

The effect of illegal hunting on the waterbirds of Hutovo blato

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Summary

Hutovo blato is a complex of sub-Mediterranean wetlands located in the southeastern part of Herzegovina. According to the last census, a total of 259 bird species was recorded in Hutovo blato and its immediate surroundings during the 1888 – 2013 period. In 1995, Hutovo blato was declared a nature park. In 1998, Hutovo blato was declared an Important Bird Area (IBA) and in 2001 it was registered in the List of Wetlands of International Importance by the Ramsar Convention. In 2002, the Nature Park „Hutovo blato“ was added to the Provisional List of National Monuments of Bosnia and Herzegovina. Although hunting is forbidden in Hutovo blato since 1995, due to unexpected circumstances during the 2008 – 2013 period (lack of financing for the ranger service), adequate control was missing which led to the occurrence of illegal hunting in the area. Since 2008, winter bird counts and monitoring of illegal hunting in Hutovo blato is performed regularly by the Ornithological Society „Naše ptice“. This paper presents the numbers of birds recorded during the International Waterbird Census (IWC), with focus on the Common Coot (*Fulica atra*). Analyses of collected data show that a declining trend of illegal hunting since 2011 corresponds with significantly increased bird numbers in Hutovo blato, with more than 24,500 birds recorded in the area in 2014. It is estimated that the number of wintering birds in Hutovo blato can reach 50,000, if illegal hunting is reduced to a minimum which can be done by providing funding for the ranger service and strengthening its capacities, improving cooperation with the local community, hunting associations and the local and cross-border police, but also by developing sustainable birdwatching tourism.

Keywords

Hutovo blato, waterbirds, International Waterbird Census, illegal hunting, Common Coot

1. Introduction

Hutovo blato is a complex of sub-Mediterranean wetlands in the southeastern part of Herzegovina, situated on the left side of the Neretva River near the border between Bosnia and Herzegovina and Croatia. It occupies an area of 7,411 hectares of swamps, plains and mountains, ranging from 1 – 432 m a.s.l. The mild Mediterranean climate and the developed vegetation of Hutovo blato are responsible for the extraordinary richness of the area's bird fauna, especially from autumn to spring, when large flocks of birds from Central and Northern Europe use the area for stopping-over during migration or spend the entire winter here. According to data published between 1888 and 2000 and research performed by members of the Ornithological Society „Naše ptice“ since 2000, a total of 259 bird species has been recorded in the area of Hutovo blato and its surroundings (Kotrošan & Sarajlić 2014).

After World War II, Hutovo blato was a hunting ground for the social and political elite. It was first protected in 1954, when the ornitho-faunistic reserve „Hutovo blato“ was established. In 1995, Hutovo blato was declared a nature park which was added to the Provisional List of National Monuments of Bosnia and Herzegovina in 2002. Following to its importance for birds, in 1998 Hutovo blato was declared an Important Bird Area (IBA) and in 2001 it was registered in the List of Wetlands of International Importance by the Ramsar Convention (<http://www.hutovoblato.ba/parku.html>; Kotrošan & Sarajlić 2014).



According to Article 6 of the Law on Hunting of the Federation of Bosnia and Herzegovina, hunting is not allowed in protected areas. The „Ordinance on Internal Order of the Hutovo blato Nature Park“ states that hunting is allowed only in exceptional cases: Wild boar (*Sus scrofa*) can be hunted if the population becomes too high, other animals can be further hunted for the purpose of scientific research, sanitary measures or in order to restore natural balance, but in all cases a permission has to be issued by the Ministry (Articles 14 and 15). By the decision of the Federal Ministry of Agriculture, Water Management and Forestry Hutovo blato's status as a special purpose hunting ground under Article 6 of the game law was confirmed in 2014. Due to various circumstances, mainly the lack of financing for the ranger service during 2008 - 2013, illegal hunting was a common practice in the area (Stumberger et al. 2008/09).



photo: Dražen Korošan



photo: Dražen Korošan

Figures 1 & 2: Hutovo blato in south-eastern Bosnia and Herzegovina.

