CONTRIBUTION TO THE STUDY OF BIRDS' FAUNA'S DIVERSITY IN THE NATURAL RESERVE "TĂLĂBASCA MARSH" FROM THE INFERIOR BASIN OF SIRET RIVER

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Abstract. Till now, there was not properly scientific data on birds' presence in the natural reserve *Tălăbasca Marsh* from the inferior valley of Siret River. Starting from 1994, the Tălăbasca Marsh has protected natural area status, in order to preserve the steppes flora and fauna, with some transition elements to the plain forest habitat, but, also, with characteristic wetlands influences. There is one caretaker that is managing the protected areas, working to develop an ecological management plan for it.

Beginning from autumn of 2004, we started the first regular study focused on the avifauna diversity in this area, identifying 125 bird species in the *Tălăbasca Marsh* perimeter, part of them listed in the Annex 1 of the Birds' Directive. Our results permitted, also, to include this perimeter in the Romanian Nature 2000 Network, like part of one Special Protected Area (SPA) from the Siret River basin. The birds find there an enough quiet place for resting and reproductive season, with favourable breeding habitats and a great variety of available food resources. Between the breeding species, we mention: *Platalea leucorodia*, *Nycticorax nycticorax*, *Cygnus olor*, *Aythya nyroca* and one colony of terns (*Sterna* sp. and *Chlidonias* sp.), between which we notice the breeding presence of the White-winged Black Tern (*Chlidonias leucopterus*), very rare in this part of Romania. There are present two rarities breeding species in Romania: *Tadorna tadorna*, present with one - two pairs, at least irregular breeding and *Recurvirostra avosetta*, with two - four pairs. We met groups of pelicans (*Pelecanus onocrotalus*) that are coming here for food. We analyses also the impact of different human activities on the birds' fauna.

Keywords: birds' fauna, breeding species, protected area, human impact.

Rezumat. **Contribuţii la studiul diversităţii avifaunei în rezervaţia naturală "Balta Tălăbasca" din bazinul inferior al Siretului**. Până în prezent, nu a fost realizat şi publicat nici un studiu ştiinţific privind avifauna rezervaţiei naturale „Balta Tălăbasca" din bazinul inferior al Siretului. Începând din 1994, balta Tălăbasca are statut de arie protejată, în vederea conservării florei şi faunei de stepă, cu elemente de silvostepă şi influenţe caracteristice zonelor umede. Rezervaţia este luată în custodie, fiind elaborat un plan de management al rezervaţiei.

Studiul nostru a devenit regulat începând din toamna anului 2004, urmărind diversitatea avifaunei. Au fost identificate 125 de specii de păsări în perimetrul bălţii Tălăbasca, unele fiind incluse în Anexa 1 a Directivei Păsări. Informaţiile adunate au permis includerea acestei suprafeţe în Reţeaua Natura 2000 din România, ca parte a Ariei Speciale de Protecţie Avifaunistică (ASPA) „Lunca Inferioară a Siretului". Păsările găsesc condiţii optime pentru odihnă şi reproducere, habitatele fiind deosebit de favorabile, iar resursa trofică este bogată şi abundentă. Printre speciile clocitoare, menţionăm:*Platalea leucorodia*, *Nycticorax nycticorax*, *Cygnus olor*, *Aythya nyroca* şi o colonie de chire şi chirighiţe (*Sterna* sp. şi *Chlidonias* sp.), printre care menţionăm prezenţa speciei *Chlidonias leucopterus*, deosebit de rară în această parte a României. De asemeni, semnalăm prezenţa altor două specii rare pentru România: *Tadorna tadorna*, prezentă cu una - două perechi, cel puţin ca specie neregulat clocitoare *Recurvirostra avosetta*, cu două – patru perechi. Am întâlnit şi grupuri de pelicani (*Pelecanus onocrotalus*) care se hrănesc în acest perimetru. De asemeni, analizăm impactul activităţilor umane asupra avifaunei.

Cuvinte cheie: avifaună, specii clocitoare, rezervaţie, impact antropic.

Introduction

The Siret River valley represent one of the most important birds' flyways during the migration time in Romania, the network of lakes present in the middle sector of this basin being one important wintering area for waterfowls in the eastern part of our country. In this perimeter, there were done the most important and constantly ornithological studies (Rang, 1990 - 2002, Feneru, 1998 - 2002). In the Lower Siret River, the ornithological

observations were done just irregular, existing only one published study regarding the birds' fauna in this sector (Gache, 1994). Moreover, part of the investigated wetlands in '90s was disappeared or present significantly reduced surfaces due the sealing and prolonged dryness during the last decade of the 20th century.

