

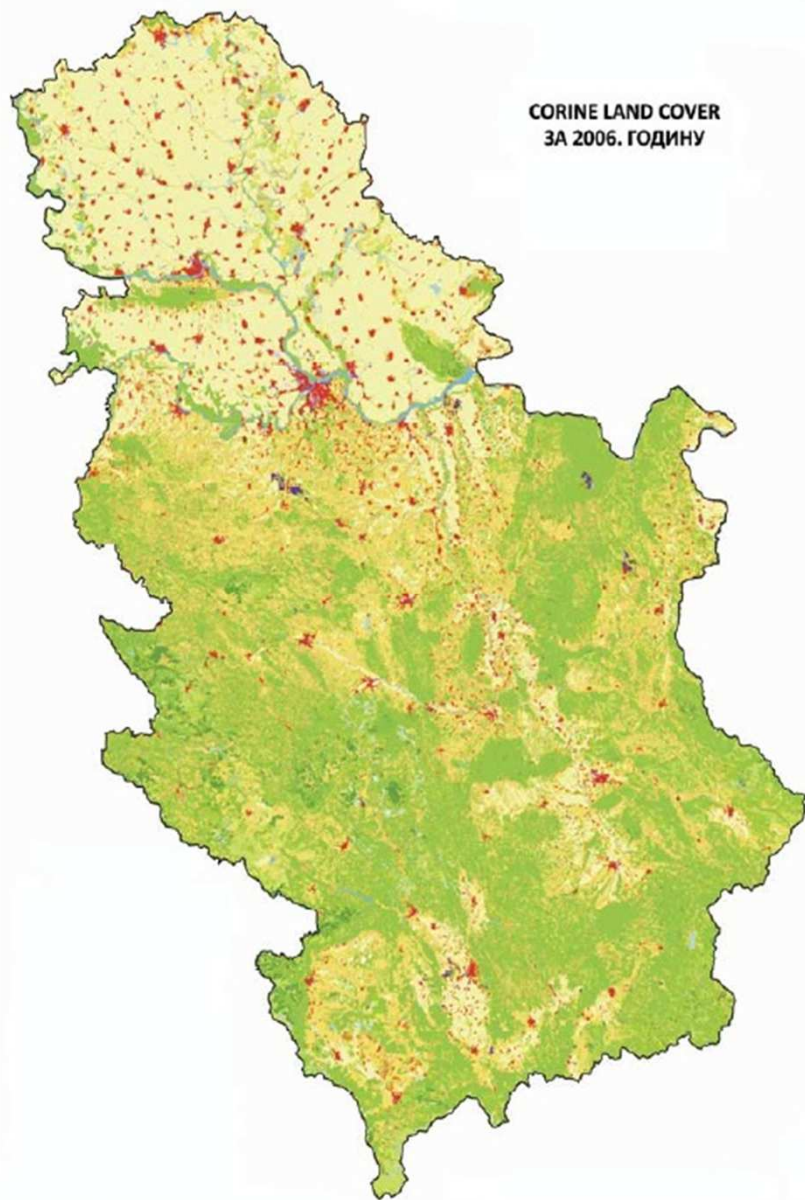
BIRD PROTECTION AND STUDY SOCIETY OF SERBIA

**PROVINCIAL SECRETARIAT FOR URBAN PLANNING, CONSTRUCTION
AND ENVIRONMENTAL PROTECTION**

SERBIA
BIRDS POPULATION AND DISTRIBUTION
CURRENT STATUS AND CHALLENGES

Slobodan PUZOVIĆ & Milan RUŽIĆ

Barcelona, March 2013



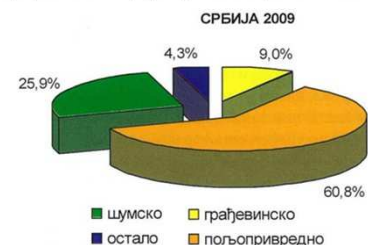
CORINE LAND COVER
ЗА 2006. ГОДИНУ

СЛИКА 34. CORINE LAND COVER ЗА 2006. ГОДИНУ

CORINE LAND COVER SERBIA 2006

- Monitoring of changes of land use, 1990, 2000. и 2006
- Corine Land Cover 2000 and 2006 database, in relation to Corine Land Cover 1990 database

Графикон 14. Упоредни приказ заступљености основних категорија земљишта у Србији 2009. године



Извор: Републички геодетски завод – Катастар непокретности

Састојинска припадност Stand category	Површина Area	
	ha	%
Шуме букве	660.400,0	29,4
Шуме цера	345.200,0	15,3
Шуме китњака	173.200,0	7,7
Шуме сладуна	159.600,0	7,1
Шуме смрче	86.400,0	3,8
Шуме борова	126.000,0	5,6
Шуме багрема, јасике и брезе	223.200,0	9,9
Шуме граба	118.800,0	5,3
Шуме лужњака	32.400,0	1,4
Шуме јеле	25.600,0	1,1
Шуме топола	48.000,0	2,1
Шуме липе	30.400,0	1,3
Шуме пољског јасена	25.200,0	1,1
Шуме грабића, ц. граба и ц. јасена	87.200,0	3,9
Шуме осталих лишћара	53.600,0	2,4
Шуме врба	22.400,0	1,0
Шуме јасена и јавора	12.800,0	0,6
Шуме осталих четинара	5.200,0	0,2
Шуме медунца	10.400,0	0,5
Шуме јова	6.400,0	0,3
Укупно	2.252.400,0	100,0

Табела 49. Површине Corine Land Cover категорија за 2006. годину (без података за територију АП Косово и Метохија)

КАТЕГОРИЈЕ	Површина у ha	у %
1 ВЕШТАЧКЕ ПОВРШИНЕ		
Континуирано урбано подручје	214	0,003
Дисконтинуирано урбано подручје	223.953	2,89
Индустријске или комерцијалне јединице	19.232	0,248
Путне и железничке мреже	1.180	0,015
Луке	363	0,005
Аеродроми	1.876	0,024
Рудници	9.436	0,122
Одлагалишта отпада	1.677	0,022
Грађевина	54	0,001
Зелена урбана подручја	3.469	0,045
Спорстски и рекреациони објекти	2.295	0,03
2 ПОЉОПРИВРЕДНЕ ПОВРШИНЕ		
Оранице које се не наводњавају	2.060.629	26,589
Виногради	12.617	0,163
Воћњаци	8.636	0,111
Пашињаци	165.931	2,141
Комплекси парцела који се обрађују	1.244.041	16,052
Претекно пољопривредна земљишта са значајном површином под природном вегетацијом	1.017.519	13,129
3 ШУМЕ И ПОЛУПРИРОДНА СТАНИШТА		
Лишћарске шуме	2.127.807	27,456
Четинарске шуме	90.788	1,171
Мешовите шуме	126.416	1,631
Природни травнати предели	209.952	2,709
Прелазно подручје шумски предео / жбуње	468.345	6,043
Плаве дине, пескови	1.283	0,018
Огољена стена	144	0,002
Подручја са разређеном вегетацијом	19.713	0,254
Пожаришта	0	0
4 ВЛАЖНА ПОДРУЧЈА		
Копнене мочваре	25.877	0,334
5 ВОДНИ БАСЕНИ		
Водотоци	79.247	1,023
Водени басени	25.884	0,334

Извор: Агенција за заштиту животне средине

BIRDS IN SERBIA 2009

- c. 360 species
- 240 breeding species
- Nonpasseriformes: c.125
- Passeriformes: c.115

