

Birds in Besaparski Ridove Special Protection Area (Natura 2000), Southern Bulgaria: Conservation Status and Dynamics

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Abstract: A total of 184 species of birds belonging to 17 orders were recorded in Besaparski Ridove Special Protection Area. Ninety-nine species are of European conservation concern (SPEC); 10 of them fall under the category SPEC 1, 23 as species threatened in Europe (SPEC 2) and 48 as SPEC 3. Twelve of the recorded species are globally threatened, 6 of are near threatened, 4 are classified as vulnerable and 2 species are endangered. The area is of global significance for the conservation of the globally threatened Eastern Imperial Eagle (*Aquila heliaca*) and one of the most important territories of European significance in Bulgaria for the breeding Tawny Pipit (*Anthus campestris*), Long-legged Buzzard (*Buteo rufinus*) and Calandra Lark (*Melanocorypha calandra*). A decline was recorded in species such as Common Buzzard (*Buteo buteo*), Grey Partridge (*Perdix perdix*), Black-eared Wheatear (*Oenanthe hispanica*) and Lesser Grey Shrike (*Lanius minor*), while an increase was recorded in the populations of Stone Curlew (*Burhinus oediconemus*) and European Bee-eater (*Merops apiaster*).

Keywords: conservation, bird fauna, Besaparski Ridove Special Protection Area, population dynamics

Introduction

Besaparski Ridove (42°7'12"N, 24°23'11"E) are part of the Pazardzhik – Plovdiv Plain, which belongs to the Thracia – Strandzha Subregion of the Kraishte – Thracia area. To the south and east, Besaparski Ridove (= Besaparski Hills) are confined by the Stara Reka River, to the west by the small Pishmanka River and to the north by Maritsa River (SLAVEYKOV, ZLATANOVA 2007). The area is characterized by flat and hilly relief, the highest point being Elenski Peak (534.5 m a. s. l.). In terms of orography, the heights constituting Besaparski Ridove are oriented in four ranges, i.e. eastern, western, northern and southern. The eastern range begins in the north with Trivodishki Hill (Tekirski Bair), followed by the southward oriented Novoselsko-Krichimski Hill. The northern range begins with

the already mentioned Trivodishki Hill in the east and continues to the west with the Ognyanovsko-Sinitevski Hill, which is the highest and most impressive of the rest of the hills. The westernmost hill in the northern range is the Glavinishki Hill, separated from the Ognyanovsko-Sinitevski Hill by the small Sinitevsko Plain. The southern range, referred to as Kapitandimitrievski Hill, is almost uninterrupted, with lower eastern (Babata) and western and higher middle (Alanchal) parts. The flat elevation Shirokia Sart connects Kapitandimitrievski Hill to Ognyanovsko-Sinitevski Hill. Thus, these two hills encompass Sinitevsko Karstic Plain from north, east, and south. The western range comprises the Kochagovski Bair. This hill as well as the area falling within the triangle closed between the town of

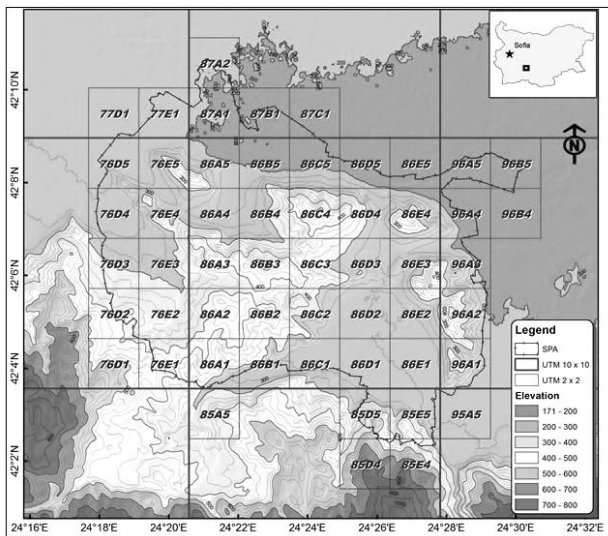


Fig. 1. Map of Besaparski Ridove Special Protection Area.

Peshtera and the villages of Kapitan Dimitriev and Byaga also belong to Besaparski Ridove (SLAVEYKOV, ZLATANOVA 2007). The climate is moderate continental, characterized by relatively mild winter and hot summer. Precipitation ranges between 500 and 800 mm/m². The soils are of the alluvial-meadow type. Woodland amounts to app. 936 ha, of which 605 ha are covered by deciduous forests and the rest by coniferous monocultures. The Special Protection Area (SPA) covers a total area of about 152.9 km². The territory of Besaparski Ridove SPA (BG 0002057) is confined by the road to the town of Peshtera to the west and by the Vacha River to the east. The northern border of the site is situated along Maritsa River while the southern border runs across the areas of the villages of Radilovo, Bega and Kozarsko and reaches the town of Krichim (Fig. 1). The fish-breeding ponds near the village of Tri Voditsi also fall within the boundaries of the SPA.

The calcareous hills are characterized by specific vegetation, which determines their significance as a habitat of rare, endemic and relict species. The territory is represented mainly by calciphilic and thermophilic grass communities dominated by *Dichanthium* (*Dichanthium ischaemum* L.), Bunchgrass (*Chrysopogon gryllus* L.), and Feather grass (*Stipa capillata* L.), hence the steppe-like character of the habitats. Arable land accounts for a significant share of the region. There are isolated patches of deciduous forests, composed of Downy oak (*Quercus pubescens* Willd.), Virgilian oak (*Quercus virgiliana* Ten.), Hungarian oak (*Quercus frainetto* Ten.), Durmast oak (*Quercus daleschampii* Ten.) and Manna ash (*Fraxinus ornus* L.). Small percentage of the territory is occupied by shrubs, represented by

Jerusalem thorn (*Paliurus spina-christi* L.), Prickly juniper (*Juniperus oxycedrus* L.), and Oriental hornbeam (*Carpinus orientalis* L.). A local endemic plant species – Tekirska mishorka (*Gypsophila tekirae* Stefanov), is also found on the hills (DIMITROV, PETROVA 2014; TZONEV et al. 2014).

Data on the particular bird species were published in the works of HRISTOVICH (1890), PATEV (1950), BOEV *et al.* (1964), DONTSCHIEV, DARAKTSCHIEV 1971, NANKINOV (1979, 1981, 1989), DARAKCHIEV, NIKOLOV (1984), NANKINOV, BORISOV (1988), PETROV *et al.* (2006), KOSTADINOVA, GRAMATIKOV (2007), IANKOV (2007), NIKOLOV *et al.* (2007, 2011).

The paper presents the status of the rare bird species as well as the species of conservation significance. Species listed according to the IUCN categories: EN – endangered; VU – vulnerable; NT – near threatened; LC – least concern, species listed according to the European conservation status – SPEC 1, 2 and 3, species threatened at European level, belonging to the following categories: endangered (E), vulnerable (V), rare (R), declining (D), historically declining (H), as well as those subject to protection within the SPA, are considered species of conservation significance. Species recorded for the first time in this region are considered rare.

Materials and methods

The territory of Besaparski Ridove SPA was split into 57 (2 x 2 km) squares, part of a standard UTM grid (LERER, DELCHEV 1984). Each square was visited twice during the period March – July and once during the period August – February. The data were gathered between April 2003 and August 2011. The applied methods included: (1) transect method and (2) viewpoint method (BIBBY et al. 1998, ANDERSON 2007). The transects were of various length, depending on the natural features of the terrain and comprising all habitats. Viewpoint observations were done in favorable weather conditions, lasting 1-2 hours. The equipment used during the survey included binoculars OLYMPUS 10 x 50 and NIKON 10.5 x 45 as well as spotting scopes Swarovski 20 x 60 and LEICA 20 x 45. The types of the habitats harbouring the recorded species were also registered. The records of raptors also included data on the number and species and, whenever possible, we took notes of age, species, flight direction and height, as well as behaviour of the individuals. Each record was put in a standard data form. Each raptor record was plotted in situ on a topographic map, entering the number of observation, delineating the soaring territory with a broken line (– –), marking the flight direction

with an arrow (→), indicating the areas where birds disappeared in the woods with (X), and highlighting every raptor nest found in the region with (●) (GILBERT *et al.* 1999). The cases of birds leaving the 2 x 2 km square were also reflected on the map. During the period April-May, all nests found, as well as the territories potentially harbouring such nests, were inspected. Nest features and coordinates were recorded during the first visit. Occupied nests were visited in June and July to record the breeding success. The degree of breeding reliability was according to HAGEMEJER, BLAIR (1997), as well as the estimated abundance: (1) 1–5 pairs; (2) 6–20 pairs; (3) 21–100 pairs; (4) >100 pairs.

Thorough bibliographic review of all published information related to this region was carried out.

Results

List of species. Conservation status

A total of 184 species of birds belonging to 17 orders were recorded within Besaparski Ridove SPA (Annex 1). These included 113 breeding, 80 migratory, 38 wintering, 12 vagrant, and 4 extinct species¹.

Out of the species occurring in the area, 99 are of European conservation concern (SPEC) (BIRDLIFE INTERNATIONAL 2004); 10 species fall under category SPEC 1, 23 species are threatened in Europe (SPEC 2) and 48 species are under SPEC 3. Twelve species are globally threatened, out of them 6 species are near threatened, 4 species are vulnerable and two species are endangered (IUCN 2013). According to the European threat status of birds (TUCKER, HEAT 1994), 7 of the recorded species are endangered, 28 vulnerable, 8 rare, 31 declining, and 6 historically declining. Of all species recorded in Besaparski Ridove SPA, 52 species are listed in Annex I of Council Directive 79/409/EEC on the conservation of wild birds, 91 species are included into the Convention on the Conservation of Migratory Species of Wild Animals (Bonn Convention), 179 species in the Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention) and 161 species in the Bulgarian Biological Diversity Act.