The Tălăbasca Marsh is a meadow eutrophic lake with a surface about 139 hectares (ha), being situated in the vicinity of Tudor Vladimirescu village (Galați County), with access possibilities on the national road DN 25 (on the sector Galați - Tecuci), but also on the railway. The Tălăbasca Marsh receives water from the rivulet Calmatui, with temporary debit, passing in the north-western side of Tudor Vladimirescu village, but also from groundwater sources. The marshes' perimeter is surrounded by dams: dam for defending flooding risk of the village in the north, east and western sides, while in the southern side was arranged a protection dam for period of high debits on the Siret River valley.

The climate is temperate-continental, with excessive aspects – hot and dryness summers, cold and relatively dry winters – typical for the plain and steppe areas in our country. The medium temperature is about 10.4 ^{0}C. The rainfalls present the maximum value in June (62.1 mm), the minimum value being recorded in February (23.1 mm). The dominant winds are from northern direction.

The flora and fauna of the Tălăbasca Marsh region are typically for the passing area from steppe to sylvosteppe, but the marshes' perimeter present wetland habitats. The reed (*Phragmites communis*) and bulrush (*Thypha angustifolia*) beds cover approximately 60% from the entire marsh' surface; in the central and south-western marsh' sectors are present compact red beds. The Siret River valley is passing near the southern side of the marshes, separated through the flooding protection dam, a large wet grassland area and the meadow forest, (*Populus* sp., *Salix* sp. etc.). The northern limit of the natural reserve is cover by wet grassland with small swampy areas (in the north-eastern sector) and surfaces with sedge (*Scirpus* sp.). In the eastern side, between the marsh and village, but also in the northern side, there exist agricultural lands and grasslands used like grazing areas.

The marsh's fauna is rich, with high diversity. The invertebrates are represented by worms, molluscs and various arthropods – spiders, crustaceans and insects. The fish fauna include species like *Cyprinus carpio*, *Stizostedion lucioperca*, *Esox lucius*, *Perca fluviatilis*, *Carassius carassius gibelio* and *Scardinius erythrophthalmus*. There are present amphibians like *Hyla arborea*, *Bombina bombina*, the *Rana esculenta* complex and reptiles like *Natrix natrix*, *N. tessellata*, *Lacerta viridis* and *Emys orbicularis*. Between the mammals we met the species *Spermophilus citellus*, *Lepus europaeus* and *Cricetus cricetus*.

The natural reserve „Tălăbasca Marsh" was founded through the decision of Galați County Board (46/10.11.1994) with the aim to preserve the birds' fauna's diversity, like site for breeding birds and migration period importance. The protection status was recognised at national level through the Law no. 5/2000. The natural reserve has a caretaker - S.C. Negro S.R.L. Galați that organised a guard service and is preparing a sustainable management plan for this territory.

Starting from our researches in the area, the Romanian Ornithological Society (SOR/Birdlife Romania) proposed to include the Tălăbasca Marsh in the Romanian Nature 2000 Network, in the Special Protected Area (SPA) "Lower Meadow of Siret River" (HG 1284/2007).

Material and Methods

Our fieldwork began in the autumn 2004 and are going on, covering the all phenological aspects during the year.

The birds' census was done using transect (covering the whole marsh's perimeter), fixed points and band counting methods.

Results and Discussion

Our fieldworks permitted to obtain a preliminary image of the birds' fauna from the natural reserve Tălăbasca Marsh. The birds' fauna's list (Table 1) includes 126 bird species, the aquatic and semi-aquatic species presenting a high diversity (60 species). There are present, too, some bird species related to the wetlands' habitats during the breeding season: *Circus aeruginosus*, *Alcedo atthis* and some passerine species - *Motacilla alba*, *Motacilla flava*, *Riparia riparia*, *Acrocephalus scirpaceus*, *Acrocephalus schoenobaenus*, *Acrocephalus arundinaceus*, *Panurus biarmicus* and *Emberiza schoeniclus*.

During our study period, despite the fact that we had not followed to investigate the birds' fauna from the meadow forest, we recorded some bird species that are breeding or searching their food in the perimeter between the marsh and Siret River valley, passing along the census transect.