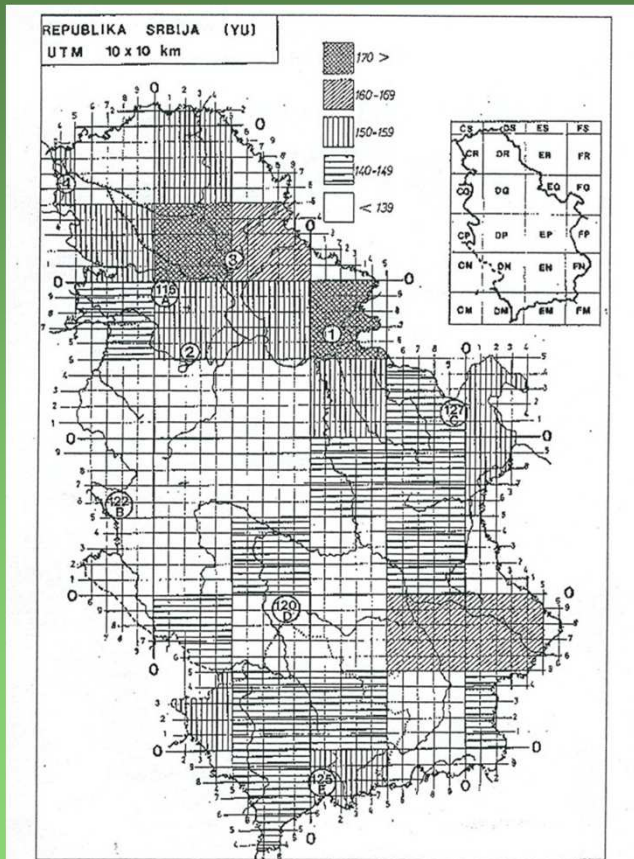
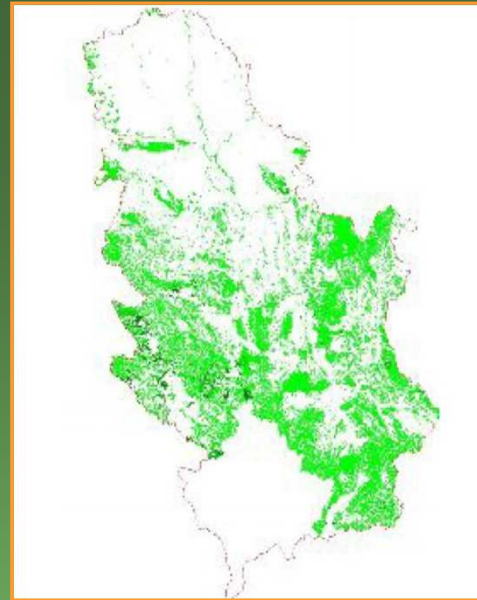


Figure1 Breeding bird species in Serbia in UTM grid map 50x50 km and in National Parks. Large circles Number of breeding bird species in National Parks: A) 'Fruška Gora', B) 'Đerdap', C) 'Tara', D) 'Kopaonik' and E) 'Šar Planina'. Small circles: 1) Deliblatska Peščara (the Sands) with the Danube; 2) Obedska Bara (wetland); 3) Carska Bara (wetland); 4) Gornji Podunavlje (wetland).



Forests in Serbia 2009

- Forest in Serbia 2.252.400 ha (30,6%)
- Forest ground over 35 %



Protected areas in Serbia 2010



- 5,9% of serbian territory
- 465 protected natural areas



FOREST HABITAT

(2.252.400 ha, 30,6% Србије)

- 1) Lowland aluvian forest (c. 36.000 ha)
- 2) Lowland oak forest (c. 60.000 ha)
- 3) Hilly-mountain oak forest (720.000 ha, 500-1300m)
- 4) Hilly-mountain beech forest (500-2000m)(661.000 ha)
- 5) Spruce forest (c. 50.000 ha, 700m и више)
- 6) Pine forest (c. 35.000 ha)
- 7) Pine culture (86.000 ha)
- 8) Spruce culture (c. 35.000 ha, 600 m и more)
- 9) Mixed beech-fir-spruce forest (21.000 ha)
- 10) Poplar plantation (37.000 ha)
- 11) ШИКАРЕ И ШИБЉАЦИ (510.000 ha)

OPEN GRASSLAND HABITAT

- 12) Mountain grassland and pasture (above 1000m)
- 13) Hilly grassland and pasture (400-1000m)
- 14) Lowland pasture (35-400m, 166.000 ha)

PARTLY OPEN MOSAIC HABITAT

- 15) High mountain habitat of short open vegetation (c. 1.500 ha)
- 16) Hilly mosaic habitat (over 700m)
- 17) Valley mosaic habitat (300-700m)
- 18) Lowland mosaic habitat (35-300m)

ROCKY HABITAT (c. 11.000 ha)

- 19) Rocky and open stone habitat (144 ha, 0,002%)
- 20) Gorge - Canyon (c. 150 ha open stones)
- 21) Mine, quarry, landfill (mine-quarry 9.436 ha; landfill 1.677 ha)

WATER HABITAT (105.131 ha; 1,4% of Serbia)

- 22) Reeds (c. 2.500 ha, Vojvodina)
- 23) Water streams (creek, river) (79.247 ha, 1% of Serbia)(beech, sand, gravel 1.383 ha)
- 24) Water bodies (stagnant water, lake, fish-pond, accumulation) (24.000 ha, 0,3% of Serbia)
- 25) Main canal network (ДТД sistem, 600 km in Vojvodina)
- 26) Supporting canal network (20.100 km in Vojvodina)

AGRICULTURE LAND (5.036.000 ha, 63,7% Србије)

- 27) Arable land I (arable land, farmland, large arable monoculture,...)(3.600.000 ha)
- 28) Arable land II (arable land, less parcels, edge bushes, rare trees, canals, ...)(1.436.000 ha)

URBAN-RURAL PLACES AND BUILDING LAND

(4.681 settlements in Serbia; c. 250.000 ha)

- 29) Urban settlements (more than 2.000 inhab.) (489 urban settlements c. 100.000 ha; 22.000 ha industrial and building land; 3.500 ha parks inside settlements)
- 30) Rural settlements (villages, less than 2000 inhab., weekends cottage zones,...) (4.187 rural settlements c. 120.000 ha) (airports, 1.876 ha) (sport and recreative facilities 2.295 ha)

INFRASTRUCTURE

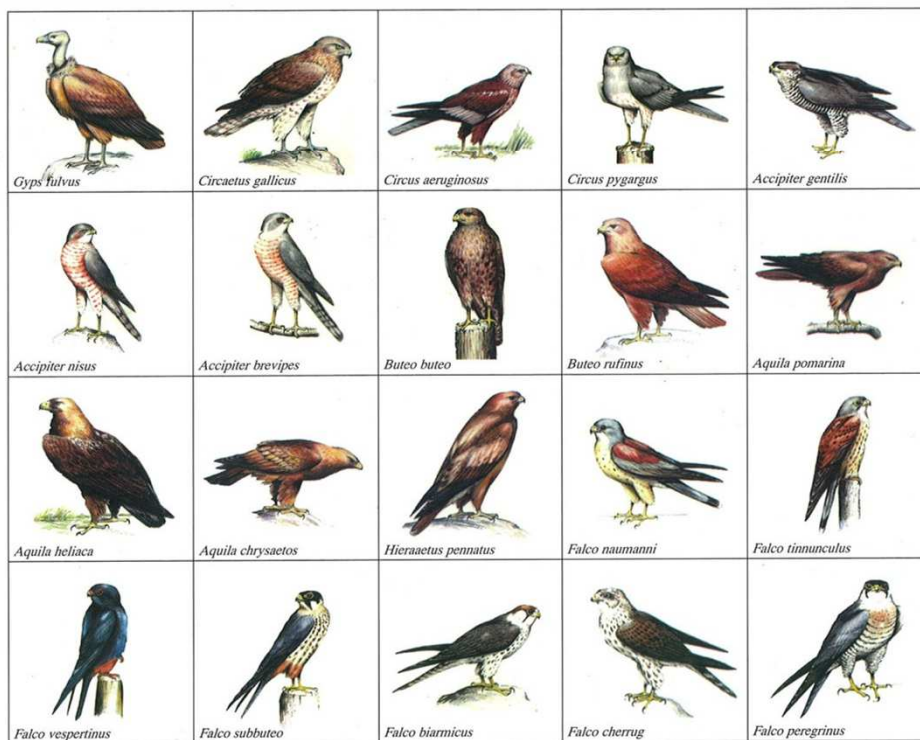
- 31) Linear construction structure (power lines, roads, railways, banks,...)(banks in Vojvodina 1.362 km) (roads and railways 1.180 ha in Serbia)

