

Results of the birds research on the Sava floodplains near Gradiška

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Abstract:

Between May 2014 and April 2015 researches on monthly bases were made in order to collect data about birds in that region, as well as to provide recommendations for the conservation. Based on available data, so far it's obvious that Sava floodplains are playing key role during bird's spring and autumn migrations.

The aim of the research was to collect data on birds diversity of the area, their distribution, potential threats and to determine next steps in this long-term vision for conservation of bird's and their habitats. During the research 54 species were identified, although many more are surely present that researches are aware of.

Preamble:

Ornithofauna of floodplains along the Sava River near Gradiška has not been systematically researched and monitored, and this work represents a pioneering step towards knowing the state bird fauna in this area.

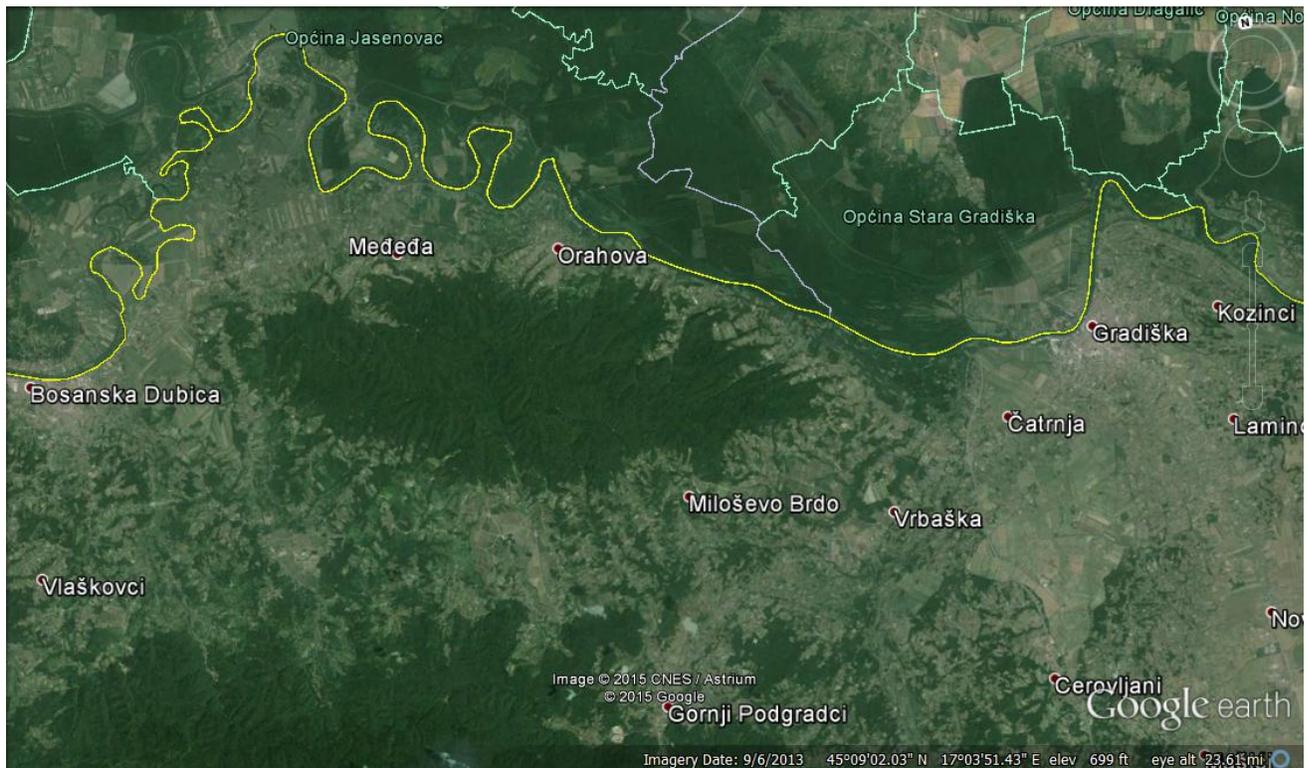
The diversity of habitats and ecosystems of Bosnia and Herzegovina is the reason of high degree of bird's diversity. Previous studies dating from 1939 to the present (Reiser (1939), Matveyev (1973), Vasic (1973), plant (1980)) shows that there were 326 species from 60 families and 18 orders. The first systematic survey of the bird fauna of northern Bosnia were carried out in the period from 1888 to 1920. Research conducted Othmar Reiser, curator of the National Museum of Bosnia and Herzegovina in Sarajevo, with the help of many contributors on the field (Reiser, 1939). In this group have not registered endemic forms for Bosnia and Herzegovina. The greatest numbers of species are stationary (nesting), a migratory species are seasonal retain on the ecosystems of Bosnia and Herzegovina, such as wetlands: Hutovo blato, Bardača, the lower part of the Drina River etc. Birds belong to the most vulnerable animals. According to the proposal for a national Red List of birds (Obratil (1989) and Matveyev (1989)) 97 species are under some degree of threat. According to Association "Our birds", in Bosnia and Herzegovina nests five of endangered species: Pygmy Cormorant (*Phalacrocorax pygmaeus*), Ferruginous duck (*Aythya nyroca*), Saker Falcon (*Falco cherrug*), White-tailed Eagle (*Haliaeetus albicilla*), Corncrake (*Crex crex*), while three globally threatened species, Black Vulture (*Aegypius monachus*), Dalmatian Pelican (*Pelecanus crispus*) and the Lesser Spotted Eagle (*Aquila clanga*), are here extinct nesting birds. Especially identified is the fact that 16 species of native fauna of birds in our considered extinct nesting. At the end of the last century, from our area has completely disappeared griffon vulture (*Gyps fulvus*) after the mass poisoning at the pond near Mostar, on the river Buna.