The area is of global significance for the conservation of the globally threatened Imperial Eagle, also being one of the most important territories of European significance for the breeding Tawny Pipit, Long-legged Buzzard and Calandra Lark in Bulgaria (KOSTADINOVA, GRAMATIKOV 2007).

Status of rare species and species of conservation significance

Pygmy Cormorant (*Phalacrocorax pygmeus* Pallas, 1773)

The species was reported by HRISTOVICH (1890) as breeding on willow trees near the village of Tri Voditsi. NANKINOV (1989) reported one pair for 1956. Nowadays, the species is wintering in varying abundance along Maritsa River and in the area of the fish-breeding ponds near the village of Tri Voditsi, numbering sometimes up to 200 individuals foraging in this region.

Night Heron (*Nycticorax nycticorax* Linnaeus, 1758)

At the end of the 19th century, there was a colony of 12 pairs breeding on an elm-tree near the village of Tri Voditsi (HRISTOVICH 1890). PATEV (1950) reported that the colony had disappeared long ago as a result of tree felling. Currently, the species is migratory.

Little Bittern (*Ixobrychus minutus* Linnaeus, 1766)

The recorded numbers of the species amounted to 1-5 pairs in squares KG 86E4, KG 96A5, KG96A4.

Bittern (*Botaurus stellaris* Linnaeus, 1758)

The species was observed on May 23rd, 1972 in the vicinity of the village of Tri Voditsi (BOEV 1985). There are no recent data on this species.

Purple Heron (*Ardea purpurea* Linnaeus, 1766)

Single individuals can be sighted during spring migration. Three individuals of the species were observed on April 29th 2004; 6.04.2006 – 1 individual, 27.04.2006 – 2 individuals, 13.05.2008 – 4 individuals, 14.05.2008 – 1 individual.

Grey Heron (*Ardea cinerea* Linnaeus, 1758)

Around 1890 (HRISTOVICH 1890) reported colonies on the elm-trees near the villages of Tri Voditsi and Kapitan Dimitrievo. The colony, comprising 28 occupied nests in the area of Tri Voditsi, was located in the village itself. Later, PATEV (1950) reported that the colonies had been destroyed long ago. Nowadays, the species can be observed throughout the year in low numbers, yet there are no data on breeding.

Black Stork (*Ciconia nigra* Linnaeus, 1758)

One pair breeding near the border of the site, along the Vacha River between the village of Kurtovo Konare and the town of Krichim; 2-3 more pairs foraging in the study area.

White Stork (*Ciconia ciconia* Linnaeus, 1758)

Six pairs breeding in this region distributed as

¹A species can have more than one status.

follows: one pair in each of the squares KG 76E3 and KG 86D2, and four pairs in square KG 86E2.

Shoveler (*Anas clypeata* Linnaeus, 1758)

The species can be sighted rarely, during spring migration. A flock of 7 birds was recorded on March 10th, 2004, as well as two individuals on February 22nd, 2007 and five individuals on February 17th, 2009.

Mallard (*Anas platyrhynchos* Linnaeus, 1758)

Breeding along Maritsa River, in the area of the fish-breeding ponds of the village of Tri Voditsi, as well as in small reservoirs on the hills; Recorded in squares KG86E4 and KG96A5, represented by a total of 1-5 pairs for both squares; Two pairs breeding in square KG86D2, and one pair in KG86C1.

Garganey (*Anas querquedula* Linnaeus, 1758)

Isolated pairs breeding along Maritsa River and in the area of the fish-breeding ponds of the village of Tri Voditsi; slightly increased numbers during migration.

Pochard (*Aythya ferina* Linnaeus, 1758)

Flocks of 10-20 individuals migrating along Maritsa River. The species was recorded in winter on Maritsa River near the town of Pazardzhik (16.01.2001 – 16 individuals).

Ferruginous Duck (*Aythya nyroca* Gldenstdt, 1770)

On December 26th, 1889 an individual was shot on Maritsa River near the town of Pazardzhik (HRISTOVICH 1890). Records from the Tri Voditsi reservoir exist for the 20th century (IANKOV 2007).

Egyptian Vulture (*Neophron percnopterus* Linnaeus, 1758)

At the end of the 19th century the species used to breed in the immediate vicinity on the northern slopes of the Rhodope Mountains (HRISTOVICH 1890). The species was observed on June 12th, 2008 – an individual in fourth plumage (P. IANKOV, D. GRADINAROV, pers. comm.).

Griffon Vulture (*Gyps fulvus* Hablizl, 1783)

NANKINOV (1981), based on data provided by local people, reported two breeding pairs until 1920 on the Elenski Peak. Considering the non-availability of suitable nesting substrate, these were probably birds breeding on the northern slopes of the Rhodope Mountains, using this region for foraging.

Black Kite (*Milvus migrans* Boddaert, 1783)

One pair breeding on Maritsa River in the vicinity of the village of Sinitevo, square KG87B1.

Golden Eagle (*Aquila chrysaetos* Linnaeus, 1758)

Isolated non-breeding individuals in immature plumage foraging in this region throughout the year. The species was recorded on March 12th, 2004 – 1 ind. in second plumage; 31.03.2004 – 1 ind. in third

plumage; 30.04.2004 – 1 ind. in second plumage; 23.06.2004 – 1 ind. in second plumage; 20.05.2005 – 1 ind. in third plumage; 29.07.2005 – 1 ind. in third plumage + 1 ind. in second plumage; 26.10.2005 – 1 ind. in second plumage; 19.03.2006 – 1 ind. in second plumage; 17.02.2009 – 1 ind. in second plumage; 14.05.2010 – 1 ind. in second plumage.

Eastern Imperial Eagle (*Aquila heliaca* Savigny, 1809)

At the end of the 19th century the species was reported to be breeding on an elm-tree in the area of the village of Sinitevo, as at the same time several pairs were probably breeding in this region (HRISTOVICH 1890). Today, Besaparski Ridove are a Temporary Settlement Area, harboring floaters throughout the year (DEMERDZHEV 2011). The region harbors dense populations of Suslik (*Spermophilus citellus* Linnaeus 1766) (KOSHEV, NEDYALKOV 2014), which is the major prey species for the eagles. Varying numbers of individuals have been observed over the years (Fig. 2). The maximum number was recorded in 2005 and 2006 – 6 individuals. Perhaps the number of Eastern Imperial Eagles that visited Besaparski Ridove was significantly underestimated due to the applied methods, based on visual observations. The analysis of the age of the Eastern Imperial Eagles that had visited this region (n = 36) revealed that almost half of them were in second plumage (42 %), followed by adults (22 %) and birds in third plumage (17 %). The rest of the age groups were poorly represented. On March 6th, 2008, remains of an Imperial Eagle were found in the area of Besaparski Ridove. The cause of death was not established since the remains of the eagle had been exposed to weather conditions for a long time. In the spring and summer of 2010 and 2011, Besaparski Ridove SPA was repeatedly visited by an Eastern Imperial Eagle tagged

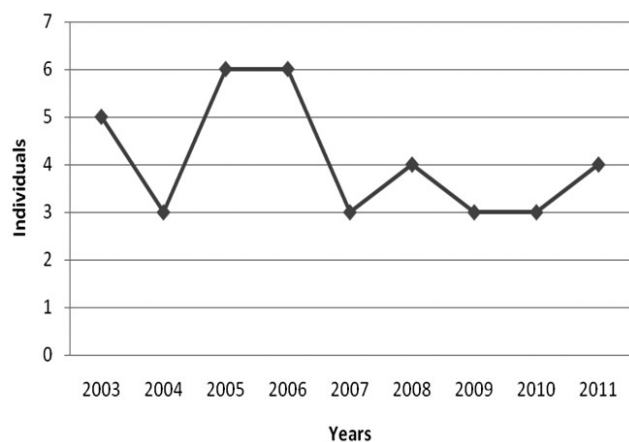


Fig. 2. Dynamics of different Eastern Imperial Eagles that had visited Besaparski Ridove.

with a satellite transmitter. The bird was tagged in 2009 in its nest, situated on the Tundzha River in the vicinities of the town of Sliven. The eagle was poisoned by bait set by pigeon fanciers, and thanks to the modern technology applied, it was found near the town of Perushtitsa on June 10th, 2011.

Spotted Eagle (*Aquila clanga* Pallas, 1811)

In the past, the species was possibly breeding and wintering. Two individuals were shot during the breeding period (June 6th, 1907 and June 30th, 1907) in the forest near the town of Krichim (IANKOV 2007). Another individual was collected in the same place on 17.01.1911 (BOEV *et al.* 1964). The skins of these individuals are kept at the National Museum of Natural History at the Bulgarian Academy of Science.

Lesser Spotted Eagle (*Aquila pomarina* Brehm, 1831)

In 2003, a pair bred on a Willow tree (*Salix* sp.) on the Stara Reka River, between the village of Isparihovo and the town of Krichim. In the years following this record the territory was not occupied; another pair breeding in a forest on the site border (KG85D5).

Steppe Eagle (*Aquila nipalensis* Cabanis, 1854)

Vagrant species foraging in this region. Birds in immature plumage were observed on: 11-13.04.2003 (1 ind. in second plumage); 20.05.2004 (1 ind. in second plumage); 19.05-20.05, 29.07.2005 (1 ind. in second plumage); 9.04.2007 (1 ind. in fifth plumage); 9.06.2007 (1 juvenile ind.) (PETROV *et al.* 2006, IANKOV 2007).

Booted Eagle (*Aquila pennata* Gmelin, 1788)

A pair breeding on the northern slopes of the Rhodope Mountains foraging in this region.