Slobodan Puzović



ATLAS PTICA GRABLJIVICA SRBIJE

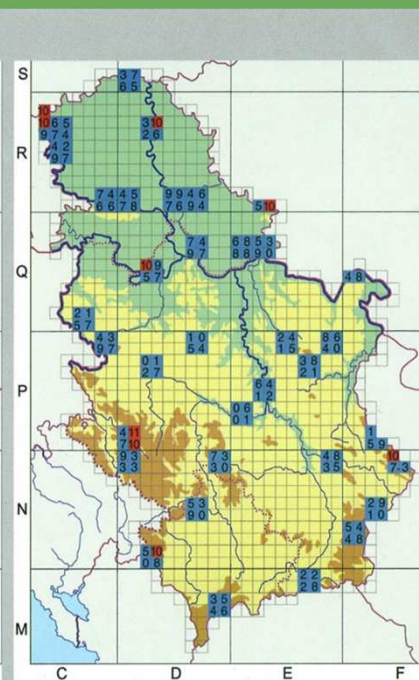
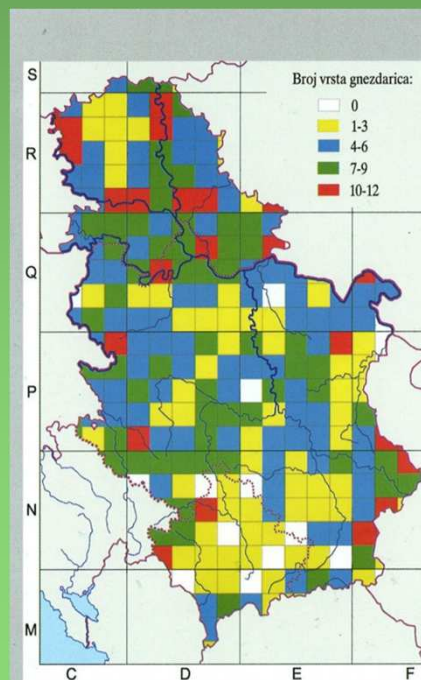
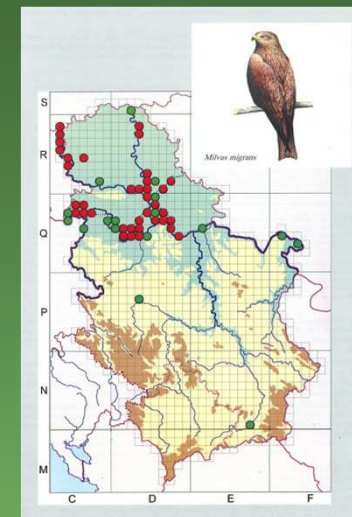
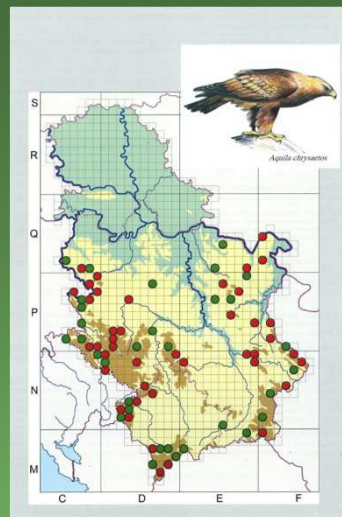
ATLAS OF BIRDS OF PREY OF SERBIA



ZAVOD ZA ZAŠTITU PRIRODE SRBIJE

- 25 breeding species
- 9105-10268 pairs

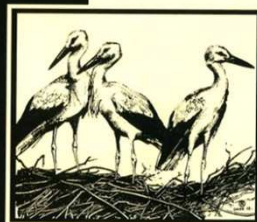
1977-1996



CICONIA

Vol. 12
Novi Sad
2003

Glasnik Društva za zaštitu
i proučavanje ptica Vojvodine
Journal of the Bird Protection
and Study Society of Vojvodina



BiE2

BIRDS IN EUROPE

Population estimates, trends and conservation status



Map 1. Four regions of Serbia and Montenegro for which separate breeding bird population estimates were made (area in km², number of breeding species, IGV - index of species densities)

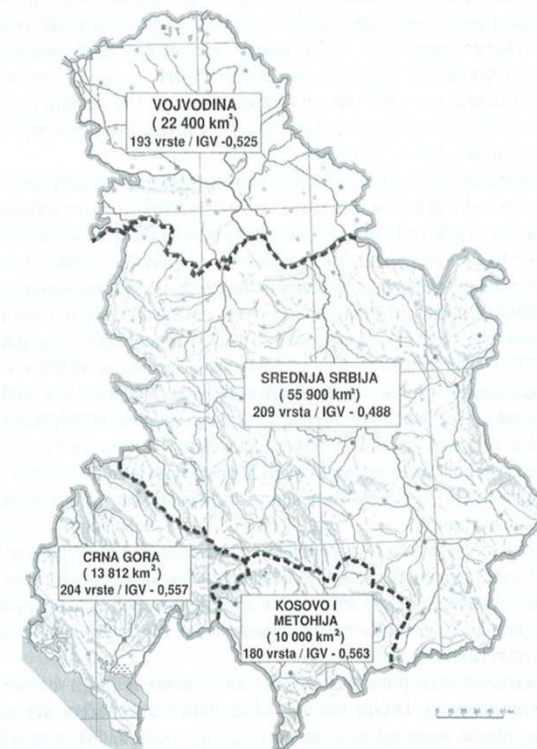
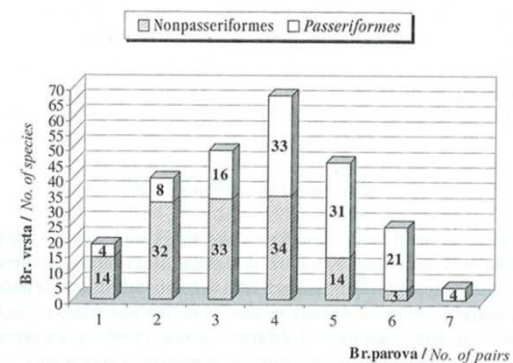
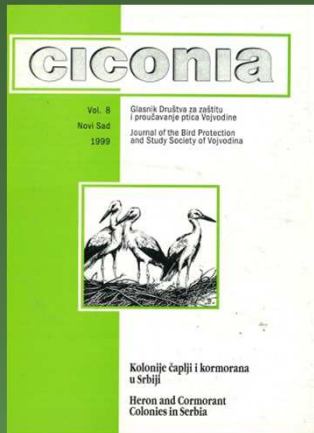


Table 1. Serbia and Montenegro breeding birds diversity in 1990-2002 period - number of species per regions of Serbia, Montenegro, plus total per entire country.
SG - confirmed breeding, VG - probable and possible breeding

Region	Nonpasseriformes		Passeriformes		Ukupno Total		Ukupno Total	
	SG	VG	SG	VG	SG	VG	SG	VG
Vojvodina								
Vojvodina	101	6	81	5	182	11	193	
Srednja Srbija								
Central Serbia	96	7	102	4	198	11	209	
Kosovo i								
Metohija	74	4	96	6	170	10	180	
Srbija Serbia								
(ukupno - total)	118	5	109	5	227	10	237	
Crna Gora								
Montenegro	97	1	105	1	203	1	204	
SCG								
(ukupno - total)	125	5	115	2	240	7	247	
	130		117					

Broj parova / No. of pairs
1=1-10, 2=11-100, 3=101-1000, 4=1001-10 000, 5= 10 001-100 000,
6= 100 001-1 000 000, 7= 1 000 000>
Graph 1. Percentages of Serbia and Montenegro breeding species per number of pair ranges (Nonpasseriformes - hatched, Passeriformes - white).





