

EARLY AUTUMN OBSERVATIONS OF WATERBIRDS ON THE MIDDLE DNESTR RIVER IN 1999

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Ранньоосінні спостереження навколорічкових птахів на середньому Дністрі у 1999 р. - А. Голавський, С. Шинкарчик. - Беркут. 9 (1-2). 2000. - Матеріал зібраний під час експедиції по Дністру від Галича до Заліщиків 28.07-5.08.1999 р. Маршрут було розділено на безлісу і обліснену частини. Всього відмічено 998 особин 24 видів птахів з густотою 82,5 ос./10 км русла (табл.). Найбільш чисельними трофічними групами були ентомофаги і поліфаги (рис.).

Abstract. The material was collected in the term 28 July - 5 August 1999 during a raft trip along the upper Dnestr river between Halicz and Zaleszczyki. The route was divided into woodless and afforested sections. In total, 998 waterbirds from 24 species were noted, with the density 82,5 ind./10 km of the riverbed (Table). The most numerous trophic groups were entomophags and polyphags (Fig.)

Key words: waterbirds, middle Dnestr river, migration, number.

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The aim of the paper was to characterise autumn migration of birds in the upper and middle part of the Dnestr river in relation to a diversified character of the valley and the riverbed.

Area

The area where observations were conducted comprised a 161-km section of the upper and middle course of the Dnestr river between the road bridge in Halicz and the railway bridge in Zaleszczyki. Along the studied fragment over ten watercourses flow into Dnestr, the largest of them are Bystrica, Złota Lipa i Strypa. The average slope (calculated from the map: Ivano-Frankivska oblast' 1: 200 000) is ca 0,43 m/km of the river stream, and the width of Dnestr varies from 150 to 400 m.

According to differences in the stage of banks overgrowth and the type of vegetation in the vicinity of the river, the route of the trip was divided into 2 sections:

- woodless section, 61-km long. It included several fragments of the river course lacking woodlands (forest, scrubby willows) completely or at least in 50 %. Along this part of the river islands and shallows were slightly more numerous than along the afforested section.

- afforested section, 100-km long. There were included fragments of the river course which were overgrown at least in 50 % with broad-leaved forest or woodlands. Usually one bank was completely covered by forest, while the other was overgrown by willow thickets. Along these fragments islands were less numerous and banks were usually steep.

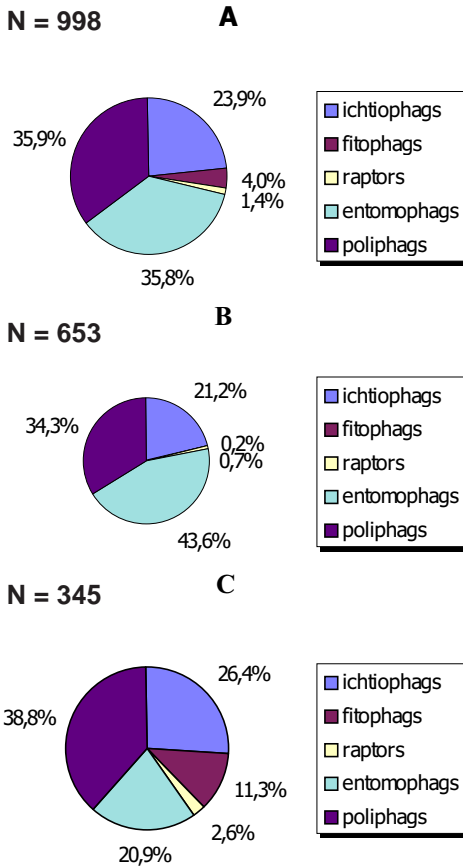
Methods

Observations were conducted during a raft trip in the term 28 July – 5 August 1999. Only birds occurring within the riverbed, i. e. on banks, islands and sandy shallows, were counted. All waterbirds were noted keeping the division into flocks and single individuals. In order to avoid noting startled individuals twice, their movements were focused as precisely as it was possible. Observation lasted on average from 10⁰⁰ to ca 19⁰⁰ and was performed using 10 x 50 binocular.

Stated species were qualified to trophic groups according to the division of Dombrowski et al. (1990). To calculate the similarity of species composition between the distinguished sections there was used index:

$$QS = (2W/A + B) \times 100 \%,$$

(W – the number of common species; A – the



Shares of trophic groups of birds on the middle Dnestr river: A – both sections jointly, B – woodless section, C – afforested section.

Частки трофічних груп птахів на середньому Дністрі: А – обидві ділянки разом, В – безліса ділянка, С – обліснена ділянка.

number of species in the community A; B – the number of species in the community B). In order to determine the index of similarity of densities, index

$$PZ = (2c/a + b) \times 100 \%$$

(c – the sum of minimal values of densities of common species; a – the density of the community a; b – the density of the community b) was used after Wesołowski (1975).