Some bird species can present a double phenological status in one area. The birds' fauna present in the Tălăbasca Marsh's perimeter is dominated by the summer visitors – 69 species, representing more than half from the whole recorded birds' fauna (54.76%). The other phenological bird groups are represented by 29 passage species, 19 sedentary species, 10 partial migrant species, 6 winter visitors and four vagrant species, met only one time in the investigated area (*Milvus migrans* – one exemplar, 29.09.2006, *Numenius tenuirostris* – one adult, 5.09.2008, *Glareola pratincola* - a group of 14 individuals, 16.05.2006, respectively, *Gelochelidon nilotica*, one adult, 24.09.2004).

We must notice that, for some bird species, we recorded a changeable phenological status from one year to other, the weather conditions, especially, the temperatures' values and rainfalls' level, representing the principal influence factor. For example, during the wintering time, the birds' fauna is poor, especially in the frosty winters, when the marsh is covered by a complete ice bed, starting from the ending November till the March (2004 – 2005, 2005 - 2006). The aquatic birds are forced to leave the territory, going to the south, where can find aquatic surfaces without ice bed. In this situation, the winter visitors become just passage species (*Cygnus cygnus*, *Anas penelope*, *Anas crecca*, *Aythya fuligula*, etc.). In fact, for this period of the year, we believe that the partial migrant species are represented by northern populations, while the breeding populations in this sector of Siret River basin are going to the south, after the breeding season's ending (*Cygnus olor*, *Anas platyrhynchos*, *Aythya ferina*, *Fulica atra* etc.). Between the waterfowl species present like winter visitors in the years with mild winters, we mention: *Cygnus cygnus*, *Anas clypeata*, *Anas crecca*, *Anas penelope* and *Aythya fuligula*.

We observed some differences between the local and national phenological birds' status, explained through the absences of the suitable breeding habitats.

The certainly breeding bird species (88 species) represent an important part of the whole recorded birds' fauna in the marsh's perimeter and vicinity, another 7 species being probably or, at least, irregular breeding bird species in the area. We can say that about 95 bird species (75.39% from the recorded bird species) are finding suitable conditions to build nests and record breeding success in the marshes' habitats – reed and bulrush beds (herons, egrets, ducks, gulls, warblers, etc.) or on the water surface, building floating nests (*Podiceps* sp., *Chlidonias* sp., *Sterna hirundo*), at the water's limit, in swampy areas (waders), in the high clayer banks (*Alcedo atthis*, *Merops apiaster*, *Riparia riparia*) or in the nearest meadow forest (raptor birds, woodpeckers, passerines). We must notice one unusual presence (due its rarety in the present times) recorded in the spring of 2007 – a

pair of White Stork (*Ciconia ciconia*) build it nest in a tree, at the village's margin, in the vicinity of the marsh, this being one of very few White Stork nests built in trees on the Romanian Moldova territory.

The breeding populations are small but present a positive trend, especially, after the guard service's organisation by the caretaker. We mention the presence of some breeding species like *Podiceps grisegena* (2 pairs), *Botaurus stellaris* (at least 2 pairs), *Ardeola ralloides* (5 – 7 pairs), *Egretta garzetta* (18 – 20 pairs), *Ardea alba* (8 – 10 pairs), *Ardea cinerea* (12 – 14 pairs), *Ardea purpurea* (3 – 4 pairs), *Nycticorax nycticorax* (10 – 12 pairs), *Cygnus olor* (3 – 4 pairs), *Anas strepera* (1 – 3 pairs), *Anas querquedula* (2 – 4 pairs), *Aythya nyroca* (3 – 5 pairs), but also of one terns breeding colony (*Sterna hirundo, Chlidonias hybridus* and *Chlidonias niger*) including 30 – 35 pairs, dominant species being the Whiskered Tern, species that increase its effectives in the eastern Romania. Every year, we observed one pair of Marsh Harrier (*Circus aeruginosus*), in mating flying display and transporting nest materials.