Heron and Cormorant Colonies in Serbia 1998

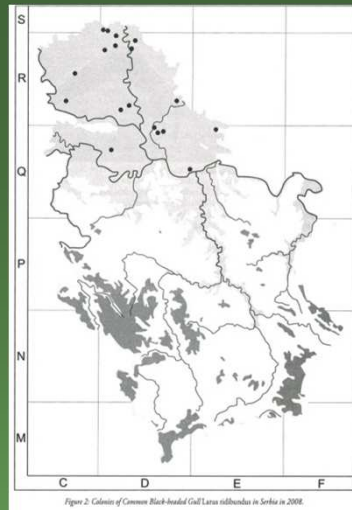


Figure 2: Colonies of Common Black-headed Gull *Larus ridibundus* in Serbia in 2008.
Larus ridibundus
 3137-3438

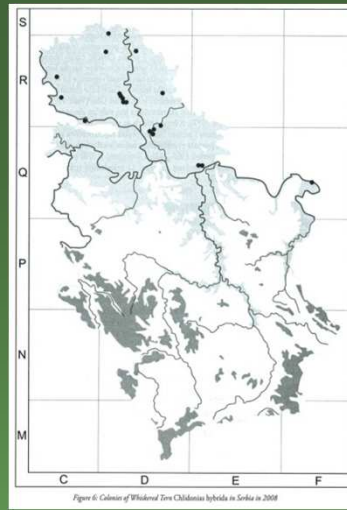


Figure 3: Colonies of Whiskered Tern *Chlidonias hybrida* in Serbia in 2008.
Chlidonias hybrida
 2231-2483

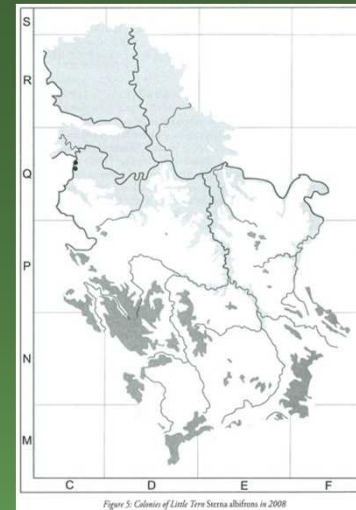


Figure 5: Colonies of Little Tern *Sterna albifrons* in 2008.
Sterna albifrons
 23-25

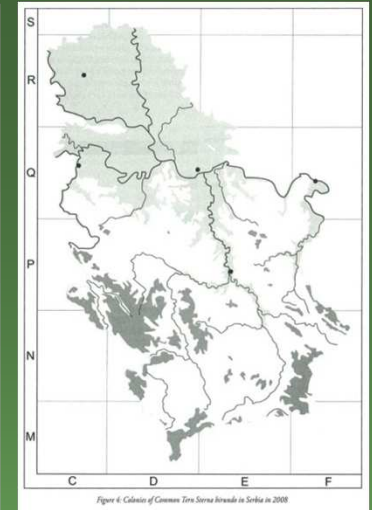


Figure 4: Colonies of Common Tern *Sterna hirundo* in Serbia in 2008.
Sterna hirundo
 130-162

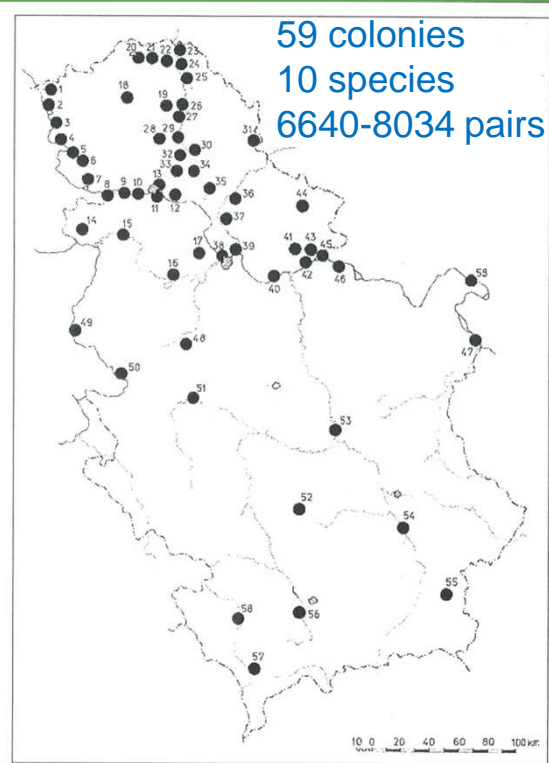


Fig. 2. Heron, egret and cormorant colonies in Serbia 1998

Gull and Tern Colonies in Serbia 2008

Larus melanocephalus
 5-5

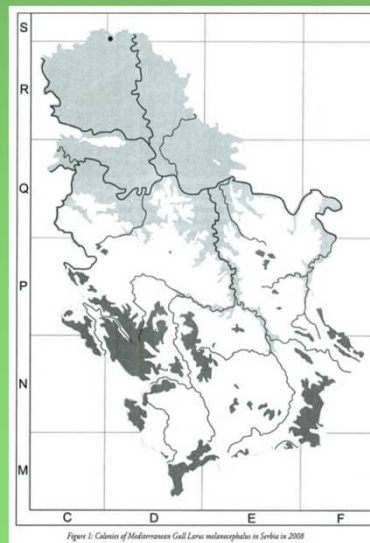


Figure 1: Colonies of Mediterranean Gull *Larus melanocephalus* in Serbia in 2008

Chlidonias niger
 1-1

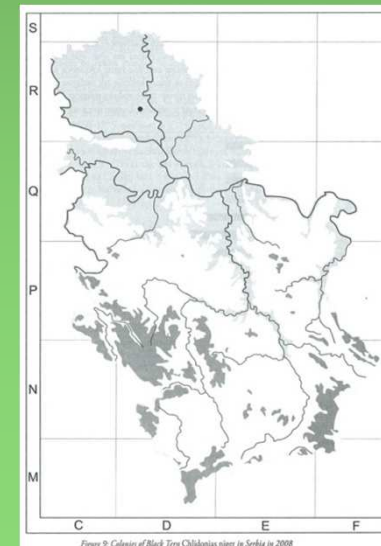
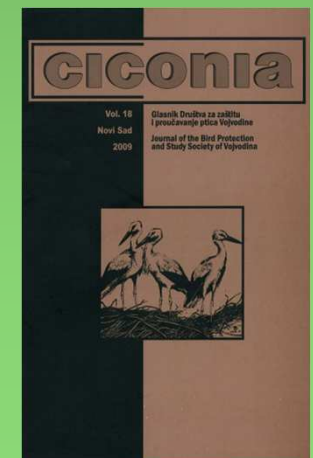


Figure 9: Colonies of Black Tern *Chlidonias niger* in Serbia in 2008



IBA in SERBIA 2000

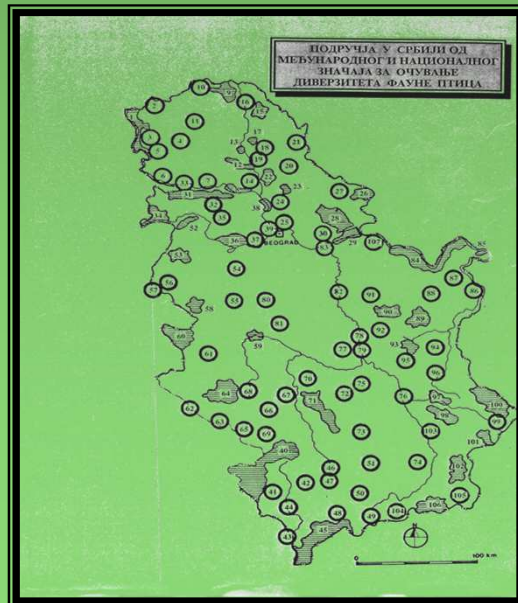
- Total 35 IBAs
- 760.000 ha
- 8,6 % of Serbia