Short-toed Eagle (*Circaetus gallicus* Gmelin, 1788)

In the period 2003-2005, a pair was probably breeding in a forest east of the village of Kapitan Dimitriev. There were numerous observations of flying adult birds carrying food and disappearing in that direction. Since this was a guarded military zone of restricted access, breeding was not proven. The military site was subsequently closed and the forest felled. In 2009, a pair consisting of birds in immature plumage was regularly observed during the breeding period resting or roosting near a former nest of Long-legged Buzzards in square KG86B3. The birds stayed in the territory but did not breed. Throughout the years of survey, single individuals in immature plumage were observed foraging in the SPA during the breeding period.

Osprey (*Pandion haliaetus* Linnaeus, 1758)

Migratory species recorded annually with isolated individuals during spring and autumn migra-

tion on Maritsa River and the fish-breeding ponds of the village of Tri Voditsi. Isolated individuals were observed on March 31st, 2004, September 30th, 2005, March 29th, 2007, March 27th, 2009, and October 27th, 2008.

Hen Harrier (*Circus cyaneus* Linnaeus, 1766)

Wintering in low numbers in this region (3-8 individuals). The species is found from the second half of November till the end of April.

Pallid Harrier (*Circus macrourus* Gmelin, 1770)

Rare sightings during spring migration and in winter. A female individual was recorded on December 23rd, 2006 and a male on March 27th, 2009.

Long-legged Buzzard (*Buteo rufinus* Cretzchmar, 1827)

Resident breeding species. NANKINOV (1981) reported the Long-legged Buzzard as a wintering species for this region, recorded on January 23rd, 1972. Food abundance and suitable nesting conditions are a precondition of the breeding of the species. The maximum number of occupied territories (n = 19) was recorded in 2008. The highest density of this species in Bulgaria was recorded in Besaparski Ridove – 14 pairs/100 km² (KG 86). The distribution by squares was as follows: KG 86 – 14 pairs, distributed in KG 86 (A4,B4,E4,A3,C3,D3,E3,C2,D2) each holding one pair; 2 pairs in KG 86D4, and 3 pairs in KG 86B3. In KG 76 the species was represented by 2 pairs, breeding respectively in squares (E5) and (E4). In KG 96 – 3 pairs (two pairs in square (A2) and one pair in square (A1)).

Honey Buzzard (*Pernis apivorus* Linnaeus, 1758)

One pair breeding in the vicinities of the village of Byaga (KG 86A3).

Levant Sparrowhawk (*Accipiter brevipes* Severtzov, 1850)

One breeding pair recorded in 2007 in square KG86C2, and one pair recorded in 2010 in KG 76E5.

Lesser Kestrel (*Falco naumanni* Fleischer, 1818)

Lesser Kestrel was reported as a common species breeding on old buildings in the town of Pazardzhik and the trees near the village of Ognyanovo in the early 1960s (BOEV *et al.* 1964). NANKINOV (1981) reported several individuals up to 1965. The species has now gone extinct in the region.

Kestrel (*Falco tinnunculus* Linnaeus, 1758)

Stable abundance, with non-periodic fluctuations of the population. NANKINOV (1981) reported 19 pairs in the period 1973-1980. The same author reported that as a result of the application of chemicals and felling of trees, many of the pairs were no longer breeding. According to recent data, the highest

number of pairs was recorded in 2004 (n = 19). The species breeds mainly on high-voltage electric poles and in quarries. When breeding on electric poles, Kestrels occupy Magpie nests, and its distribution in this region is more or less related to the location of Magpie nests. These nests are quite unstable and get usually blown down by the strong autumn and winter winds. The highest breeding abundance was recorded in square KG8618 (3 pairs).

Red-footed Falcon (*Falco vespertinus* Linnaeus, 1766)

Rarely, during spring migration. Recorded on 8.05.1974 – 2 individuals (NANKINOV 1981) and 12.05.2007 – 14 individuals.

Peregrine Falcon (*Falco peregrinus* Tunstall, 1771)

Birds from the pairs breeding on the northern slopes of the Western Rhodopes foraging in the area. Three to four pairs breed in the adjacent areas on the slopes of the Western Rhodopes.

Saker Falcon (*Falco cherrug* Gray, 1834)

Recorded on 14-15.04.2003 – 1 ad; 10.03, 23.3-24.03, 29.04., 20.07. 2004 – 1 ad; 11.03.2006 -1 ad; 30.09.2005 – 1 ind. in second plumage. Possible breeding of a pair on the northern slopes of the Rhodope Mountains during the first half of the first decade of the 21st century.

Grey Partridge (*Perdix perdix* Linnaeus, 1758)

Declining in this particular area. NANKINOV (1981) reported the species as abundant and widespread in this region in the 1970s. Nowadays, the species occurs in small flocks of a few individuals.

Quail (*Coturnix coturnix* Linnaeus, 1758)

Distributed in low numbers throughout the region, found mainly in wheat fields.

Rock Partridge (*Alectoris graeca* Meisner, 1804)

Isolated individuals on the rocky parts of the Elenski Peak.

Chukar (*Alectoris chukar* Watson, 1962)

According to the data provided by the hunters' union of the town of Pazardzhik, tens of individuals were released between 1990 and 2000 in Besaparski Ridove area in the vicinities of the villages of Ognyanovo and Kapitan Dimitriev. According to the hunters, all resettled birds were eaten by jackals and foxes. There were also cases of resettled Chukars found in the village yards.

Great Bustard (*Otis tarda* Linnaeus, 1758)

In the end of the 19th century, the species was widespread in the region of Pazardzhik (HRISTOVICH 1890). At that time, the Great Bustard was probably breeding in Besaparski Ridove area as well.

Little Bustard (*Tetrax tetrax* Linnaeus, 1758)

In the end of the 19th century, it was reported as a resident species for this region, with nests found in

Besaparski Ridove, "Babata" and "Turska zemya" areas (HRISTOVICH 1890).

Black-winged Pratincole (*Glareola nordmanni* Fischer, 1842)

In August and September 1890, a flock of 50 individuals was observed on Maritsa River near the town of Pazardzhik (HRISTOVICH 1890). The same author shot two birds from the flock.

Little Ringed Plover (*Charadrius dubius* Gmelin, 1789)

Breeding numbers amounting to 1-5 pairs along Maritsa River in squares KG 86 (C5,D5,E5) and KG 96 (A5,B5).

Stone-curlew (*Burhinus oedicnemus* Linnaeus, 1758)

Reported as a common species breeding in the region in the late 19th century (HRISTOVICH 1890). Inhabiting arid places throughout the SPA territory. In all squares the recorded numbers amounted to 1-5 pairs. The species was recorded in KG 76E5, KG 86 (A5,A4,B4,E4,A3,B3,C3,B2,C2,D2), KG 96 (A2,A1). The breeding population was estimated at 15-20 pairs.

Ruff (*Philomachus pugnax* Linnaeus, 1758)

Recorded by HRISTOVICH (1890) during spring and autumn migration in the vicinity of the village of Tri Voditsi.

Lapwing (*Vanellus vanellus* Linnaeus, 1758)

Recorded in low numbers during autumn and spring migration (11.03.2008 – 12 individuals, 10.11.2008 – 7 individuals, 17.02. 2009 – 15 individuals).

Redshank (*Tringa totanus* Linnaeus, 1758)

Reported by HRISTOVICH (1890) as a migratory species for this region. Probably breeding in the early decades of the 20th century.

Wood Sandpiper (*Tringa glareola* Linnaeus, 1758)

Regular winter sightings of individuals in Maritsa River flood areas between the town of Pazardzhik and the village of Tri Voditsi.

Common Sandpiper (*Actitis hypoleucos* Linnaeus, 1758)

Reported by HRISTOVICH (1890) and BOEV et al. (1964) as a common species breeding along Maritsa River. Within this study, the species was recorded in low numbers during the winter period.

Snipe (*Gallinago gallinago* Linnaeus, 1758)

BOEV et al. (1964) recorded the species during the breeding season along Maritsa River in the vicinity of the village of Ognyanovo. Another observation near the village of Ognyanovo on 11.07.1960 (DONTSHEW, DARAKTSCHIEW 1971). Possible breeding of isolated pairs during this period. Currently, the Snipe is a migratory species for this region.

Turtle Dove (*Streptopelia turtur* Linnaeus, 1758)

Common breeding species for this region.

Barn Owl (*Tyto alba* Scopoli, 1769)

Breeding pairs recorded in the villages of Isparihovo, Novo Selo, and Kapitan Dimitriev. The population was estimated between 5 and 10 pairs.

Scops Owl (*Otus scops* Linnaeus, 1758)

Common breeding species. Between 3 and 5 pairs breed in the region.

Little Owl (*Athene noctua* Scopoli, 1769)

Breeding in villages and quarries.

Short-eared Owl (*Asio flammeus* Pontoppidan, 1763)

One individual was observed on 9.04. 2007.

Nightjar (*Caprimulgus europaeus* Linnaeus, 1758)

Distributed throughout the IBA, represented by 1-5 pairs per square. Higher density was recorded only in square KG 86B5. Estimated population size 15-25 pairs.

Bee-eater (*Merops apiaster* Linnaeus, 1758)

Breeding in sheer banks of Maritsa River, excavation areas, as well as deposits left after rock processing in quarries. The breeding population of the species in this region comprises 150-200 pairs.

Roller (*Coracias garrulus* Linnaeus, 1758)

Unevenly distributed in the study area, occurring in poplar plantations along Maritsa River: squares KG 86 (C5,D5,E5), KG 96 (A5,B5), and riparian habitats in squares KG 76 (D3,D2,E2). Population amounting to 7-10 pairs.

Kingfisher (*Alcedo atthis* Linnaeus, 1758)

Breeding in holes in Maritsa River banks. The population for this region amounts to 8-10 pairs.

Wryneck (*Jynx torquilla* Linnaeus, 1758)

Rare breeding species. Between 3 and 4 birds were observed in summer in a suitable habitat.

Green Woodpecker (*Picus viridis* Brandt, 1841)

Recorded in low numbers (3-4 pairs), mainly in poplar plantations along Maritsa River.