We notice the presence of some rare breeding bird species nor only in the Siret River basin, but also in Romania: *Platalea leucorodia* (5 – 7 pairs), *Himantopus himantopus* (1 – 2 pairs) and *Chlidonias leucopterus* (3 – 5 pairs), as well as the appearance of the Greylag Goose (*Anser anser*) like breeding species with 2 pairs in the 2007' spring, that represent a prove of the human impact's diminution in this territory. We mention another bird species that could be, at least, irregular breeding species in the Tălăbasca Marsh's perimeter and its vicinity, being observed during the breeding season with mating displays or different parental behaviours (with food of nest material in their beaks, mimicry injured status, etc.): *Tadorna tadorna* (2 pairs, observed in 2006, one pair in 2007), *Recurvirostra avosetta* (2 – 4 pairs) and *Charadrius dubius* (2 – 4 pairs). Somewhere in the meadow forest, the Black Stork (*Ciconia nigra*) can has a nest, the birds being observed in the passage time, but also, searching food in the summer time.

The pelicans (*Pelecanus onocrotalus*) represent a special presence in the area, appearing during the summer in groups about 85 – 150 individuals, probably, immature birds that are wandering and searching territories with available feed resources.
During the migration time, in the Tălăbasca Marsh's perimeter, we met hundreds, sometimes, thousands waterfowls, while the waders can form mixed groups bigger than 1500 individuals.

Regarding the protection status of the species forming the birds' fauna from the natural reserve Tălăbasca Marsh, we observe that 104 species represent criteria for designation of one Important Birds Area (IBA), being the starting point to create the Nature 2000 Network (like Special Protected Areas - SPA) and 29 species appear in the Annex 1 of the Birds Directive (representing important criteria in the biodiversity's conservation strategy of the European Union – these bird species shall be subject of special conservation measures concerning their habitats in order to ensure their survival and the reproduction in their area of distribution), mostly of them being breeding species in this territory.

Between the IBA criteria bird species (one species can represent two or three evaluation criteria category), two species are globally threatened species (A1) - *Aythya nyroca*, breeding species in the investigated area, presenting greater effectives during the passage time (more than 130 pairs in the spring migration) and *Numenius tenuirostris*, just vagrant species, recorded only one time (adult bird, on the 5th September 2008). We recorded only four species of restrictive biom (A3): *Calidris minuta, Tringa nebularia* and *Tringa erythropus*, met during the migration time, with different effectives from on year to other (in flocks about some tens to 150 – 210 individuals), respectively, *Fringilla montifringilla*, present in winter, with small flocks (no more than 65 birds), feeding in bushes with *Eleagnus angustifolia*.

The group of gregarious bird species is very well represented in different period of the year – forming colonies in the breeding season, with large flocks during passage time or in wintering period; we recorded 62 species included in this group (A4/B1), mostly aquatic and semi-aquatic species, present like breeding species, but also, in the spring/autumn passage time. We met 39 bird species with unfavourable conservation status in Europe (B2), majority of these being semi-aquatic species. In the area, 22 bird species with favourable conservation status in Europe (B3) are present, like breeding species in the nearest meadow forest from Siret River valley, visiting the Tălăbasca Marsh's perimeter during the winter and passage time, finding there suitable site for resting, refuge and a rich, abundant food resource.

From the recorded birds' fauna, 21 bird species appear in the Red Book of the Vertebrates from Romania (Botnariuc *et al*., 2005). The mostly of these bird species are vulnerable species (13 species); another five species are threatened bird species in our country, while *Milvus migrans*, *Numenius tenuirostris* and *Gelochelidon nilotica* are critically threatened species in Romania, all of them being observed during the autumn migration in the investigated area. Starting from the regular or irregular breeding status in this area of the majority of the bird species included in the Romanian Red Book, the natural reserve's caretaker, through a large partnership with the Environment Protection Agency (Galaţi County), specialists and local community must develop specific management measures in order to improve the birds' breeding conditions and to reduce the human pressure in the area, at least during the breeding season period. We estimate that at least another three bird species included in the Romanian Red Book can start to breed in this territory or it vicinity during the next years: *Plegadis falcinellus* (present like recently breeding species in the Prut River basin) can use the compact red beds in the central part of the marsh, while *Ciconia nigra* and *Pernis apivorus* can built their nests in the high and old trees from the nearest meadow forest.