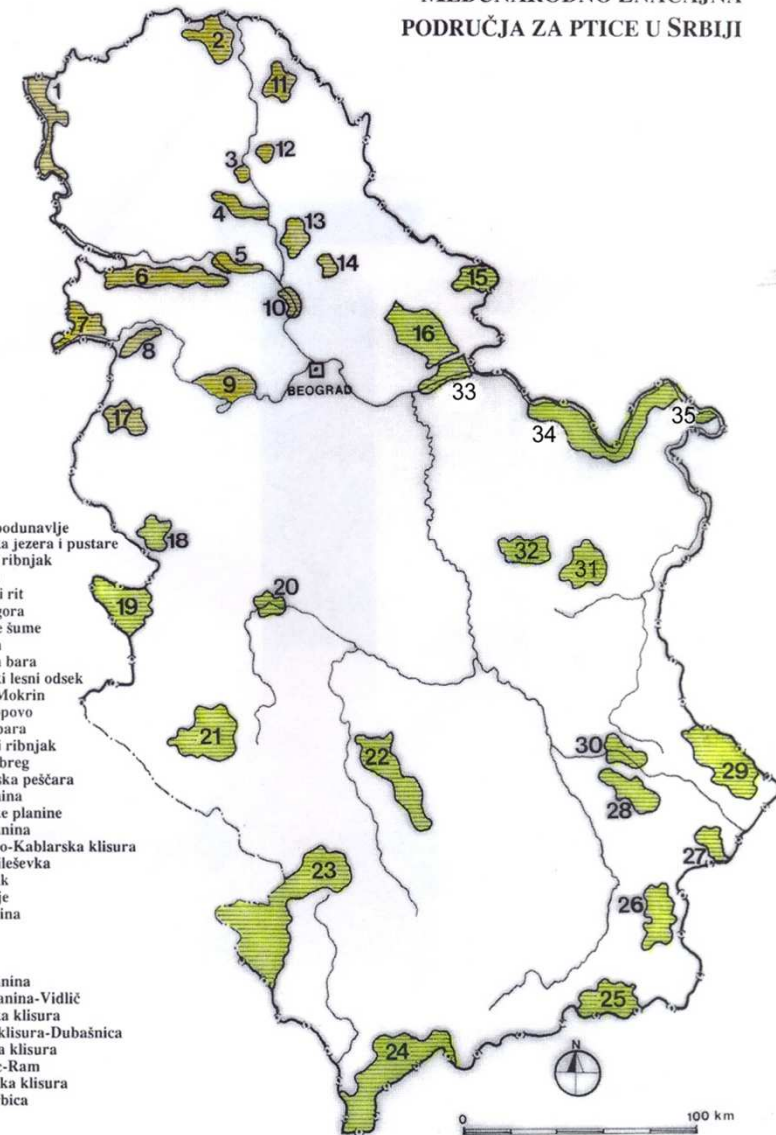
IBA



IBA national



IBA PROJEKAT MEĐUNARODNO ZNAČAJNA PODRUČJA ZA PTICE U SRBIJI





ANEX 2.

Tabela 2: Pregled posebno značajnih vrsta ptica gnezdarica Srbije sa analizom ispunjenosti IBA kriterijuma A1, B2 i B3
 Tab.2: Survey of important breeding bird species of Serbia with analyses of fulfillment of IBA criteria A1, B2 and B3

Skala za broj IBA koji se mogu nominovati po jednoj vrsti u zavisnosti od udela evropske populacije u Srbiji (predzadnja kolona), imajući u vidu nacionalni prag gnezdišne populacije od 1% u odnosu na min populaciju u Evropi (broj u zagradi u predzadnjoj koloni):

- 1% do 5% evropske gnezdišne populacije = 5 IBA za nominaciju po toj vrsti
- 5% do 15% evropske gnezdišne populacije = 10 IBA za nominaciju po toj vrsti

-A1 vrste mogu nominovati neograničen broj IBA (all), ali uz obavezan min. broj parova (bp)
 -Za vrste B2 i B3, potrebno je da IBA ima broj parova naveden nakon te oznake u zadnjoj koloni, dok je broj mogućih nominacija IBA po toj vrsti prikazan u zagradi
 -Moguće je nominovati IBA sa vrstama u okviru B2 i B3 kriterijuma i kada one imaju manje od 1% evropske populacije, ukoliko imaju značajnu brojnost u odnosu na druge zemlje (označene * u tabeli).

VRSTA Species	EVROPA	SRBIJA	% EVROPSKE POPULACIJE U SRBIJI (% european population in Serbia, bp)	IBA KRITERIJUM U SRBIJI (broj područja za nominaciju) (% proportion, bp, number of areas for nomination)
	BRJ GNEZDEĆIH PAROVA Number of breeding pairs	BRJ GNEZDEĆIH PAROVA Number of breeding pairs		
	Min - Max	Min - Max		
Mali gnjurac <i>Tachybaptus ruficollis</i>	99.000 - 170.000	4.500 - 7.000	4,5% (990 bp)	-
Čubasti gnjurac <i>Podiceps cristatus</i>	300.000 - 450.000	1.300 - 2.100	0,43% (3.000)	-
Veliki vranac <i>Phalacrocorax carbo</i>	310.000 - 370.000	1.100 - 1.400	0,35% (3.100)	-
Mali vranac <i>Phalacrocorax pygmaeus</i>	25.000 - 39.000	600 - 1.100	2,14% (280)	B2, 6 (5)
Vodeni bik <i>Botaurus stellaris</i>	34.000 - 54.000	250 - 350	0,81% (340)	B2, 5 (5)
Čapljica <i>Icthyophaga minotus</i>	60.000 - 120.000	2.200 - 3.200	3,67% (660)	B2, 22 (5)
Gak <i>Nycticorax nycticorax</i>	63.000 - 87.000	2.400 - 3.400	3,81% (630)	B2, 24 (5)
Žuta čaplja <i>Ardeola ralloides</i>	18.000 - 27.000	480 - 600	2,67% (180)	B2, 5 (5)
Mala bela čaplja <i>Egretta garzetta</i>	88.000 - 94.000	930 - 1.200	1,4% (980)	-
Velika bela čaplja <i>Catmerodius albus</i>	11.000 - 24.000	400 - 600	3,64% (110)	-
Šiva čaplja <i>Ardea cinerea</i>	210.000 - 290.000	2.100 - 2.400	1,00% (2.100)	-
Crvena čaplja <i>Ardea purpurea</i>	29.000 - 42.000	1.000 - 1.200	3,45% (290)	B2, 10 (5)
Crna roba <i>Ciconia nigra</i>	7.800 - 12.800	120 - 135	1,54% (78)	B2, 2 (5)
Bela roba <i>Ciconia ciconia</i>	180.000 - 220.000	1.200 - 1.300	0,67% (1.800)	B2, 20* (5)
Ražanj <i>Plegadis falcinellus</i>	16.000 - 22.000	10 - 17	0,06% (160)	B2, 5* (5)
Kašikar <i>Platalea leucorodia</i>	8.900 - 15.000	195 - 280	2,19% (89)	B2, 2 (5)
Labud grluac <i>Cygnus olor</i>	86.000 - 120.000	70 - 90	0,08% (860)	-
Divlja guska <i>Anser anser</i>	120.000 - 190.000	100 - 130	0,08% (1.200)	-
Čegrtina <i>Anas streperus</i>	60.000 - 96.000	50 - 130	0,15% (600)	-
Grugotovac <i>Anas querquedula</i>	390.000 - 590.000	600 - 900	0,15% (3.900)	-
Plivka kašikara <i>Anas chapeira</i>	170.000 - 210.000	70 - 100	0,04% (1.700)	-
Rišoglavu patka <i>Aythya ferina</i>	210.000 - 440.000	800 - 1.000	0,38% (2.100)	-
Patka njorka <i>Aythya nyroca</i>	12.000 - 18.000	400 - 550	3,33% (120)	A1, 20bp (all)