Syrian Woodpecker (*Dendrocopos syriacus* Gengler, Stresemann, 1919)

Occurring throughout the territory, represented by isolated pairs. Stable population of 20-30 pairs.

Sand Martin (*Riparia riparia* Linnaeus, 1758)

Breeding in sheer banks of Maritsa River.

Barn Swallow (*Hirundo rustica* Linnaeus, 1758)

Common breeding species.

Calandra Lark (*Melanocorypha calandra* Linnaeus, 1766)

Widely distributed throughout the study area. Inhabiting various grass biotopes. Lower numbers recorded only along Maritsa River. The population of the species within the IBA amounts to 320-1000 pairs.

Short-toed Lark (*Calandrella brachydactyla* Leisler, 1814)

The species prefers dry rocky areas of short grass vegetation; unevenly distributed within the SPA, mostly with 1-5 pairs per square. Numbers exceeding 5 pairs recorded in the following squares: KG 76E4, KG 86 (A4, C2), KG 96 (A3,A2,A1). The population amounts to 30-150 pairs.

Lesser Short-toed Lark (*Calandrella rufescens* Vieillot, 1820)

Breeding in Bulgaria not proved, yet considered possible. Observed in the summer of 2005 in Besaparski Ridove area (IANKOV 2007).

Crested Lark (*Galerida cristata* Linnaeus, 1758)

Common breeding species for this region.

Woodlark (*Lullula arborea* Linnaeus, 1758)

Inhabiting forest areas. Numbers exceeding 20 pairs only in the following squares: KG 76E1; KG 86 (C4, A2); KG 85 (D5, E5); KG 96A2. Some 140-150 pairs breeding in the SPA.

Skylark (*Alauda arvensis* Linnaeus, 1758)

Common breeding species for the study area.

Tawny Pipit (*Anthus campestris* Linnaeus, 1758)

Relatively uniform distribution throughout the SPA. Population estimated at 18-60 pairs.

Redstart (*Phoenicurus phoenicurus* Linnaeus, 1758)

Migratory species for this region, observed on 26.05. 2007 – 4 individuals, 16.05.2008 – 5 individuals, 25.05.2009 – 3 individuals.

Stonechat (*Saxicola torquata* Linnaeus, 1766)

Possible sightings during spring migration. Observed on 17.05.2008 – 6 individuals, 25.05.2009 – 4 individuals.

Black-eared Wheatear (*Oenanthe hispanica* Linnaeus, 1758)

Rare breeding species for this region. Population estimated at 15-25 pairs. Since 2005, the population has been in decline.

Aquatic Warbler (*Acrocephalus paludicola* Vieillot, 1817)

Recorded during migration.

Spotted Flycatcher (*Muscicapa striata* Pallas, 1764)

Breeding species for this region; inhabiting outskirts of forests and bushes.

Olive-tree Warbler (*Hippolais olivetorum* Strickland, 1837)

A total of 3-5 breeding pairs recorded to the north of the town of Krichim and in the vicinity of the village of Novo Selo. This record is the westernmost breeding locality in the Upper Thracian valley.

Olivaceous Warbler (*Hippolais pallida* Hemprich, Ehrenberg, 1833)

Common breeding species, inhabiting various biotopes.

Barred Warbler (*Sylvia nisoria* Bechstein, 1795)

Rare species for this region. KOSTADINOVA, GRAMATIKOV (2007) reported 10 breeding pairs in the territory of the IBA.

Subalpine Warbler (*Sylvia cantillans* Pallas, 1764)

The species was first recorded on 6.04.2009 – a singing male in a suitable biotope near the town of Krichim (P. IANKOV, D. GRADINAROV, D. DEMERDZHIEV, UNPUBLISHED DATA). In May, three males – singing and defending their breeding territories, were observed in the same place (KG85E4). Although no nest has been found, breeding is considered quite likely. This record is the northernmost probable breeding locality of the species in Bulgaria (IANKOV 2007).

Bonelli's Warbler (*Phylloscopus bonelli* Vieillot, 1819)

Breeding species inhabiting outskirts of forests and bushes.

Wood Warbler (*Phylloscopus sibilatrix* Bechstein, 1793)

Migratory species for this region. Small groups were observed as follows: April 29th, 2004 – 7 individuals; April 27th, 2006 – 5 individuals; April 6th, 2009 – 3 individuals; and May 14th, 2010 – 8 individuals.

Red-backed Shrike (*Lanius collurio* Linnaeus, 1758)

Evenly distributed throughout the territory. Lower density recorded in the squares along Maritsa River. Population estimated at 200-250 pairs.

Lesser Grey Shrike (*Lanius minor* Gmelin, 1788)

Rare species for the IBA. Isolated pairs recorded in only five squares: KG 76 (E4,E1); KG 86 (C3,D3,A2). Breeding population estimated at 5-7 pairs.

Great Grey Shrike (*Lanius excubitor* Linnaeus, 1758)

Wintering species of low abundance. Recorded as follows: January 17th, 2006 – 2 individuals; November 21st, 2005 – one individual; December 29th, 2008 – 4 individuals; and February 17th, 2009 – 3 individuals.

Woodchat Shrike (*Lanius senator* Linnaeus, 1758)

The species was recorded in 13 squares, as only seven of them held numbers exceeding 5 pairs per square. Population amounting to 60-120 pairs.

Masked Shrike (*Lanius nubicus* Lichtenstein, 1823)

The species was first recorded on April 29th, 2008 (NIKOLOV, 2012). Some 10-15 breeding pairs were recorded. This record is the westernmost breeding locality of the species in the Upper Thracian valley; until 2005 the species' distribution was recorded westwards along Maritsa River up to the town of Plovdiv (DEMERDZHIEV, STOYCHEV 2008).

Rose-coloured Starling (*Sturnus roseus* Linnaeus, 1758)

Sporadic records over the years. The species was recorded by HRISTOVICH (1890) on 19.05.1889 – 5-6 individuals in the vicinity of the village of Tri Voditsi. On 21.06.2008 we found a colony of 500 pairs and newly fledged birds in a quarry to the south of the village of Sinitevo. On 28.06.2010 we recorded 700 pairs in the same place.

Black-headed Bunting (*Emberiza melanocephala* Scopoli, 1769)

Widely distributed throughout the territory. Avoiding high areas and forests. Population estimated at 300-600 pairs.

Ortolan Bunting (*Emberiza hortulana* Linnaeus, 1758)

Avoiding open areas. Population amounting to 300-550 pairs.

Rock Sparrow (*Petronia petronia* Linnaeus, 1766)

Initially, a nest was found on 20.05.2006 in a rock cleft north of the village of Byaga (KG86B2). Subsequently, nests were found in quarries to the east of the village of Kapitan Dimitriev (KG86A3) and to the south of the village of Sinitevo (KG86B4). The breeding population is estimated at 7-10 pairs. This record is the northernmost confirmed breeding locality of the species in Bulgaria (IANKOV 2007).

Discussion

Population trends and dynamics of the avifauna

Data on birds inhabiting the area of Besaparski Ridove of the late 19th century and the first half of the 20th century are scarce, presenting the status of particular species (HRISTOVICH 1890, PATEV 1950, BOEV et al. 1964). The information contained in these publications, however, shed light on the current state of some rare species as well as species facing extinction that used to be widespread in the past. At the close of the 19th century, the globally threatened Imperial Eagle used to breed in this area nesting on Elm trees (*Ulmus* sp.), numbering several pairs at that time. Nowadays, non-breeding birds only visit Besaparski Ridove as a temporary settlement area (DEMERDZHIEV 2011). The Little Bustard also used to breed in suitable habitats, while the Great Bustard was a common widespread species, sometimes forming huge winter congregations (HRISTOVICH 1890). Both species have gone extinct from the breeding avifauna of Bulgaria. The colonies of Grey Heron and Night Heron situated on the Elm trees in the villages of Tri Voditsi and Kapitan Dimitriev disappeared in the first half of the 20th century when the trees were cut (PATEV

1950). The Pygmy Cormorant reported by HRISTOVICH (1890) as breeding near the village of Tri Voditsi was last recorded (one pair) during the breeding period of the year 1956 (NANKINOV 1989). Today, this species is reported only as wintering or migrating for this region. The European Roller and the Stock Dove, reported by HRISTOVICH (1890) as common breeding species in this particular area, have also been affected by the negative changes in the habitats over the years. The European Roller is rare and the Stock Dove can only be seen as a wintering species. The drastic changes resulting from the new agricultural policy introduced in the 1950s involved continuous loss of bird diversity as the most affected species were those inhabiting and foraging in grassland habitats. Soon after the Lesser Kestrel was reported by BOEV et al. (1964) as a common breeding bird, the species went extinct in this region. NANKINOV (1981) reported several individuals until 1965. The Common Redshank has probably bred until the first half of the 20th century (HRISTOVICH 1890, BOEV et al. 1964). It has gone extinct as a breeding species in this region. The changes in the breeding avifauna of Besaparski Ridove involved not only extinction of breeding species. Over the years, many species have started breeding in this region, as a result of the expansion of the range and the availability of suitable breeding conditions. The Long-legged Buzzard was reported by NANKINOV (1981) as wintering. In the 1980s and 1990s, the opening of numerous quarries in Besaparski Ridove, offering a nesting substrate coinciding with the expansion of the species' range (MICHEV et al. 1984), was a pre-requisite for breeding and population increase. During the second half of the 20th century, as a result of natural expansion, species such as Levant Sparrowhawk, Red-rumped Swallow, Woodchat Shrike, and Olive-tree Warbler occurred in the region. In the 1970s, the Eurasian Oystercatcher and the Isabelline Wheatear were recorded for the first time in this region (NANKINOV 1979, NANKINOV, BORISOV 1988). New breeding bird species continued to appear after the year 2000. The Rock Sparrow was recorded as breeding in the region after 2006. The Subalpine Warbler was recorded in 2009, and the Masked Shrike – in 2008. Population decline was recorded with species such as Common Buzzard, Grey Partridge, Black-eared Wheatear, and Lesser Grey Shrike, while a population increase was recorded for Stone Curlew and European Bee-eater.