2. Methods

Since 2008, International Waterbird Censuses (IWCs) are performed by the Ornithological Society „Naše ptice“ in Hutovo blato. Counts were conducted during a single day between 11 and 22 January (Kotrošan & Dervović 2010, Dervović & Kotrošan 2011/12, Topić & Kotrošan 2011/12, Topić 2013). At the same time, the evidence for the occurrence and intensity of illegal hunting activities was monitored. The intensity of illegal hunting activities was ranked on a scale from 0 to 3, with 0 for no illegal activities, 1 for minimal activities (1 - 2 shots heard during the respective count), 2 for 3 to 10 shots per count and no hunting from boats, 3 for more than 10 shots and hunting from boats. For the present study data were analyzed for the families Gaviidae, Podicipedidae, Phalacrocoracidae, Ardeidae, Threskiornithidae, Anatidae, Rallidae and Laridae, with special attention on the Common Coot (*Fulica atra*), the quarry most preferred by illegal hunters.

3. Results

3.1. Intensity of illegal hunting activity

During the study period, the intensity of illegal hunting activities was most prominent between 2008 and 2010 (Tab. 1), when a number of activities which are forbidden by the Law on Hunting of Federation of Bosnia and Herzegovina and by international conventions, such as shooting from motor boats, shooting from hunting blinds, the killing of endangered and protected species, like Pygmy Cormorant (*Microcarbo pygmaeus*) and Ferruginous Duck (*Aythya nyroca*), the killing of birds during migration and the disturbance of bird flocks, were observed (Stumberger et al. 2008/09). The main reason for the occurrence of illegal hunting activities is the reduction in financing

of the public institution „Hutovo blato“, which led to the disbandment of the ranger service and a lack of control of hunting activities.

According to Tab. 1 illegal hunting activities are considerably lower in Hutovo blato since 2011, after a report regarding this topic was shown in the „Europamagazin“ of the German TV station ARD in autumn 2011, and letters by the Ornithological Society „Naše ptice“ have been sent to the relevant national and entity ministries and to the Ramsar representative in Bosnia and Herzegovina. Since then, several police actions were performed and six guns have been confiscated.

Since 2013, the monitoring of illegal activities has been intensified and a better cooperation with local communities, hunting associations and the police has been established which led to a significant decrease in illegal hunting activities. Eleven cases of illegal hunting activity were registered in 2013 and during the first half of 2014 there were six cases, with no illegal activities in spring and during summer.

Tab. 1: Intensity of illegal hunting activities in Hutovo blato, 2008 - 2014. Hunting intensity increases on a scale from 0 – 3.

Year	Intensity of illegal hunting
2008	3
2009	3
2010	3
2011	2
2012	2
2013	1
2014	1

„According to Article 6 of the Law on Hunting of the Federation of Bosnia and Herzegovina, hunting is not allowed in protected areas“



photo: Ilhan Dervovic



photo: Ilhan Dervovic

Fig. 3 & 4: Hunting from a motorboat and used cartridges as signs for illegal hunting in Hutovo blato.



reference: ARD - Europamagazin

Fig. 5: Detail from a report which the German TV station ARD broadcasted in autumn 2011.

3.2. Effect of illegal hunting on waterbird abundance

Data collected during IWCs show the relation between the intensity of illegal hunting activities and the population numbers of waterbirds. In the years between 2008 – 2010 when illegal hunting was common, total numbers of waterbirds in Hutovo blato didn't exceed 5,000 individuals, but, after illegal hunting activities declined, numbers raised up to more than 24,500 birds in 2014 (Tab. 2). The most significant increase of the winter population was observed in Common Coot and in many duck species (Anatidae).