All the recorded species appear in the annexes of Hunting Romanian Law (no. 407/2006), 107 bird species (84.92% from the whole recorded birds' fauna) being included in the Annex 2, like species strictly prohibit for hunting. A total about 23 bird species present in the study territory are game hunting species, being included in the Annex 1 of the Romanian Hunting Law; sequel the updates of this law through the law 197/2007, another two bird species met in the Tălăbasca Marsh' perimeter - *Anas strepera* and *Alauda arvensis* – were included in the game hunting species. We must notice that the Gadwall is one the duck species not frequently like breeding species, with a negative trend of it breeding effectives in Romania. After a strong lobby campaign developed by the Romanian Ornithological Society (SOR/Birdlife Romania), the Skylark was not viewed like a game hunting species in the 2006' Hunting Law. We estimate that the reintroduction of this passerine in the Annex 1 of the mentioned law through the high pressure of the hunters' associations is an important error due its ecological consequences. Numerous abroad hunters have interest for this species' hunting; the skylark presents a constant trend and it is not in danger of extinction in Romania, but it is an important insectivorous species in the steppe habitats and agricultural lands. We cannot neglect the impact on the biodiversity, especially in the southern part of our country, of the hunters' confusion regarding the different lark species, some of them very rare in Romania.

As we mentioned before, the Tălăbasca Marsh is a natural reserve (management area for habitats/species in order to preserve the biodiversity - IV IUCN), presenting this status before its inclusion in the Romanian Nature 2000 Network, like part of the SPA "Lower Meadow of Siret River". The gravest event recorded during our study period was represented by the catastrophic flooding recorded in July 2005, in the lower sector of Siret River valley. The flooding wave propagation was initiated after the suddenly waters' flash from the accumulation lake Călimăneşti producing the protection dam's collapse on the

Tudor Vladimirescu village's territory (13 – 14 July 2005). The Siret River spilled in the Tălăbasca Marsh's area and village (only material damages, the population being evacuated before), covering the national road (DN 25). The protection dam was rebuilt after the water's withdrawal.

The pisciculture was the principal economic activity in the area for a long time, so, periodically, there the fish populations were introduced and commercial fishing was done yearly. The caretaker S.C. Negro S.R.L. Galați included the pisciculture like economic activity in the management plan of the area but provided measures for sustainable development of the area, with regular evaluation of the fishes' effectives, natural capacity of fish population' regeneration and an optimal level of exploitation. The sportive and commercial fishing are done from the banks of with small boats, using angles and fixing or baffling fishing nets. The caretaker follows to assess this kind of impact on the fishes' populations, but also on the birds' diversity on the marsh's territory. During our study period, we met bigger or smaller groups of fishermen, dispersed around the whole perimeter, many times being concentrated on the eastern and northern banks. Sometimes, despite their big presence, the fishermen are not disturbing the normal dynamic of the wild flora and fauna, but we had days, especially, during the birds' breeding season, when our ornithological visits in the area were "attended" by the strong decibels produced through different electronic apparatus of the fishermen.

The caretaker follows to promote some traditional activities, including the reed and bulrush's exploitation, but also the ecological tourism (without motorboats). The grazing activity is permitted, but we believe that could be limited during the birds' breeding season, especially for the wader species that build their nests on the ground, because the cattle were met on the north – north-eastern side of the marsh, in a area with very suitable habitat for this group of birds, some of them being rare or vulnerable in our country.

The hunting activity is permitted in the law's limits, but we have not met hunters; we assume that this activity is just temporarily and very irregular in the area.

Conclusions

The Tălăbasca Marsh natural reserve is part of the SPA "Lower Meadow of Siret River" and is sheltering a rich birds' fauna' s diversity.

The breeding bird species are various, including some rare species for Romania, with small but increasing effectives.

During the migration time, the aquatic and semi-aquatic bird species are present with groups of hundreds and thousand individuals.

In the mild winters, the marsh's perimeter is an important wintering territory for many waterfowls in this part of Romania.

The management plan proposed by the caretaker creates premises for sustainable development of the area.