For the modern biogeography is not enough to know the geographical distribution of a species, but is necessary to know in detail the conditions for its survival, we should emphasize the links

between species and biocenosis which they belong should understand the role it plays in a given biocenosis. Only then can understand the appropriate structure of biocenosis and make the correct biogeographic conclusions.

General characteristics of the area:

Research areas were floodplains of Sava River between two Municipalities: Gradiška and Dubica. Special focus was on tree sites: Vrbaška, Gašnica and Orahova villages. Those places are between Sava River and its floodplains and old forests on the southern part, which are important nesting habitats for species like *Ciconia nigra*, Black Stork.



Material and methodologies:

Observation using binoculars, photographing, and identifying species on the ground in the early morning and afternoon are the methodologies used for collecting data on birds. Used binoculars: Sotem 10x50 and Minox 8x42.



Night researches were not conducted and that is one of the reasons why certain species that we know they are present in the area, were not recorded and listed in the report.

Birds are identified using following literature:

- Heinzel, H., Fitter, R., Parslow, J. (1995); za Hrvatsku prilagodio Radović, D. (1999): Ptice Hrvatske i Evrope. Hrvatsko ornitološko društvo. Zagreb.
- Lars Svensson (2009); Collins Bird Guide, 2th Edition. Harper Collins Publisher. London.

Results:

During the research, 54 bird species were recorded and are listed below in the table. Some of them are common and widely spread, but certain number of species e.g. storks (white and black), Golden Oriole, Montagu's Harrier, Night Heron, Hawfinch etc.

Authors listed only species that identified during the field research and most of them were also photographed.

Many more species are expected and known to be present in the research area, but due to objective reasons like floods that happened in May last year, huge area was unreachable for research for very important time for the research. Those are unpredictable situations that can be overcome with longer research and monitoring of those habitats.