The low waterbird numbers present in January 2013 were registered due to the extremely mild winter, when January and February temperatures were significantly above average in Central and Eastern Europe, which led to lower migration intensity from the north. Anyway, in 2013, Hutovo blato was the locality in which the largest drop in numbers of wintering waterbirds was registered in the entire country (Topić 2013).

Tab. 2: Results of International Waterbird Censuses (IWCs) in Hutovo blato in January, 2008 – 2014.

Species	2008	2009	2010	2011	2012	2013	2014
<i>Gavia arctica</i>						1	
<i>Tachybaptus ruficollis</i>	55	54	21	69	503	25	50
<i>Podiceps cristatus</i>		1		6	45		
<i>Phalacrocorax carbo</i>	34	108	187	103	40	355	213
<i>Phalacrocorax pygmaeus</i>	100	360	264	566	1,842	287	121
<i>Ardea cinerea</i>		2	17	24	21	48	4
<i>Ardea alba</i>	1		1	2	6	5	4
<i>Egretta garzetta</i>		3		9			4
<i>Botaurus stellaris</i>	1					2	
<i>Cygnus olor</i>		12				2	
<i>Anas penelope</i>	3	163	113	62	71	135	929
<i>Anas strepera</i>		146	3	98	85	26	2,658
<i>Anas acuta</i>	1				56	14	
<i>Anas crecca</i>		716	185	675	135	89	520
<i>Anas clypeata</i>		72	9		3		2
<i>Anas platyrhynchos</i>		2	587		208	176	1,268
<i>Netta rufina</i>					6		
<i>Aythya ferina</i>		2	102	1,300	410	65	469
<i>Aythya nyroca</i>			4		39	43	13
<i>Aythya fuligula</i>			63	66	65	422	1,364
<i>Aythya marila</i>						1	125
<i>Rallus aquaticus</i>	1	1	5				
<i>Fulica atra</i>	385	1,814	1,616	7,745	6,936	1,741	16,747
<i>Gallinula chloropus</i>		4			6		
<i>Larus michahellis</i>	64	21	26	360	61	25	29
<i>Larus ridibundus</i>	3	333	783	41	183	105	73
TOTAL	648	3,814	3,986	11,126	10,721	3,567	24,593



3.3. Effect of illegal hunting on Common Coot abundance

Common Coot is the species which was most affected by illegal hunting activities in Hutovo blato. After the control of illegal hunting activities was established in winter 2010/2011, the numbers of the species recorded during the IWC increased (Tab. 2, Fig. 6). This is especially prominent for the figures in January 2014. During winter 2013/14 illegal hunting activities were registered in nearby Neretva Delta in Croatia. Hence, it is assumed that birds from the Croatian part of the Neretva river valley moved to Hutovo blato, searching for safety.

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„It will be further necessary to provide funding for a ranger service, for strengthening its capacities, and to improve cooperation with ... hunting associations and the local and cross-border police“