The significant number of species recorded in a relatively small territory ranks Besaparski Ridove among the areas of highest diversity of birds. As compared to these data, the species recorded in Eastern Rhodopes (n = 278), Western Rhodopes (n

= 247), Sakar (n = 253), Konyavska Mountain (n = 178), Sredna Gora (n = 230), Ograzhden (n = 166), Strandzha (n = 289), and the Middle Danubian Plain (n = 271) were reported for considerably larger areas (PETROV 1981, SIMEONOV, BAEVA 1988, SIMEONOV, DELOV 1989, STOYCHEV et al. 2005, SHURULINKOV et al. 2005, PETROV et al. 2006, MILCHEV 2007, STOYCHEV et al. 2008). The area is of particular importance, also considering the great number of recorded species of conservation significance.

Threats

Changes in agricultural practices. The large-scale ploughing in 2010 and 2011 of areas that had been managed as pastures in recent decades resulted in a significant loss of valuable foraging habitats for raptors as well as many other species inhabiting grassland habitats.

Opening and exploitation of quarries for the production of inert materials. This is a key factor leading to destruction of grassland habitats. Stones fall in the nests located in the quarries, which may cause juvenile mortality or clutch loss.

Nests falling from electric poles due to strong winter winds or from quarries as a result of landslides. The insufficient nesting substrate determines this threat as a factor limiting the breeding activity of particular pairs.

Illegal dumping grounds in the quarries. The uncontrolled waste disposal is a potential threat to birds as they may get poisoned or injured.

Human disturbance. Anthropogenic activities near raptor nests sometimes result in breeding failure or low breeding success.

Active quarries. These may cause disturbance or loss of breeding habitats. Species breeding in active quarries have lower breeding success.

Fires and conflagrations. They result in destruction and devastation of breeding habitats, and, sometimes, may cause bird mortality.

Hazardous power supply network. The survey of a part of the 20kV power supply network carried out in the autumn and winter of 2004 reported three cases of bird death caused by electrocution (DEMERDZHIEV et al. 2009) – a Common Kestrel and two Hooded Crows. This threat remains potentially high.

Poisons. Mass use of poisons against rodents was reported; this poses a potential threat to the avifauna, and, in particular, to birds of prey feeding on these key prey species. The Imperial Eagle found dead in the spring of 2008 had most probably been poisoned.

Poison baits – pigeons. The existing practice applied by local pigeon fanciers, namely smearing

pigeons with poison and leaving them as live baits in an accessible place, so that they can be easily found and eaten by birds of prey, caused the death of an Imperial Eagle in 2011. Perhaps many raptors fall victims to similar practices, considering the widespread use of poison baits.

Expansion of vineyards at the expense of valuable habitats. After 2004, the establishment of extensive vineyards in huge areas involved losses of valuable habitats. Significant Suslik colonies were destroyed, which resulted in reduced prey availability to raptors. The lost habitats were of importance to grassland breeding species of conservation significance, such as Short-toed Lark, Tawny Pipit, etc.

Afforestation with non-typical tree species. The result of this threat is habitat alteration and deterioration.

Off-road competitions. When organized during the breeding season, off road competitions entail disturbance of raptors and negative impacts on the avifauna in general.

Direct persecution of susliks as a key prey species in raptors' diet.

Poaching, unregulated hang- and paragliding, forestry activities during the breeding season.

Deforestation of the area; felling of single tall trees. This threat results in loss of suitable breeding substrate. In the beginning of the breeding season of

2008, illegal felling was recorded in two locations within the territory of Besaparski Ridove. A tree harboring a Long-legged Buzzard nest and another one with a Common Buzzard nest were cut. As a result of this felling, the Common Buzzard pair has stopped breeding since there are no trees suitable for nesting, while the Long-legged Buzzards have started breeding on an electric pole, which involves a significant risk of nest or chick falling. On November 21st, 2008 clear felling was recorded in an Oak forest in the vicinity of "Ognyanovsko-Sinitevski rid" Protected Site, where a tree harbouring an active Common Buzzard nest was also cut. The clear felling affected a part of the protected site. Shrinking of forest areas also has a negative indirect effect on most raptor populations.

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ANNEX 1. List of species recorded in the region of Besaparski Ridove Special Protection Area

| Nº | Species | English name | Status | BDA | SPEC | IUCN | ETS | WBD | BERN | BONN |
|-----|---|---------------------|--------|--------|------|------|-----|------------|------|------|
| 1. | <i>Podiceps cristatus</i> * (Linnaeus, 1758) | Great Crested Grebe | BWr | III | - | LC | S | - | III | - |
| 2. | <i>Tachybaptus ruficollis</i> * (Pallas, 1764) | Little Grebe | Wrb | III | - | LC | S | - | - | - |
| 3. | <i>Phalacrocorax carbo</i> * (Linnaeus, 1758) | Cormorant | Wm | - | - | LC | S | - | III | - |
| 4. | <i>Phalacrocorax pygmeus</i> * (Pallas, 1773) | Pygmy Cormorant | Wm | II/III | 2 | LC | V | I | II | II |
| 5. | <i>Nycticorax nycticorax</i> * (Linnaeus, 1758) | Night Heron | M | II/III | 3 | LC | D | I | II | - |
| 6. | <i>Ixobrychus minutus</i> * (Linnaeus, 1766) | Little Bittern | Bm | II/III | 3 | LC | (V) | I | II | II |
| 7. | <i>Botaurus stellaris</i> ** (Linnaeus, 1758) | Bittern | Rb! | II/III | 3 | LC | H | I | III | II |
| 8. | <i>Egretta garzetta</i> * (Linnaeus, 1766) | Little Egret | Mv | II/III | - | LC | S | I | II | - |
| 9. | <i>Egretta alba</i> * (Linnaeus, 1758) | Great Egret | Wm | II/III | - | LC | S | I | II | - |
| 10. | <i>Ardea purpurea</i> ** (Linnaeus, 1766) | Purple Heron | M | II/III | 3 | LC | V | I | II | II |
| 11. | <i>Ardea cinerea</i> * (Linnaeus, 1758) | Grey Heron | Rw | III | - | LC | S | - | III | - |
| 12. | <i>Ciconia ciconia</i> * (Linnaeus, 1758) | White Stork | Mb | II/III | 2 | LC | V | I | II | II |
| 13. | <i>Ciconia nigra</i> * (Linnaeus, 1758) | Black Stork | Bm | II/III | 3 | LC | R | I | II | II |
| 14. | <i>Cygnus olor</i> * (Gmelin, 1789) | Mute Swan | Wm | III | - | LC | S | II-2 | III | II |
| 15. | <i>Cygnus cygnus</i> * (Linnaeus, 1758) | Whooper Swan | Wm | II/III | 4 | LC | S | I | II | II |
| 16. | <i>Anser albifrons</i> * (Scopoli, 1769) | White-fronted Goose | W | II/III | - | LC | S | - | III | II |
| 17. | <i>Anas clypeata</i> * (Linnaeus, 1758) | Shoveler | Mw | IV | 3 | LC | (D) | II/1;III/2 | III | II |
| 18. | <i>Anas platyrhynchos</i> * (Linnaeus, 1758) | Mallard | Br | - | - | LC | S | II-1/III-1 | II | - |
| 19. | <i>Anas querquedula</i> * (Linnaeus, 1758) | Garganey | Mb | - | 3 | LC | V | II-2 | III | II |
| 20. | <i>Anas crecca</i> * (Linnaeus, 1758) | Teal | W | - | - | LC | S | II-1/III-2 | II | - |
| 21. | <i>Anas penelope</i> * (Linnaeus, 1758) | Wigeon | Wm | - | - | LC | S | II-1/III-2 | II | - |
| 22. | <i>Aythya ferina</i> * (Linnaeus, 1758) | Pochard | Mw | III | 2 | - | (D) | II/1;III/2 | III | II |
| 23. | <i>Aythya nyroca</i> ** (Güldenstädt, 1770) | Ferruginous Duck | w | II/III | 1 | NT | V | I | III | I/II |
| 24. | <i>Neophron percnopterus</i> * (Linnaeus, 1758) | Egyptian Vulture | V | II/III | 3 | EN | E | I;II | II | II |
| 25. | <i>Gyps fulvus</i> ** (Hablitzl, 1783) | Griffon Vulture | V | II/III | 3 | LC | R | I | II | II |
| 26. | <i>Milvus migrans</i> * (Boddaert, 1783) | Black Kite | Br | II/III | 3 | LC | V | I | II | II |
| 27. | <i>Aquila chrysaetos</i> * (Linnaeus, 1758) | Golden Eagle | V! | II/III | 3 | LC | R | I | II | II |
| 28. | <i>Aquila heliaca</i> * (Savigny, 1809) | Imperial Eagle | V | II/III | 1 | VU | E | I | II | I/II |
| 29. | <i>Aquila clanga</i> ** (Pallas, 1811) | Spotted Eagle | w | II/III | 1 | VU | E | I | II | I/II |

