole, Ingineria mediului, pp: 57-62.
- BĂLESCU CARMEN (2005): Les oiseaux de la ville de Craiova pendant la saison hiémale. *Analele Universității Craiova*, vol. X (XLVI), Seria Biologie, Horticultură, Tehnologia prelucrării produselor agricole, Ingineria mediului, pp: 71-76.
- BĂLESCU CARMEN (2005): Les oiseaux de la ville de Craiova pendant la saison prevernale et vernale. *Analele Universității Craiova*, vol. X (XLVI), Seria Biologie, Horticultură, Tehnologia prelucrării produselor agricole, Ingineria mediului, pp: 77- 82.
- BĂLESCU CARMEN (2006): The birds of the municipality of Craiova during the aestival season. *Analele Universității Craiova*, vol. XI (XLVII) Seria Biologie, Horticultură, Tehnologia prelucrării produselor agricole, Ingineria mediului, pp: 269- 274.
- BĂLESCU CARMEN (2007): The birds of the municipality of Craiova during the serotinal season. *Analele Universității Craiova*, vol. XII (XLVIII), Seria Biologie, Horticultură, Tehnologia prelucrării produselor agricole, Ingineria mediului, pp: 57-62.
- BOTNARIUC, N. & TATOLE VIORICA (Eds.) (2005): *Cartea Roșie a Vertebratelor din România*, Academia Română București, pp: 85-172.
- BRUUN, B. et al. (1999): *Păsările din România și Europa - determinant ilustrat*. Editura Hamlyn Guide (Ediție Românească, adaptată de MUNTEANU, D.), 320 pp.
- HAGEMEIJER, W. J. & BLAIR, M. J. (1997): *The EBCC Atlas of European Breeding Birds. Their Distribution and Abundance*. Editura T& A.D.Poyser. London, 902 pp.
- MUNTEANU, D. (2004): *Arii de importanță avifaunistică din România – Documentații*, Societatea Ornitologică Română, Ed. Alma Mater, Cluj-Napoca.
- PETERSON, R., MOUNTFORT, G., HOLLAND, P.A.D. & GÉROUDET, P (1984): *Guide des Oiseaux d'Europe*, Ed. Delachaux et Niestlé, Neuchâtel - Paris.
- TUCKER, G. M., HEATH, M. F. (1994): *Birds in Europe: their conservation status*, U.K.: BirdLife International (BirdLife Conservation Series, No. 3), Cambridge.
- TUCKER, G. M., EVANS, M., (1997): *Habitats for Birds in Europe: a conservation strategy for the wider environment*, U.K: BirdLife International (BirdLife Conservation Series, No. 6), Cambridge.
- *** Council Directive 79/409/EEC on the conservation of wild birds (the Birds Directive), adopted on the 2nd of April 1979.
- *** Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (the Habitats Directive), adopted on the 21st of May 1992.

- *** Legea Nr. 407/2006 a vânătorii și a protecției fondului cinegetic. Monitorul Oficial, partea 1 nr. 944 din 22/11/2006, București.
- *** Ordonanța de Urgență Nr 57 din 20 iunie 2007 privind regimul ariilor naturale protejate, conservarea habitatelor naturale, a florei și faunei sălbatice. Monitorul Oficial nr. 442 din 29/06/2007, București.