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Table 1. List of the bird species recorded on the territory of the protected areas „Tălăbasca Marsh"

No.	Species	Breeding status	Phenology in the investigated area	Phenology in Romania	Protection/conservation status in Romania			Birds' Directive Annex 1
					IBA Criteria	Red List	Law no. 407/2006	
1.	*Podiceps cristatus*	+	SV	SV, RW	A4/B1	-	Annex 2	-
2.	*Podiceps grisegena*	+	SV	SV	A4/B1	-	Annex 2	-
3.	*Podiceps nigricollis*	-	P	SV, RW	A4/B1	-	Annex 2	-
4.	*Tachybaptus ruficollis*	+	SV	SV, RW	A4/B1	-	Annex 2	-
5.	*Pelecanus onocrotalus*	-	P	SV	A4/B1, B2	V	Annex 2	+
6.	*Phalacrocorax carbo*	-	P	SV, RW	A4/B1	-	Annex 1	-
7.	*Botaurus stellaris*	+	SV	SV, RW	B2	-	Annex 2	+
8.	*Ixobrychus minutus*	+	SV	SV	B2	-	Annex 2	+
9.	*Ardeola ralloides*	+	SV	SV	A4/B1, B2	V	Annex 2	+
10.	*Egretta garzetta*	+	SV	SV	A4/B1	T	Annex 2	+
11.	*Ardea alba (Casmerodius albus)*	+	SV	SV, RW	A4/B1	T	Annex 2	+
12.	*Ardea purpurea*	+	SV	SV	B2	T	Annex 2	+
13.	*Ardea cinerea*	+	SV	SV, RW	A4/B1	-	Annex 2	-
14.	*Nycticorax nycticorax*	+	SV	SV	A4/B1, B2	V	Annex 2	+
15.	*Plegadis falcinellus*	-	SV	SV	A4/B1, B2	V	Annex 2	+
16.	*Platalea leucorodia*	+	SV	SV	A4/B1, B2	T	Annex 2	+
17.	*Ciconia ciconia*	+	SV	SV	A4/B1, B2	V	Annex 2	+
18.	*Ciconia nigra*	-	P	SV	A4/B1, B2	V	Annex 2	+
19.	*Cygnus olor*	+	PM	PM	A4/B1	-	Annex 2	-
20.	*Cygnus cygnus*	-	WV, P	WV	A4/B1	-	Annex 2	-
21.	*Anser anser*	+?	PM	PM	A4/B1	-	Annex 1	-
22.	*Anas platyrhynchos*	+	PM	PM, WV	A4/B1	-	Annex 1	-
23.	*Anas strepera*	+	SV	SV	A4/B1, B2	-	Annex 2*	-
24.	*Anas penelope*	-	P, WV	P, WV	A4/B1	-	Annex 1	-
25.	*Anas acuta*	-	P	P, WV	A4/B1, B2	-	Annex 1	-
26.	*Anas crecca*	-	P, WV	P, WV, SV	A4/B1	-	Annex 1	-
27.	*Anas querquedula*	+	SV	SV, P	A4/B1, B2	-	Annex 1	-
28.	*Anas clypeata*	-	P, WV	P, SV	A4/B1	-	Annex 1	-
29.	*Aythya ferina*	+	SV, PM	PM	A4/B1, B3	-	Annex 1	-
30.	*Aythya fuligula*	-	P, WV	WV, SV	A4/B1	-	Annex 1	-