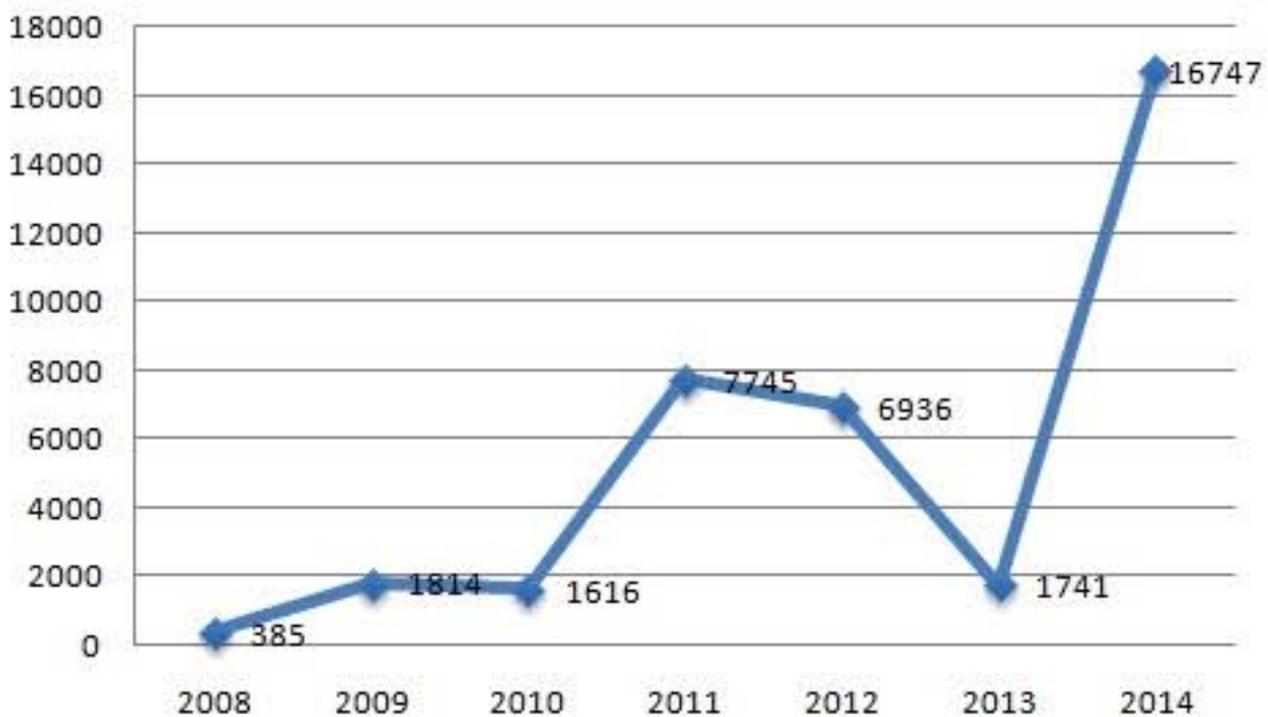


Fig. 6: Numbers of Common Coot (*Fulica atra*) in Hutovo blato during the IWC in January, 2008 - 2014.

4. Conclusions

The presented data show that the reduction of illegal hunting activities had a positive and immediate effect on bird populations in Hutovo blato. A similar effect was registered after a complete hunting ban at Lake Constance in Switzerland and Germany (Schneider-Jacoby 2009). Obviously, the securing of peace for birds from hunting is a basic prerequisite for increasing their numbers. With favorable conditions, such as the lack of significant anthropogenic pressures or following to possible effects of climate change on winter distribution (cf. Zwarts 2015), the number of wintering birds in Hutovo blato is expected to rise up to 50,000 ind. in the next few years.

The control of illegal hunting activities in Hutovo blato encouraged the first nesting of Glossy Ibis (*Plegadis falcinellus*) in 2013 (Dalmatin et al. 2013) as well as the first record of Cattle Egret (*Bubulcus ibis*) in the area in 2014. It is necessary to ensure the continuity of monitoring of illegal activities in order to reduce hunting and other disturbances to a minimum. It will be further necessary to provide funding for a ranger service for strengthening its capacities, and to improve cooperation with the local community, hunting associations and the local and cross-border police. This is confirmed by the success of the present two-year project „Improving management of Hutovo blato Nature Park“ through which three park rangers received funding and necessary equipment which strengthened the capacities of the ranger service. As a result, the control of illegal hunting activities could be substantially improved in 2013 and 2014 (Bečka 2014).

Finally, the positive effect of the present project for the biodiversity of birds should be used for strengthening tourism in the region by including birdwatching in the offer for tourists. In this context it will be necessary to link Hutovo blato with the Neretva Delta by developing cross-border programs for the control of illegal hunting activities and sustainable tourism, based on the natural resources of the area and on birdwatching.

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