IMPORTANT BIRD AREAS IN SERBIA



Total 42 IBAs, 1.259.624 ha, 14,25% Serbia

2009

Haliaeetus albicilla

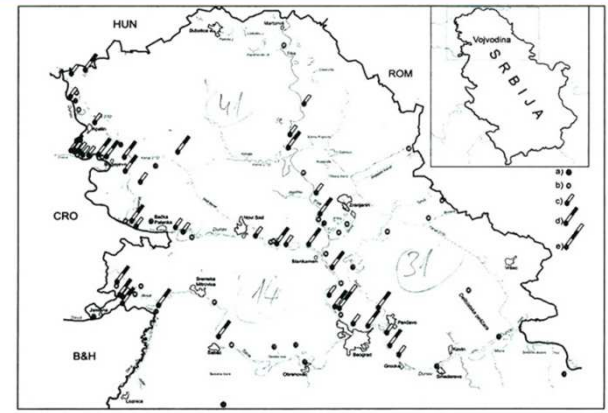
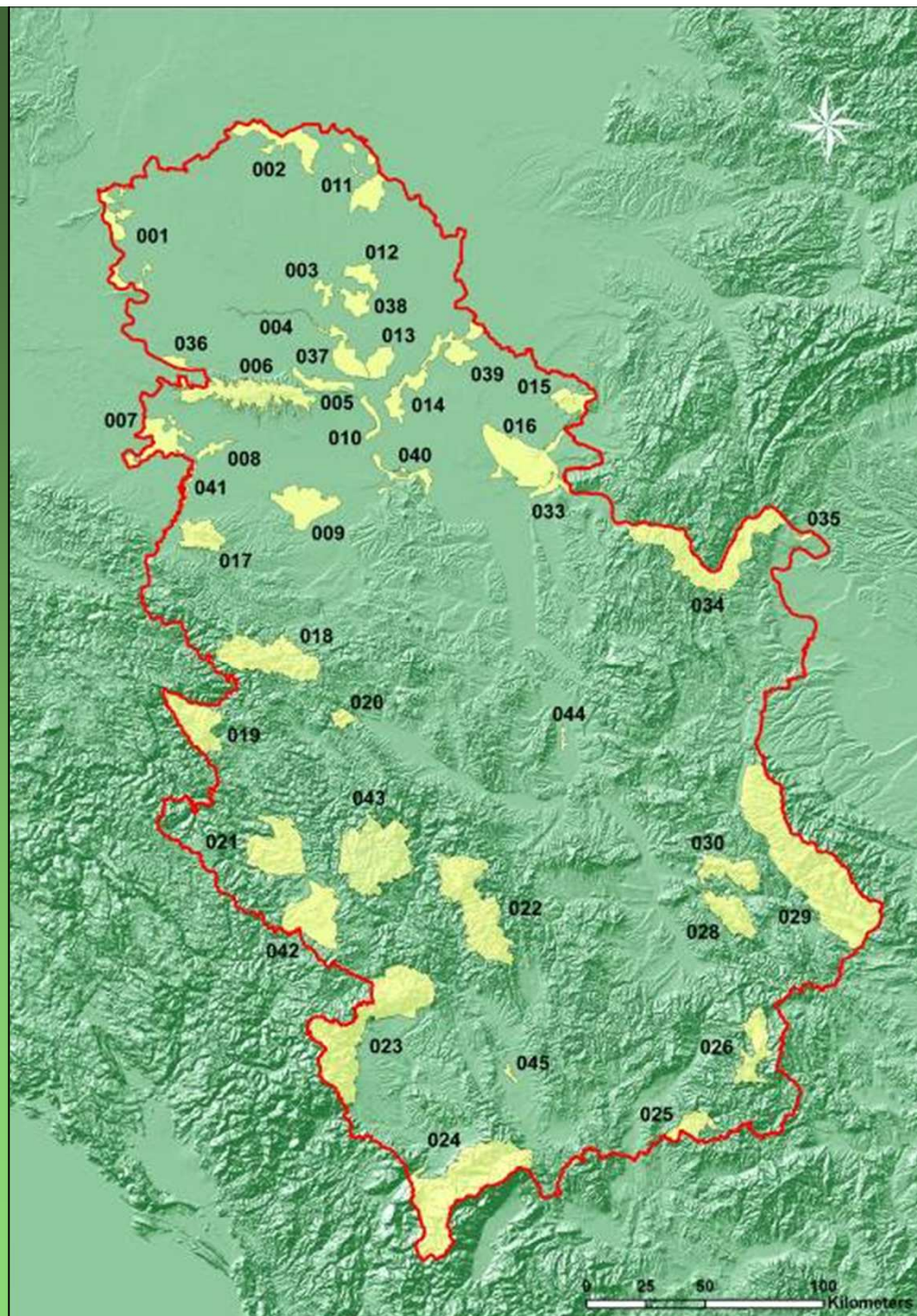


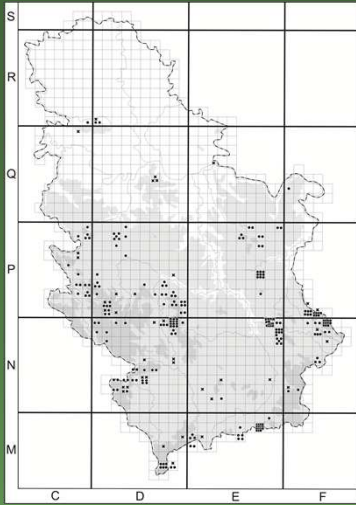
Figure 2: Distribution of known nests and breeding success of individual pairs of White-tailed eagle *Haliaeetus albicilla* in Serbia: a) unsurveyed nest; b) unsuccessful breeding; c) successful breeding with one juvenile; d) successful breeding with two juveniles; e) successful breeding with three juveniles

IBA IN SERBIA

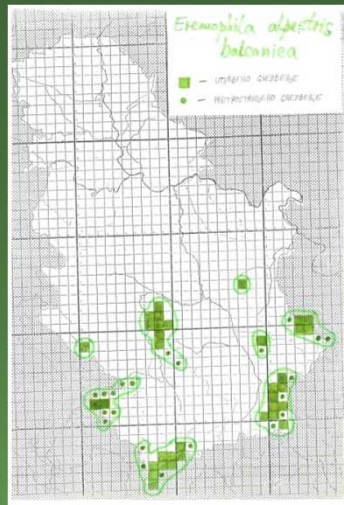
RS001 RS001IBA **GORNJE PODUNAVLJE** 22.617 A1, A4i, A4iii, B1i, B2
RS002 RS002IBA **SUBOTIČKA JEZERA I PUSTARE** 25.923 A1, B2
RS003 RS003IBA **BEČEJSKI RIBNJAK** 4.807 B1i, B2
RS004 RS004IBA **JEGRIČKA** 4.112 A1, B2, B3
RS036 RS005IBA **KARAĐORĐEVO** 4.851 B1i, B2
RS037 RS006IBA **TITELSKI BREG** 14.318 A1, B2
RS005 RS007IBA **KOVILJSKI RIT** 9.594 B2
RS011 RS008IBA **PASNJACI VELIKE DROPLJE** 20.522 A1, A4i, B1i, B1iv, B2
RS012 RS009IBA **SLANO KOPOVO** 9.344 A1, A4i, A4iii, A4iv, B1i, B1iv, B2
RS038 RS010IBA **OKANJ I RUSANDA** 10.194 A1, A4i, B1i, B1iv
RS013 RS011IBA **CARSKA BARA** 11.570 A1, A4iii, B1i, B2
RS039 RS012IBA **GORNJE POTAMIŠJE** 20.087 A1, B1i, B2
RS014 RS013IBA **SREDNJE POTAMIŠJE** 14.507 A1, B1i, B2
RS015 RS014IBA **VRŠAČKE PLANINE** 12.069 A1
RS016 RS015IBA **DELIBLATSKA PEŠČARA** 48.758 A1, B2, B3
RS033 RS016IBA **LABUĐOVO OKNO** 6.488 A1, A4i, A4iii, B1i, B2
RS040 RS017IBA **UŠĆE SAVE U DUNAV** 9.808 B1i, B2
RS010 RS018IBA **DUNAVSKI LESNI ODSEK** 5.304 B1i, B2
RS006 RS019IBA **FRUŠKA GORA** 49.210 A1, B2, B3
RS009 RS020IBA **OBEDSKA BARA** 29.913 A1, B2, B3
RS007 RS021IBA **BOSUTSKE ŠUME** 25.931 B2, B3
RS008 RS022IBA **ZASAVICA** 4.670 A1, B1i, B2
RS041 RS023IBA **DONJE PODRINJE** 4.706 B1i, B2
RS017 RS024IBA **CER** 19.024 B2, B3
RS018 RS025IBA **VALJEVSKE PLANINE** 56.291 B2, B3
RS019 RS026IBA **TARA** 34.216 B1i, B2
RS021 RS027IBA **UVAC I MILEŠEVKA** 45.911 A1, B1i, B1iii, B2
RS042 RS028IBA **PEŠTER** 43.966 A1, B2, B3
RS043 RS029IBA **GOLIJA** 75.184 B2, B3
RS044 RS030IBA **GORNJE POMORAVLJE** 1.701 B2
RS020 RS031IBA **OVČARSKO-KABLARSKA KLISURA** 6.174 B2, B3
RS022 RS032IBA **KOPAONIK** 73.850 B2
RS045 RS033IBA **SITNICA** 1.821 B2
RS023 RS034IBA **PROKLETIJE** 106.661 A3, B2, B3
RS024 RS035IBA **ŠAR-PLANINA** 105.508 A1, A3, B2
RS025 RS036IBA **PČINJA** 14.942 A1, B2, B3
RS026 RS037IBA **VLASINA** 26.984 A1
RS028 RS038IBA **SUVA PLANINA** 24.246 A1, A3, B2
RS030 RS039IBA **SIĆEVAČKA KLISURA** 25.050 B2
RS029 RS040IBA **STARA PLANINA** 149.782 A1, B2
RS034 RS041IBA **ĐERDAP** 77.095 A4i, A4iii, B1i, B2
RS035 RS042IBA **MALA VRBICA** 1.915 B1i, B2