| Nº | Species | English name | Status | BDA | SPEC | IUCN | ETS | WBD | BERN | BONN |
|-----|--|----------------------|--------|----------|------|------|-----|------------|------|------|
| 30. | <i>Aquila pomarina*</i> (Brehm, 1831) | Lesser Spotted Eagle | Bm | II/III | 2 | LC | D | I | II | II |
| 31. | <i>Aquila nipalensis*</i> (Cabanis, 1854) | Steppe Eagle | V | III | 3 | LC | V | - | II | II |
| 32. | <i>Aquila pennata*</i> (Gmelin, 1788) | Booted Eagle | B! m | II/III | 3 | LC | R | I | II | II |
| 33. | <i>Circus gallicus*</i> (Gmelin, 1788) | Short-toed Eagle | B! m | II/III | 3 | LC | R | I | II | II |
| 34. | <i>Pandion haliaetus*</i> (Linnaeus, 1758) | Osprey | M | II/III | 3 | LC | R | I | II | II |
| 35. | <i>Circus aeruginosus*</i> (Linnaeus, 1758) | Marsh Harrier | Bm | II/III | - | LC | S | I | II | II |
| 36. | <i>Circus cyaneus*</i> (Linnaeus, 1766) | Hen Harrier | Mw | II/III | 3 | LC | V | I | II | II |
| 37. | <i>Circus pygargus*</i> (Linnaeus, 1758) | Montagu's Harrier | m | II/III | 4 | LC | S | I | II | II |
| 38. | <i>Circus macrourus*</i> (Gmelin, 1770) | Pallid Harrier | mw | II/III-1 | 1 | NT | (E) | I | II | II |
| 39. | <i>Buteo rufinus*</i> (Cretzschmar, 1827) | Long-legged Buzzard | Br | II/III | 3 | LC | (E) | I | II | II |
| 40. | <i>Buteo buteo*</i> (Linnaeus, 1758) | Common Buzzard | Br | III | - | LC | S | - | II | II |
| 41. | <i>Pernis apivorus*</i> (Linnaeus, 1758) | Honey Buzzard | Bm | II/III | - | LC | (S) | I | II | II |
| 42. | <i>Accipiter nisus*</i> (Linnaeus, 1758) | Sparrowhawk | Br | III | - | LC | S | - | II | II |
| 43. | <i>Accipiter gentilis*</i> (Linnaeus, 1758) | Goshawk | Br | III | - | LC | S | - | II | II |
| 44. | <i>Accipiter brevipes*</i> (Severtzov, 1850) | Levant Sparrowhawk | Bm | II/III | 2 | LC | R | I | II | II |
| 45. | <i>Falco naumanni**</i> (Fleischer, 1818) | Lesser Kestrel | Ext | II/III | 1 | LC | H | I | II | II |
| 46. | <i>Falco tinnunculus*</i> (Linnaeus, 1758) | Kestrel | Br | III | 3 | LC | D | - | II | II |
| 47. | <i>Falco vespertinus*</i> (Linnaeus, 1766) | Red-footed Falcon | M | II/III | 3 | NT | V | - | II | II |
| 48. | <i>Falco peregrinus</i> (Tunstall, 1771) * | Peregrine Falcon | B! r | II/III | 3 | LC | R | I | II | II |
| 49. | <i>Falco cherrug*</i> (Gray, 1834) | Saker Falcon | M? | II/III-1 | 1 | EN | E | I | II | II |
| 50. | <i>Falco columbarius*</i> (Linnaeus, 1758) | Merlin | Wm | II/III | - | LC | S | I | II | II |
| 51. | <i>Falco subbuteo*</i> (Linnaeus, 1758) | Hobby | Bm | II/III | - | LC | S | - | II | II |
| 52. | <i>Perdix perdix*</i> (Linnaeus, 1758) | Grey Partridge | Br | - | 3 | LC | V | II/III | III | - |
| 53. | <i>Phasianus colchicus*</i> (Linnaeus, 1758) | Pheasant | Br | - | - | LC | S | II-1/III-1 | III | - |
| 54. | <i>Coturnix coturnix*</i> (Linnaeus, 1758) | Quail | Bm | - | 3 | LC | V | II-2 | III | II |
| 55. | <i>Alectoris graeca*</i> (Meisner, 1804) | Rock Partridge | Br | II | 2 | LC | D | II-1 | III | - |
| 56. | <i>Alectoris chukar*</i> (Watson, 1962) | Chukar | Br | - | 3 | LC | V | II-2 | III | - |
| 57. | <i>Otis tarda**</i> (Linnaeus, 1758) | Great Bustard | Ext | II/III | 1 | VU | V | I | II | II |
| 58. | <i>Tetrax tetrax**</i> (Linnaeus, 1758) | Little Bustard | Ext | III | 1 | NT | V | I | II | - |
| 59. | <i>Rallus aquaticus*</i> (Linnaeus, 1758) | Water Rail | B | III | - | LC | S | II-2 | III | - |
| 60. | <i>Fulica atra*</i> (Linnaeus, 1758) | Coot | Br | - | - | LC | S | II-1/III-2 | II | - |

| Nº | Species | English name | Status | BDA | SPEC | IUCN | ETS | WBD | BERN | BONN |
|-----|---|--------------------------|--------|--------|------|------|-----|------------|------|------|
| 61. | <i>Gallinula chloropus</i> * (Linnaeus, 1758) | Moorhen | Br | III | - | LC | S | II-2 | III | - |
| 62. | <i>Glaucous-winged Pratincole</i> | Black-winged Pratincole | m | II/III | 1 | NT | E | | II | II |
| 63. | <i>Haematopus ostralegus</i> * (Linnaeus, 1758) | Oystercatcher | Bm | III | - | LC | (S) | II-2 | III | II |
| 64. | <i>Burhinus oedichenemus</i> * (Linnaeus, 1758) | Stone-curlew | B | II/III | 3 | LC | V | I | II | II |
| 65. | <i>Philomachus pugnax</i> ** (Linnaeus, 1758) | Ruff | v | II/III | 2 | LC | D | I/II-2 | III | II |
| 66. | <i>Vanellus vanellus</i> * (Linnaeus, 1758) | Lapwing | Mw | III | 2 | LC | V | II-2 | III | II |
| 67. | <i>Charadrius dubius</i> * (Gmelin, 1789) | Little Ringed Plover | Bm | III | - | LC | (S) | - | II | II |
| 68. | <i>Numenius phaeopus</i> ** (Linnaeus, 1758) | Whimbrel | w | III | - | LC | S | II-2 | III | II |
| 69. | <i>Tringa totanus</i> ** (Linnaeus, 1758) | Redshank | Ext | II/III | 2 | LC | D | II-2 | III | II |
| 70. | <i>Tringa ochropus</i> * (Linnaeus, 1758) | Green Sandpiper | Wm | III | - | LC | (S) | - | II | II |
| 71. | <i>Tringa nebularia</i> ** (Gunnerus, 1767) | Greenshank | w | III | - | LC | S | II-2 | III | II |
| 72. | <i>Tringa glareola</i> ** (Linnaeus, 1758) | Wood Sandpiper | w | II/III | 3 | LC | H | II-1 | II | II |
| 73. | <i>Actitis hypoleucos</i> ** (Linnaeus, 1758) | Common Sandpiper | w | III | 3 | LC | D | II-1/III-2 | II | II |
| 74. | <i>Gallinago gallinago</i> ** (Linnaeus, 1758) | Snipe | M | - | 3 | LC | (D) | | III | II |
| 75. | <i>Larus michahellis</i> * (Naumann, 1840) | Yellow-legged Gull | V | - | - | LC | (S) | II-2 | III | - |
| 76. | <i>Larus fuscus</i> ** (Linnaeus, 1758) | Lesser Black-backed Gull | v | III | - | LC | S | II-2 | | |
| 77. | <i>Larus ridibundus</i> * (Linnaeus, 1766) | Black-headed Gull | Mw | III | - | LC | (S) | II-2 | III | - |
| 78. | <i>Sterna hirundo</i> ** (Linnaeus, 1758) | Common Tern | b | II/III | - | LC | S | I | II | II |
| 79. | <i>Columba livia f. domestica</i> * (Gmelin, 1789) | Feral Pigeon | Br | | | | | | | |
| 80. | <i>Columba oenas</i> * (Linnaeus, 1758) | Stock Dove | w | III | - | LC | S | II-2 | III | - |
| 81. | <i>Columba palumbus</i> * (Linnaeus, 1758) | Wood Pigeon | Br | - | 4 | LC | S | II-1/III-1 | - | - |
| 82. | <i>Streptopelia turtur</i> * (Linnaeus, 1758) | Turtle Dove | Bm | - | 3 | LC | D | II | III | - |
| 83. | <i>Streptopelia decaocto</i> * (Frisvaldszky, 1838) | Collared Dove | Br | - | - | LC | (S) | II-2 | III | - |
| 84. | <i>Tyto alba</i> * (Scopoli, 1769) | Barn Owl | Bw | III | 3 | LC | D | - | II | - |
| 85. | <i>Otus scops</i> * (Linnaeus, 1758) | Scops Owl | B | III | 2 | LC | (D) | - | II | II |
| 86. | <i>Athene noctua</i> * (Scopoli, 1769) | Little Owl | Br | III | 3 | LC | D | - | II | II |
| 87. | <i>Asio otus</i> * (Linnaeus, 1758) | Long-eared Owl | Br | III | - | LC | S | - | II | II |
| 88. | <i>Asio flammeus</i> ** (Pontoppidan, 1763) | Short-eared Owl | m | II/III | 3 | LC | (H) | I | II | - |
| 89. | <i>Apus apus</i> * (Linnaeus, 1758) | Swift | V | III | - | LC | S | - | III | - |
| 90. | <i>Tachymarpis melba</i> * (Linnaeus, 1758) | Pallid Swift | V | III | - | LC | S | - | III | - |
| 91. | <i>Clamator glandarius</i> * (Linnaeus, 1758) | Great Spotted Cuckoo | B | III | - | LC | (S) | - | III | - |