Qualitative structure of ornithofauna of Sava River floodplains near Gradiška

Species	Vrbaška	Gašnica	Orahova
<i>Cygnus olor</i> , Mute Swan		+	

<i>Anas platyrhynchos</i> , Mallard			+
<i>Phasianus colchicus</i> , Pheasant	+		
<i>Phalacrocorax carbo</i> , Cormorant	+	+	+
<i>Nycticorax nycticorax</i> , Night Heron			+
<i>Egretta garzetta</i> , Little Egret		+	+
<i>Casmerodius albus</i> , Great Heron	+		+
<i>Ardea cinerea</i> , Grey Heron	+	+	+
<i>Ciconia ciconia</i> , White Stork	+	+	+
<i>Ciconia nigra</i> , Black Stork	+	+	+
<i>Circus pygargus</i> , Montagu's Harrier		+	
<i>Buteo buteo</i> , Common Buzzard	+	+	+
<i>Falco tinnunculus</i> , Kestrel	+		
<i>Fulica atra</i> , Coot	+	+	+
<i>Charadrius dubius</i> , Little Ringed Plover			+
<i>Vanellus vanellus</i> , Lapwing			+
<i>Gallinago gallinago</i> , Snipe			+
<i>Columba livia</i> , Feral Pigeon	+	+	+
<i>Streptopelia decaocto</i> , Collared Dove			+
<i>Alcedo atthis</i> , Kingfisher			+
<i>Hirundo rustica</i> , Barn Swallow	+	+	+
<i>Delichon urbicum</i> , House Martin			+
<i>Motacilla alba</i> , White Wagtail	+	+	+
<i>Erithacus rubecula</i> , Robin			+
<i>Phoenicurus ochruros</i> , Black Redstart	+		
<i>Saxicola torquatus</i> , Stonechat			+
<i>Saxicola rubetra</i> , Whinchat			+
<i>Turdus pilaris</i> , Fieldfare			+
<i>Turdus merula</i> , Blackbird	+		+
<i>Sylvia atricapilla</i> , Blackcap	+	+	+
<i>Regulus regulus</i> , Goldcrest			+
<i>Troglodytes troglodytes</i> , Wren			+
<i>Muscicapa striata</i> , Spotted Flycatcher			+
<i>Ficedula albicollis</i> , Collared Flycatcher			+
<i>Parus major</i> , Great Tit	+	+	+
<i>Cyanistes caeruleus</i> , Blue Tit		+	+
<i>Poecile palustris</i> , Marsh Tit			+
<i>Aegithalos caudatus</i> , Long-tailed Tit		+	+
<i>Lanius excubitor</i> , Great Grey Shrike			+
<i>Lanius collurio</i> , Red-backed Shrike	+		+
<i>Pica pica</i> , Magpie	+	+	+
<i>Garrulus glandarius</i> , Jay	+		+
<i>Corvus cornix</i> , Hooded Crow	+	+	+

<i>Corvus corax</i> , Raven			+
<i>Sturnus vulgaris</i> , Starling	+	+	+
<i>Oriolus oriolus</i> , Golden Oriole	+		
<i>Passer domesticus</i> , House Sparrow	+		+
<i>Passer montanus</i> , Tree Sparrow	+	+	+
<i>Fringilla coelebs</i> , Chaffinch	+	+	+
<i>Carduelis carduelis</i> , Goldenfinch	+	+	+
<i>Serinus serinus</i> , Serin	+		
<i>Pyrrhula pyrrhula</i> , Bullfinch			+
<i>Coccothraustes coccothraustes</i> , Hawfinch	+		+
<i>Emberiza citrinella</i> , Yellowhammer	+		

Conclusion:

Based on the results of the research conducted during the rather short time, we can conclude that floodplains of Sava River are very good birds habitat, either for nesting, resting or feeding. Orahova Municipality and its surroundings are especially interesting area, where not only many species were found, but also many nesting places and isolated areas without human disturbance. What is even more important, and that is recorded along the whole research area, local people are interested in birds, they don't have much information and do not see often clearly they importance, but are interested to know more about them, they are open for cooperation and many of them were strongly criticizing e.g. poachers.

Special connection people are having with White Storks that are nesting in their close neighbourhoods for a long time.

On all research sites, partially or not, hunters, intensive agriculture, illegal small landfills and deforestation are recorded. For all these reasons it is important to take adequate measures in order to timely protected those habitats. The extent of the negative consequences is difficult to predict, but it is certain that the presence of certain rare species would be questioned.

It is very important to conduct a more detailed research in the future during the whole year to create a clearer picture of the diversity of species and the habitat types.