Total 42 IBAA, 1.259.624 ha, 14,25% Serbia

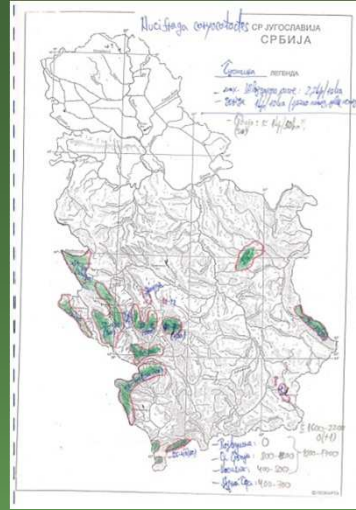




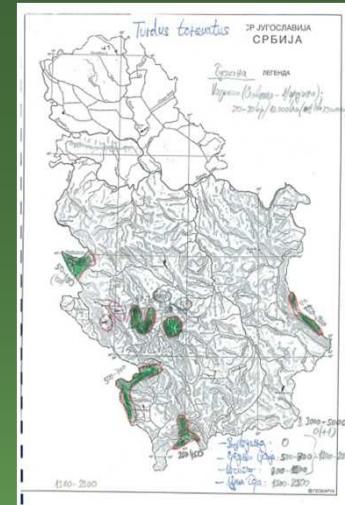
Monticola saxatilis



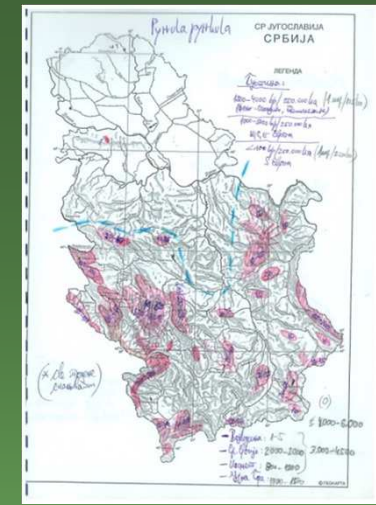
Eremophila alpestris



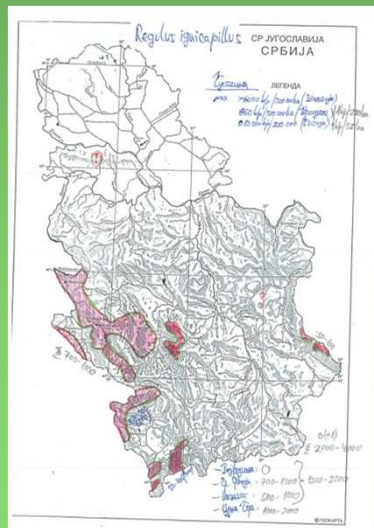
Nucifraga caryocatactes



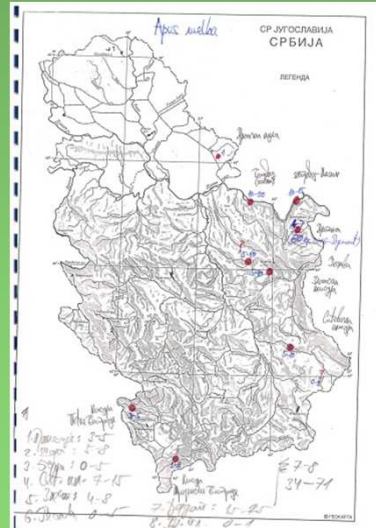
Turdus torquatus



Pyrrhula pyrrhula



Regulus ignicapillus

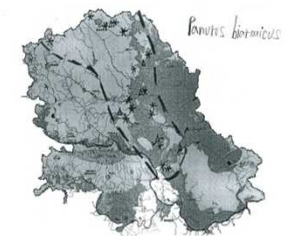
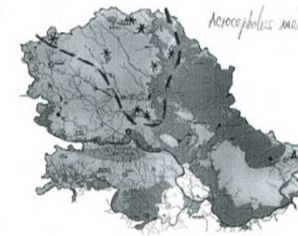


Apus melba



Luscinia svecica

Acrocephalus melanopogon



Panurus biarmicus

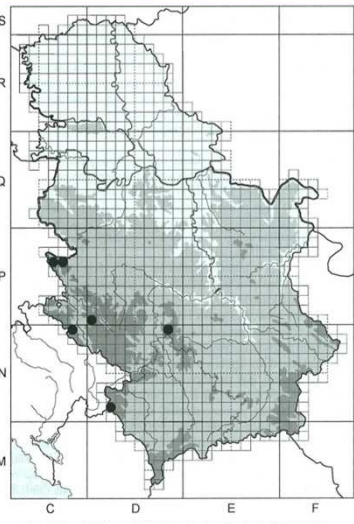


Figure 3: Records of Three-toed Woodpecker *Picoides tridactylus* in Serbia (UTM).
 Tara: Kamena Bula and Omar CP'66; Crevice Ptak CP'76; Zlatar DP'00; Kamena Gora CN'89; Kopaonik DN'89; Prokletije DN'21.

Picoides tridactylus

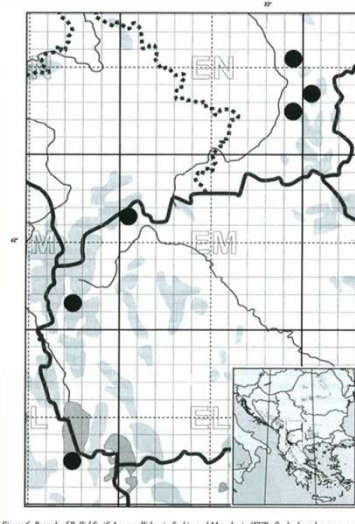


Figure 6: Records of Pallid Swift *Apus pallidus* in Serbia and Macedonia (FYR of); shaded areas – areas above 1000 m.
 UTM: Vlasovine EN'95; Suraljica EN'92; Cemerik; Valmiste FN'83; Brezovica; Hani "Molika" EM'06; Mavrovo; Hani "Buzna" DM'71; St. Naum DL'72