| Nº | Species | English name | Status | BDA | SPEC | IUCN | ETS | WBD | BERN | BONN |
|------|---|---------------------------|--------|--------|------|------|-----|------|------|------|
| 92. | <i>Cuculus canorus</i> * (Linnaeus, 1758) | Cuckoo | B | III | - | LC | S | - | III | - |
| 93. | <i>Caprimulgus europaeus</i> * (Linnaeus, 1758) | Nighthjar | Bm | II/III | 2 | LC | (D) | I | II | - |
| 94. | <i>Merops apiaster</i> * (Linnaeus, 1758) | Bee-eater | Bm | II | 3 | LC | D | - | II | II |
| 95. | <i>Coracias garrulus</i> * (Linnaeus, 1758) | Roller | B | II/III | 2 | NT | (D) | I | II | II |
| 96. | <i>Upupa epops</i> * (Linnaeus, 1758) | Hoopoe | B | III | - | LC | S | - | II | - |
| 97. | <i>Alcedo atthis</i> * (Linnaeus, 1758) | Kingfisher | Br | II/III | 3 | LC | D | I | II | - |
| 98. | <i>Jynx torquilla</i> ** (Linnaeus, 1758) | Wryneck | B | III | 3 | LC | (D) | - | II | - |
| 99. | <i>Picus viridis</i> * (Brandt, 1841) | Green Woodpecker | Br | III | 2 | LC | D | - | II | - |
| 100. | <i>Dendrocopos major</i> * (Brehm, 1831) | Great Spotted Woodpecker | Br | III | - | LC | S | - | II | - |
| 101. | <i>Dendrocopos minor</i> * (Linnaeus, 1758) | Lesser Spotted Woodpecker | Br | III | - | LC | S | - | II | - |
| 102. | <i>Dendrocopos syriacus</i> * (Gengler, Stresemann, 1919) | Syrian Woodpecker | Br | II/III | 4 | LC | S | I | II | - |
| 103. | <i>Riparia riparia</i> * (Linnaeus, 1758) | Sand Martin | B | II/III | 3 | LC | H | - | II | - |
| 104. | <i>Hirundo rupestris</i> * (Scopoli, 1769) | Crag Martin | B! | III | - | LC | S | - | II | - |
| 105. | <i>Hirundo rustica</i> * (Linnaeus, 1758) | Barn Swallow | Bm | III | 3 | LC | D | - | II | - |
| 106. | <i>Hirundo daurica</i> * (Linnaeus, 1771) | Red-rumped Swallow | Bm | III | - | LC | S | - | II | - |
| 107. | <i>Delichon urbica</i> * (Linnaeus, 1758) | House Martin | Bm | III | - | LC | S | - | II | - |
| 108. | <i>Melanocorypha calandra</i> * (Linnaeus, 1766) | Calandra Lark | Br | II/III | 3 | LC | (D) | I | II | - |
| 109. | <i>Calandrella brachydactyla</i> * (Leisler, 1814) | Short-toed Lark | Bm | II/III | 3 | LC | V | I | II | - |
| 110. | <i>Calandrella rufescens</i> ** (Vieillot, 1820) | Lesser Short-toed Lark | V? | II | 3 | LC | D | - | II | - |
| 111. | <i>Galerida cristata</i> * (Linnaeus, 1758) | Crested Lark | Br | III | 3 | LC | (D) | - | III | - |
| 112. | <i>Lullula arborea</i> * (Linnaeus, 1758) | Woodlark | Br | II/III | 2 | LC | V | I | III | - |
| 113. | <i>Alauda arvensis</i> * (Linnaeus, 1758) | Skylark | Br | III | 3 | LC | V | II-2 | III | - |
| 114. | <i>Anthus campestris</i> * (Linnaeus, 1758) | Tawny Pipit | Bm | II/III | 3 | LC | V | I | II | - |
| 115. | <i>Anthus pratensis</i> * (Linnaeus, 1758) | Meadow Pipit | w | III | - | LC | S | - | II | - |
| 116. | <i>Motacilla flava</i> * (Pallas, 1776) | Yellow Wagtail | Bm | III | - | LC | S | - | II | - |
| 117. | <i>Motacilla alba</i> * (Linnaeus, 1758) | Pied Wagtail | M | III | - | LC | S | - | II | - |
| 118. | <i>Troglodytes troglodytes</i> * (Linnaeus, 1758) | Wren | Br | III | - | LC | S | - | III | - |
| 119. | <i>Erithacus rubecula</i> * (Linnaeus, 1758) | Robin | B | III | 4 | LC | S | - | II | II |
| 120. | <i>Luscinia megarhynchos</i> * (Brehm, 1831) | Nightingale | Bm | III | 4 | LC | S | - | II | II |
| 121. | <i>Phoenicurus ochruros</i> * (Gmelin, 1774) | Black Redstart | Mb | III | - | LC | S | - | II | II |
| 122. | <i>Phoenicurus phoenicurus</i> * (Linnaeus, 1758) | Redstart | M | II/III | 2 | LC | V | - | II | II |

| Nº | Species | English name | Status | BDA | SPEC | IUCN | ETS | WBD | BERN | BONN |
|------|--|----------------------|--------|--------|------|------|-----|------|------|------|
| 123. | <i>Saxicola rubetra</i> * (Linnaeus, 1758) | Whinchat | M | III | 4 | LC | S | - | II | II |
| 124. | <i>Saxicola torquata</i> * (Linnaeus, 1766) | Stonechat | M | III | 3 | LC | (D) | - | II | II |
| 125. | <i>Oenanthe oenanthe</i> * (Linnaeus, 1758) | Wheatear | Bm | III | - | LC | S | - | II | II |
| 126. | <i>Oenanthe isabellina</i> * (Temminck, 1829) | Isabelline Wheatear | Bm | III | - | LC | (S) | - | II | II |
| 127. | <i>Oenanthe hispanica</i> * (Linnaeus, 1758) | Black-eared Wheatear | Bm | II/III | 2 | LC | V | - | II | II |
| 128. | <i>Turdus philomelos</i> * (Brehm, 1831) | Song Thrush | B | III | - | LC | S | II-2 | III | - |
| 129. | <i>Turdus torquatus</i> * (Linnaeus, 1758) | Ring Ouzel | w | III | - | LC | S | - | II | - |
| 130. | <i>Turdus merula</i> * (Linnaeus, 1758) | Blackbird | Br | III | 4 | LC | S | II-2 | III | II |
| 131. | <i>Turdus viscivorus</i> * (Linnaeus, 1758) | Mistle Thrush | M | III | 4 | LC | S | II-2 | III | II |
| 132. | <i>Turdus pilaris</i> * (Linnaeus, 1758) | Fieldfare | Mw | III | 4 | LC | S | II-2 | III | II |
| 133. | <i>Locustella naevia</i> ** (Boddaert, 1783) | Grasshopper Warbler | m | III | - | LC | S | - | II | II |
| 134. | <i>Acrocephalus arundinaceus</i> * (Linnaeus, 1758) | Great Reed Warbler | Br | III | - | LC | (S) | - | II | II |
| 135. | <i>Acrocephalus schoenobaenus</i> ** (Linnaeus, 1758) | Sedge Warbler | b | III | - | LC | S | - | II | II |
| 136. | <i>Acrocephalus palustris</i> ** (Bechstein, 1798) | Marsh Warbler | b | III | - | LC | S | - | II | II |
| 137. | <i>Acrocephalus scirpaceus</i> ** (Hermann, 1804) | Reed Warbler | b | III | - | LC | S | - | II | II |
| 138. | <i>Acrocephalus paludicola</i> ** (Viellot, 1817) | Aquatic Warbler | m | II/III | 1 | VU | V | I | II | II |
| 139. | <i>Muscicapa striata</i> * (Pallas, 1764) | Spotted Flycatcher | B | III | 3 | LC | H | - | II | II |
| 140. | <i>Hippolais olivetorum</i> * (Strickland, 1837) | Olive-tree Warbler | Bm | II/III | 3 | LC | S | II-1 | II | II |
| 141. | <i>Hippolais pallida</i> * (Hemprich, Ehrenberg, 1833) | Olivaceous Warbler | Bm | III | 3 | LC | (V) | - | II | II |
| 142. | <i>Sylvia curruca</i> * (Linnaeus, 1758) | Lesser Whitethroat | Bm | III | - | LC | S | - | II | II |
| 143. | <i>Sylvia atricapilla</i> * (Linnaeus, 1758) | Blackcap | Bm | III | 4 | LC | S | - | II | II |
| 144. | <i>Sylvia communis</i> * (Latham, 1787) | Whitethroat | Bm | III | - | LC | S | - | II | II |
| 145. | <i>Sylvia canillans</i> * (Pallas, 1764) | Subalpine Warbler | B | II/III | - | LC | S | - | II | II |
| 146. | <i>Sylvia nisoria</i> * (Bechstein, 1795) | Barred Warbler | Bm | II/III | - | LC | S | I | III | II |
| 147. | <i>Phylloscopus collybita</i> * (Viellot, 1817) | Chiffchaff | Bm | III | - | LC | (S) | - | II | II |
| 148. | <i>Phylloscopus bonelli</i> * (Viellot, 1819) | Bonelli's Warbler | Bm | III | 2 | LC | D | - | II | II |
| 149. | <i>Phylloscopus sibilatrix</i> * (Bechstein, 1793) | Wood Warbler | M | III | 2 | LC | D | - | III | II |
| 150. | <i>Aegithalos caudatus</i> * (Linnaeus, 1758) | Long-tailed Tit | Bw | III | - | LC | S | - | III | - |
| 151. | <i>Parus major</i> * (Linnaeus, 1758) | Great Tit | Br | III | - | LC | S | - | II | - |
| 152. | <i>Parus caeruleus</i> * (Linnaeus, 1758) | Blue Tit | Br | III | 4 | LC | S | - | II | - |
| 153. | <i>Certhia familiaris</i> ** (Linnaeus, 1758) | Treecreeper | Br | III | - | LC | S | - | III | - |