No.	Species	Breeding status	Phenology in the investigated area	Phenology in Romania	Protection/conservation status in Romania			Birds' Directive Annex 1
					IBA Criteria	Red List	Law no. 407/2006	
31.	*Aythya nyroca*	+	SV	SV, RW	A1, A4/B1	V	Annex 2	+
32.	*Tadorna tadorna*	+?	SV, P	SV, RW	A4/B1	V	Annex 2	-
33.	*Buteo buteo*	-	PM	PM	A4/B1	-	Annex 2	-
34.	*Pernis apivorus*	-	P	SV	A4/B1	V	Annex 2	+
35.	*Milvus migrans*	-	Vg	SV	A4/B1, B2	CT	Annex 2	+
36.	*Circus aeruginosus*	+	SV	SV, RW	A4/B1	-	Annex 2	+
37.	*Falco tinnunculus*	+	SV	PM	A4/B1, B2	-	Annex 2	-
38.	*Falco subbuteo*	+	SV	SV	A4/B1	-	Annex 2	-
39.	*Phasianus colchicus*	+	S	S	-	-	Annex 1	-
40.	*Rallus aquaticus*	+?	SV	PM	-	-	Annex 2	-
41.	*Gallinula chloropus*	+	SV	SV	A4/B1	-	Annex 1	-
42.	*Fulica atra*	+	SV, PM	PM	A4/B1	-	Annex 1	-
43.	*Vanellus vanellus*	+	SV	SV	A4/B1	-	Annex 2	-
44.	*Charadrius dubius*	+?	SV, P	SV	A4/B1	-	Annex 2	-
45.	*Limicola falcinellus*	-	P	P	A4/B1, B2	-	Annex 2	-
46.	*Calidris minuta*	-	P	P	A3, A4/B1	-	Annex 2	-
47.	*Numenius arquata*	-	P	P, SV	A4/B1, B2	-	Annex 2	-
48.	*Numenius tenuirostris*	-	Vg	Vg	A1	CT	Annex 2	+
49.	*Limosa limosa*	-	P	P, SV	A4/B1, B2	-	Annex 1	-
50.	*Tringa ochropus*	-	P	P	A4/B1	-	Annex 2	-
51.	*Tringa glareola*	-	P	P	A4/B1, B2	-	Annex 2	+
52.	*Tringa nebularia*	-	P	P	A3, A4/B1	-	Annex 2	-
53.	*Tringa stagnatilis*	-	P	P	A4/B1	-	Annex 2	-
54.	*Tringa totanus*	-	P	P	A4/B1, B2	-	Annex 2	-
55.	*Tringa erythropus*	-	P	P	A3, A4/B1	-	Annex 2	-
56.	*Philomachus pugnax*	-	P	P	A4/B1, B2	-	Annex 2	-
57.	*Recurvirostra avosetta*	+?	SV, P	SV	A4/B1, B2, B3	V	Annex 2	+
58.	*Himantopus himantopus*	+	P, SV	SV	A4/B1	T	Annex 2	+
59.	*Glareola pratincola*	-	Vg	SV	A4/B1, B2	V	Annex 2	+
60.	*Larus michahellis*	+	SV, PM	S	A4/B1	-	Annex 2	-
61.	*Larus cachinnans*	-	P	S	A4/B1	-	Annex 2	-
62.	*Larus ridibundus*	+	SV, PM	PM	A4/B1	-	Annex 2	-
63.	*Larus minutus*	-	P	P, ?C	A4/B1, B2	-	Annex 2	+
64.	*Chlidonias hybridus*	+	SV	SV	A4/B1, B2	-	Annex 2	+
65.	*Chlidonias niger*	+	SV	SV	A4/B1, B2	-	Annex 2	+

No.	Species	Breeding status	Phenology in the investigated area	Phenology in Romania	Protection/conservation status in Romania			Birds' Directive Annex 1
					IBA Criteria	Red List	Law no. 407/2006	
66.	*Chlidonias leucopterus*	+	SV	SV	A4/B1	-	Annex 2	-
67.	*Gelochelidon nilotica*	-	Vg	SV	A4/B1, B2	CT	Annex 2	+
68.	*Sterna hirundo*	+	SV	SV	A4/B1	-	Annex 2	+
69.	*Cuculus canorus*	+	SV	SV	-	-	Annex 2	-
70.	*Streptopelia turtur*	+	SV	SV	B2	V	Annex 1	-
71.	*Streptopelia decaocto*	+	S	S	-	-	Annex 1	-
72.	*Athene noctua*	+	S	S	B2	-	Annex 2	-
73.	*Alcedo atthis*	+?	SV	PM	B2	-	Annex 2	+
74.	*Upupa epops*	+	SV	SV	-	V	Annex 2	-
75.	*Merops apiaster*	+	SV	SV	A4/B1, B2	-	Annex 2	-
76.	*Picus viridis*	+	S	S	B2	-	Annex 2	-
77.	*Dendrocopos major*	+	S	S	-	-	Annex 2	-
78.	*Dendrocopos syriacus*	+	S	S	B3	-	Annex 2	-
79.	*Alauda arvensis*	+	SV	PM	B2	-	Annex 2*	-
80.	*Galerida cristata*	+	S	S	B2	-	Annex 2	-
81.	*Hirundo rustica*	+	SV	SV	B2	-	Annex 2	-
82.	*Delichon urbica*	+	SV	SV	-	-	Annex 2	-
83.	*Riparia riparia*	+	SV	SV		-	Annex 2	-
84.	*Motacilla alba*	+	SV	SV	-	-	Annex 2	-
85.	*Motacilla flava*	+	SV	SV	-	-	Annex 2	-
86.	*Lanius collurio*	+	SV	SV	B2	-	Annex 2	+
87.	*Lanius minor*	+	SV	SV	B2	-	Annex 2	+
88.	*Oriolus oriolus*	+	SV	SV	-	-	Annex 2	-
89.	*Sturnus vulgaris*	+	PM	PM	-	-	Annex 1	-
90.	*Pica pica*	+	S	S	-	-	Annex 1	-
91.	*Corvus frugilegus*	+	S	S	-	-	Annex 1	-
92.	*Corvus monedula*	+	S	S	B3	-	Annex 1	-
93.	*Corvus corone cornix*	+	S	S	-	-	Annex 1	-
94.	*Troglodytes troglodytes*	+	S	S	-	-	Annex 2	-
95.	*Acrocephalus schoenobaenus*	+	SV	SV	B3	-	Annex 2	-
96.	*Acrocephalus scirpaceus*	+	SV	SV	B3	-	Annex 2	-
97.	*Acrocephalus arundinaceus*	+	SV	SV	-	-	Annex 2	-
98.	*Hippolais icterina*	+	SV	SV	B3	-	Annex 2	-
99.	*Sylvia communis*	+	SV	SV	B3	-	Annex 2	-
100.	*Sylvia borin*	+	SV	SV	B3	-	Annex 2	-
101.	*Sylvia atricapilla*	+	SV	SV	B3	-	Annex 2	-
102.	*Phylloscopus collybita*	+	SV	SV	-	-	Annex 2	-
103.	*Muscicapa striata*	+	SV	SV	B2	-	Annex 2	-
104.	*Saxicola torquata*	+	SV	SV	B2	-	Annex 2	-
105.	*Saxicola rubetra*	+	SV	SV	B3	-	Annex 2	-
106.	*Erithacus rubecula*	+	SV	SV, RW	B3	-	Annex 2	-
107.	*Luscinia megarhynchos*	+	SV	SV	B3	-	Annex 2	-
108.	*Turdus merula*	+	PM	PM	B3	-	Annex 2	-