Apus pallidus

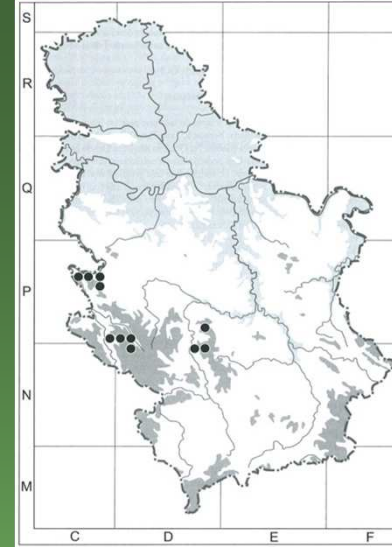
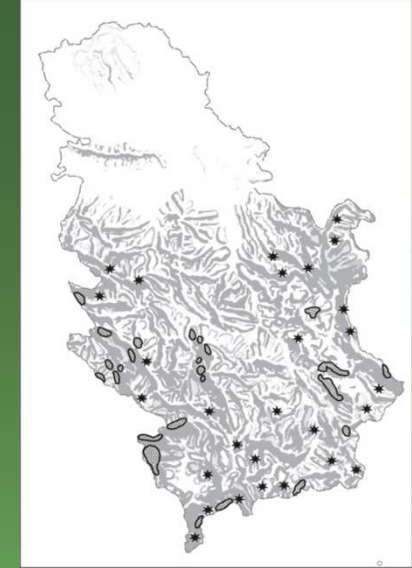
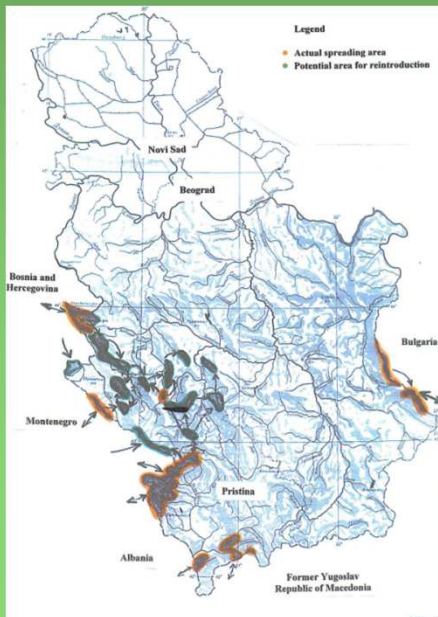


Figure 5: Known distribution of Raven *Aegolius funereus* breeding records in Serbia

Aegolius funereus



Alectoris graeca



Tetrao urogallus

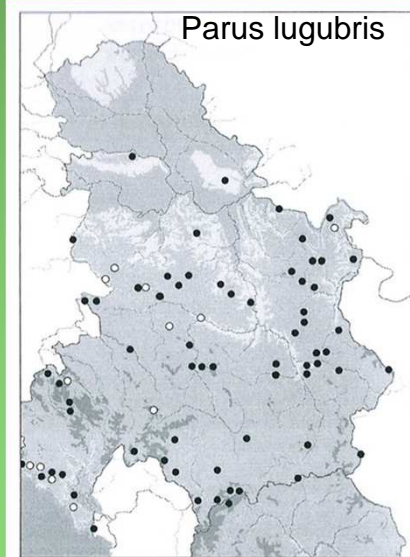
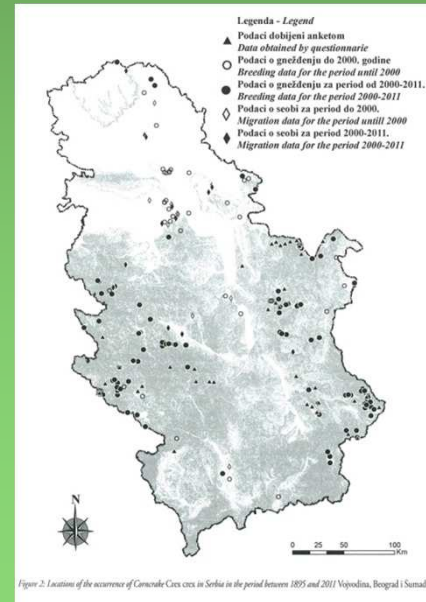
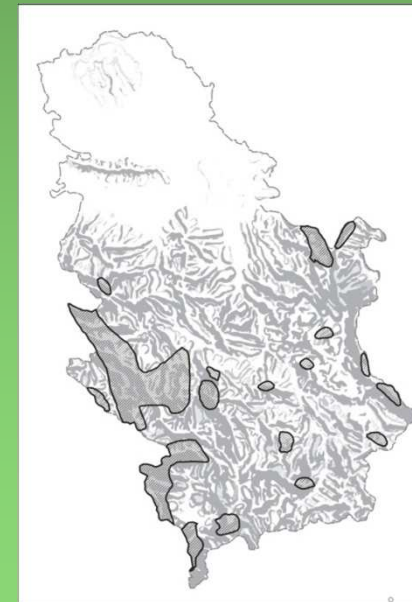


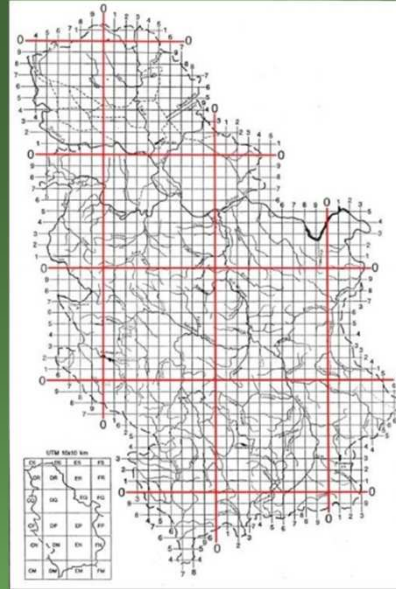
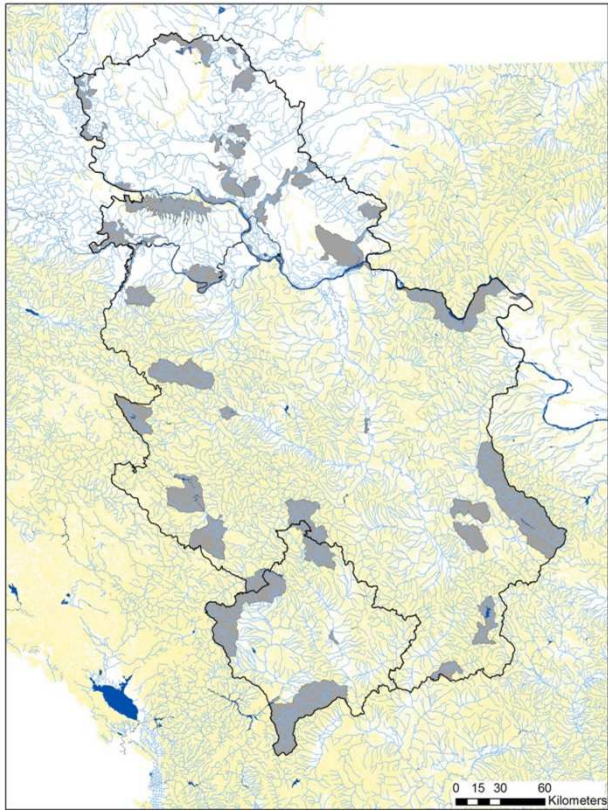
Figure 1: Distribution of Sombre Tit *Parus lugubris* in Serbia and Montenegro; black circles indicate historical data (prior to 1990), white circles indicate data collected after 1990. All data are presented, from both breeding and non-breeding periods.



Crex crex



Bonasa bonasia



CHALLENGES BIE3 – EBBA2 SERBIA

- Detailed/partially mapping/counting
- 50% species + well known
- 50% species – further investigation is needed

I. List up to three main and the most important constraints, which are limiting factors:

1. Financial aspect (travel cost, accomodation, meal, equipment)
2. Number of trained field ornithologists
3. Field work at Kosovo region and on/near administrative border zone to central Serbia

III. Any other comment on situation in your country (e.g. updated plans for national atlas etc):

- It is clear that EBBA will stimulate national breeding bird atlas development and accelerate it.

II. List up to three issues where you can help TO THE OTHER COUNTRIES with their atlas. They can include for instance technical assistance (methods, databases), help with fieldwork, fundraising, common initiatives among several neighbouring countries, or any other kind of help which you can provide to others:

1. Help - fieldwork within border zone: BIH , Montenegro, Macedonia, Bulgaria, Romania.
2. Help with fieldwork - Some serbian ornithologists regularly visit during summer period some submediterranean-mediterranean parts of Greece and Montenegro and collect a lot breeding bird data annually. Also, Macedonia is regular object of ornithological research of some serbian ornithologists.
3. Help with fieldwork - Maybe that is possible to organize field work in some eastern part of BIH (Republic of Serbska) by ornithologists from Serbia.