| Nº | Species | English name | Status | BDA | SPEC | IUCN | ETS | WBD | BERN | BONN |
|------|---|------------------------|--------|----------------|------|------|-----|------|------|------|
| 154. | <i>Certhia brachydactyla</i> ** (Brehm, 1820) | Short-toed Treecreeper | m | III | - | LC | S | - | II | - |
| 155. | <i>Lanius collurio</i> * (Linnaeus, 1758) | Red-backed Shrike | Bm | II/III | 3 | LC | (D) | I | II | - |
| 156. | <i>Lanius minor</i> * (Gmelin, 1788) | Lesser Grey Shrike | Bm | II/III | 2 | LC | (D) | I | II | - |
| 157. | <i>Lanius excubitor</i> * (Linnaeus, 1758) | Great Grey Shrike | W | III | 3 | LC | D | - | II | - |
| 158. | <i>Lanius senator</i> * (Linnaeus, 1758) | Woodchat Shrike | Bm | III | 2 | LC | V | - | II | - |
| 159. | <i>Lanius nubicus</i> * (Lichtenstein, 1823) | Masked Shrike | B | II/III | 2 | LC | D | I | II | - |
| 160. | <i>Garrulus glandarius</i> * (Linnaeus, 1758) | Jay | Br | - | - | LC | (S) | II-2 | III | - |
| 161. | <i>Pica pica</i> * (Linnaeus, 1758) | Magpie | Br | - | - | LC | S | II-2 | III | - |
| 162. | <i>Corvus frugilegus</i> * (Linnaeus, 1758) | Rook | Wm | - | - | LC | S | II-2 | III | - |
| 163. | <i>Corvus monedula</i> * (Linnaeus, 1758) | Jackdaw | Br | - | 4 | LC | S | II-2 | - | - |
| 164. | <i>Corvus cornix</i> * (Linnaeus, 1758) | Hooded Crow | Br | - | - | LC | S | II-2 | III | - |
| 165. | <i>Corvus corax</i> * (Linnaeus, 1758) | Raven | Br | III | - | LC | (S) | - | III | - |
| 166. | <i>Sturnus roseus</i> * (Linnaeus, 1758) | Rose-coloured Starling | B | II | - | LC | S | - | II | - |
| 167. | <i>Sturnus vulgaris</i> * (Linnaeus, 1758) | Starling | Br | - | - | LC | S | II-2 | III | - |
| 168. | <i>Oriolus oriolus</i> * (Linnaeus, 1766) | Golden Oriole | Bm | III | - | LC | S | - | II | - |
| 169. | <i>Fringilla coelebs</i> * (Linnaeus, 1758) | Chaffinch | Br | III | 4 | LC | S | - | III | - |
| 170. | <i>Fringilla montifringilla</i> * (Linnaeus, 1758) | Brambling | Wm | III III II III | - | LC | S | - | III | - |
| 171. | <i>Carduelis chloris</i> * (Linnaeus, 1758) | Greenfinch | Bw | III | 4 | LC | S | - | II | - |
| 172. | <i>Carduelis carduelis</i> * (Linnaeus, 1758) | Goldfinch | Brw | III | - | LC | (S) | - | II | - |
| 173. | <i>Carduelis cannabina</i> * (Linnaeus, 1758) | Linnet | Brw | III | 4 | LC | S | - | II | - |
| 174. | <i>Coccothraustes coccothraustes</i> * (Linnaeus, 1758) | Hawfinch | Br | III | - | LC | S | - | II | - |
| 175. | <i>Passer domesticus</i> * (Linnaeus, 1758) | House Sparrow | Br | - | - | LC | S | - | III | - |
| 176. | <i>Passer montanus</i> * (Linnaeus, 1758) | Tree Sparrow | Br | III | - | LC | S | - | III | - |
| 177. | <i>Passer hispaniolensis</i> * (Temminck, 1820) | Spanish Sparrow | Bm | III | - | LC | (S) | - | III | - |
| 178. | <i>Petronia petronia</i> * (Linnaeus, 1766) | Rock Sparrow | Br | II/III | - | LC | S | - | II | - |
| 179. | <i>Emberiza citrinella</i> * (Linnaeus, 1758) | Yellowhammer | Br | III | 4 | LC | (S) | - | II | - |
| 180. | <i>Emberiza schoeniclus</i> * (Linnaeus, 1758) | Reed Bunting | W | III | - | LC | S | - | III | - |
| 181. | <i>Emberiza melanocephala</i> * (Scopoli, 1769) | Black-headed Bunting | Bm | III | 2 | LC | (V) | - | II | - |
| 182. | <i>Emberiza cirlus</i> * (Linnaeus, 1766) | Cirl Bunting | Bm | III | - | LC | S | - | II | - |
| 183. | <i>Emberiza hortulana</i> * (Linnaeus, 1758) | Ortolan Bunting | Bm | II/III | 2 | LC | (V) | I | III | - |
| 184. | <i>Miliaria calandra</i> * (Linnaeus, 1758) | Corn Bunting | Br | III | 4 | LC | (S) | - | III | - |

LEGEND:

Symbol following the species' name: * – species recorded within the present survey of the area; ** – species reported according to bibliographic data. **Status:**

| Primary: | Secondary: |
|----------------------|----------------------|
| B – breeding | b – breeding |
| M – migrant | m – migrant |
| R – resident | r – resident |
| W – wintering | w – wintering |
| V – vagrant | v – vagrant |

Ext- Extinct

! – species breeding beyond the boundaries of the SPA, yet visiting the area while foraging

BDA – Species listed in the Annexes to the Biological Diversity Act

II – Annex 2 to Art. 6, paragraph 1, sections 3 and 4, paragraph 3 of the Biological Diversity Act Art. 6.

(1) Special Protection Areas are designated for the purpose of: 3. Protecting habitats of bird species listed in Annex 2; 4. Protecting territories harboring significant numbers of birds of species during the periods of breeding, moulting, wintering, and migration, other than those listed in Annex 2. (3) Plant and animal species threatened with extinction listed in Annex 2 are considered a conservation priority.

III – Annex 3 to Art. 37 of the Biological Diversity Act Art. 37 Wild animal and plant species listed in Annex 3 are declared protected for the entire territory of Bulgaria.

“I” indicates that the provisions of Art. 70 are valid for the particular species. Art. 70. The provisions contained herein are related to specimens of species listed in the Appendices of the Convention on International Trade in Endangered Species (CITES) (OJ, issue 6 of 1992), briefly referred to as “the Convention”, which:

1. are threatened with extinction or are subject to protection and regulated use, which are or may become subject to trade, listed in:

- a) Appendix I to Art. III of the Convention;
- б) Annex No 3 of this Act, marked with (I);
- в) Annex No 4 of this Act, marked with (I);

2. need regulations of the trade thereof, to avoid the risk of exploitation inconsistent with their survival, listed in Appendix II to Art. IV of the Convention;

3. are designated for regulated trade within the jurisdiction of the country, party to the Convention, listed in Appendix III to Art. V of the Convention.

International conservation status

SPEC – species of European conservation concern, identified on the basis of criteria in compliance with their global and European status, and, proportionally, with the dimensions of the part of their range situated in Europe according to Birds in Europe: their conservation status. (Tucker, Heath, 1994).

SPEC1: Species in Europe of global conservation concern due to their status of globally threatened, conservation dependent, or insufficiently studied.

SPEC2: Species, whose global population is concentrated in Europe, with unfavorable conservation status in Europe.

SPEC3: Species, whose population is not concentrated in Europe, with unfavorable conservation status in Europe.

SPEC4: Species, whose global population is concentrated in Europe, with favorable conservation status.

Species are considered concentrated in Europe when at least 50 % of their global breeding or wintering population is found in Europe. Species of unfavorable conservation status are species, whose European populations are small and spatially undefined or highly local.

BERN – Species listed in the Convention on the Conservation of European Wildlife and Natural Habitats.

II – species listed in Appendix II to the Convention as strictly protected

III – species listed in Appendix III to the Convention as protected

IUCN – Red List of Threatened Species (www.redlist.org)

EN – endangered

VU – vulnerable

NT – near threatened

LC – least concern

ETS – European Threat Status of birds (Tucker, Heat 1994):

E – Endangered: species, whose European population is smaller than 10 000 pairs and undergoes a severe decline, or whose population is stable, but smaller than 2 500 pairs and undergoes a moderate decline, or whose population is smaller than 250 pairs;

V – Vulnerable: species, whose population exceeds 10 000 pairs, but undergoes a severe decline, or whose population is under 10 000 pairs and undergoes a moderate decline, or whose population is smaller than 250 pairs;

R – Rare: species, whose European population does not undergo a severe or moderate decline, but is smaller than 10 000 pairs;

D – Declining: species, whose European population exceeds 10 000 pairs and undergoes a moderate decline;

H – Historically declining

L – Localized: species, whose European population exceeds 10 000 pairs or 40 000 wintering individuals, does not undergo a decline, but 90% of the population is found within 10 or less areas (IBA); **S** – Stable: species, whose European population exceeds 10 000 pairs or 40 000 wintering individuals, which is neither declining nor localized, i.e. of favorable conservation status. () – temporary status

WBD – Species listed in Council Directive on the conservation of wild birds

Annex I – Birds which are the subject of special conservation measures concerning their habitat in order to ensure their survival and reproduction in their area of distribution.

Annex II/1 – Birds which may potentially be hunted under national legislation within the geographical area to which the Directive applies.

Annex II/2 – Birds which may potentially be hunted under national legislation only within certain specified Member States..

Annex III/1 – The species listed in this annex shall not be subject to trade, transportation for the purpose of trading, as well as sale of live or dead birds and typical and distinguishable parts thereof.

Annex III/2 – With regard to the species listed in this annex, the Member States shall undertake appropriate measures within their territories, in order to impose relevant restrictions, in cases of birds legally killed, held in captivity, or otherwise legally acquired.

BONN Convention – Species listed in the Convention on the Conservation of Migratory Species of Wild Animals. I

– species listed in Appendix I of the Bonn Convention as species in danger of extinction throughout all or a significant portion of their range.

II – species listed in Appendix II of the Bonn Convention as a priority of the international cooperation with regard to their conservation and management.