No.	Species	Breeding status	Phenology in the investigated area	Phenology in Romania	Protection/conservation status in Romania			Birds' Directive Annex 1
					IBA Criteria	Red List	Law no. 407/2006	
109.	*Turdus philomelos*	+	SV	SV	B3	-	Annex 1	-
110.	*Turdus pilaris*	-	WV	PM, WV	B3	-	Annex 1	-
111.	*Parus palustris*	+	SV	S	-	-	Annex 2	-
112.	*Parus major*	+	S	S	-	-	Annex 2	-
113.	*Parus coeruleus*	+	S	S	-	-	Annex 2	-
114.	*Remiz pendulinus*	+	SV	SV	-	-	Annex 2	-
115.	*Panurus biarmicus*	+	PM	S	-	-	Annex 2	-
116.	*Passer domesticus*	+	S	S	-	-	Annex 2	-
117.	*Passer montanus*	+	S	S	-	-	Annex 2	-
118.	*Fringilla coelebs*	+	S	PM	B3	-	Annex 2	-
119.	*Fringilla montifringilla*	-	WV	WV	A3	-	Annex 2	-
120.	*Coccothraustes coccothraustes*	+	SV	S	-	-	Annex 2	-
121.	*Carduelis chloris*	+	SV	S	B3	-	Annex 2	-
122.	*Carduelis carduelis*	+	S	S, WV	-	-	Annex 2	-
123.	*Carduelis cannabina*	+	SV	PM	B3	-	Annex 2	-
124.	*Miliaria calandra*	+	SV	PM	B3	-	Annex 2	-
125.	*Emberiza citrinella*	+	S	S	B3	-	Annex 2	-
126.	*Emberiza schoeniclus*	+	PM	PM	-	-	Annex 2	-

Breeding status: + - certainly breeding species; +? – probable or irregular breeding species.
Phenology: SV – summer visitor; WV – winter visitor; P – passage species; PM – partial migratory species; S – sedentary species; RW – rare wintering species; Vg – vagrant species.
IBA Criteria: A1 – globally threatened species; A3 – species of restrictive biom; A4/B4 – bird species forming great agglomerations in different period of the year (breeding season, migration, wintering time); B2 – species with unfavourable conservation status in Europe; B3 – species with favourable conservation status in Europe.
Red List: V – vulnerable species; T – threatened species; CT – critically threatened species.
Law no. 407/2006: Annex 1 – bird species with hunting permission status; Annex 2 – bird species with prohibit hunting status; Annex 2* - bird species that in the Law no. 197/2007, were included in the list of the species with hunting permission status.