Results

Along the controlled section of the Dnestr river, in total 998 waterbirds from 24 species

were stated. Along the woodless section 23 species were observed, and along the afforested one – 13. The mean number of birds in a flock on the woodless section was 3,4 ind., while on the other one – only 2,1 ind. (Table). The index of similarity of species composition (QS) for distinguished sections was 66,7 %, which means that these assemblies were similar. More numerous species noted only along the woodless section were: Little Egret (*Egretta garzetta*), Marsh Harrier (*Circus aeruginosus*), Lapwing (*Vanellus vanellus*), Greenshank (*Tringa nebularia*) and Little Tern (*Sterna albifrons*). On the other hand, Black Kite (*Milvus migrans*) was observed only on the afforested section. Dominants (over 5 % of an assemblage) were 5 species: Herring/Yellow-Legged Gull (*Larus argentatus/cachinnans*) (adult birds with both pink and yellow legs were seen but the decided majority remained undetermined, thus the two taxa were treated jointly), Black Tern (*Chlidonias niger*), Common Sandpiper (*Actitis hypoleucos*), Black-headed Gull (*Larus ridibundus*) and Grey Heron (*Ardea cinerea*), which amounted jointly to 70,3 % of all stated birds.

The domination structure was similar for the two distinguished sections, however at the woodless part among the dominants there were also Cattle Egret – 5,8 % and Common Tern (*Sterna hirundo*) – 7,2 %, while the threshold of 5 % was not reached by Grey Heron. Along the afforested section also Mallard (*Anas platyrhynchos*) (11,3 %) was one of dominants, and the threshold was not reached Black Tern (Table).

Along the woodless part, the density was 107,0 birds per 10 km of the riverbed, and along the afforested one 34,5 ind./10 km, while on the whole length – 82,5 ind./10 km (Table). The quantitative similarity of bird assemblies of the two compared fragments was rather low (PZ = 43,4 %). On the woodless



The number of individuals (No), the number of flocks (Ns), the density No/10 km (Den) and species domination (D) of birds on the upper Dnestr river

Число особин (No), число зграй (Ns), густота ос./10 км (Den) і видове домінування (D) птахів на верхньому Дністрі

Species	Woodless section				Afforested section				Both sections jointly			
	No	Ns	Den	D	No	Ns	Den	D	No	Ns	Den	D
<i>Podiceps cristatus</i>	1	1	0,2	0,2	–	–	–	–	1	1	0,1	0,1
<i>Nycticorax nycticorax</i>	1	1	0,2	0,2	–	–	–	–	1	1	0,1	0,1
<i>Egretta garzetta</i>	38	15	6,2	5,8	–	–	–	–	38	15	2,4	3,8
<i>Ardea cinerea</i>	26	14	4,3	4,0	71	39	7,1	20,6	97	53	6,0	5,3
<i>Ciconia nigra</i>	8	3	1,3	1,2	4	2	0,4	1,2	12	5	0,7	0,5
<i>Anas platyrhynchos</i>	1	1	0,2	0,2	39	4	3,9	11,3	40	5	2,5	0,5
<i>Milvus migrans</i>	–	–	–	–	9	4	0,9	2,6	9	4	0,6	0,4
<i>Circus aeruginosus</i>	5	5	0,8	0,8	–	–	–	–	5	5	0,3	0,5
<i>Charadrius dubius</i>	5	5	0,8	0,8	1	1	0,1	0,3	6	6	0,4	0,6
<i>Vanellus vanellus</i>	18	3	2,9	2,8	–	–	–	–	18	3	1,1	1,8
<i>Calidris temminckii</i>	1	1	0,2	0,2	–	–	–	–	1	1	0,1	0,1
<i>Tringa nebularia</i>	22	13	3,6	3,4	–	–	–	–	22	13	1,4	0,22
<i>Actitis hypoleucos</i>	77	36	12,6	11,8	65	40	6,5	18,8	142	76	8,9	14,2
<i>Tringa ochropus</i>	6	6	1,0	0,9	3	3	0,3	0,9	9	9	0,6	0,9
<i>T. glareola</i>	3	3	0,5	0,5	–	–	–	–	3	3	0,2	0,3
<i>Gallinago gallinago</i>	2	1	0,3	0,3	–	–	–	–	2	1	0,1	0,2
<i>Larus ridibundus</i>	117	17	19,2	17,9	21	6	2,1	6,1	138	23	8,6	13,8
<i>L. canus</i>	1	1	0,2	0,2	2	2	0,2	0,6	3	3	0,2	0,3
<i>L. argent./cachinnans</i>	106	30	17,4	16,2	111	48	11,1	32,2	217	78	13,5	21,7
<i>Sterna hirundo</i>	47	21	7,7	7,2	2	1	0,2	0,3	49	22	3,0	4,9
<i>S. albifrons</i>	9	3	1,5	1,4	–	–	–	–	9	3	0,6	0,9
<i>Chlidonias niger</i>	150	5	24,6	23,0	3	1	0,3	0,3	153	6	9,5	15,3
<i>Ch. hybridus</i>	1	1	0,2	0,2	–	–	–	–	1	1	0,1	0,1
<i>Alcedo atthis</i>	8	7	1,3	1,2	14	14	1,4	4,1	22	21	1,4	2,2
Total:	653	193	107,0	100,0	345	165	34,5	100,0	998	358	82,5	100,0

section decidedly higher densities were reached by: Little Ringed Plover (*Charadrius dubius*), Black-headed Gull and Black Tern, while in the afforested one it was Mallard. Corresponding values of densities in both sections were found only in Kingfisher (*Alcedo atthis*) (Table).

Considering trophic groups, polyphags and entomophags dominated along the whole studied route, amounting jointly to 71,7 %. A remarkable share (23,9 %) was also presented by ichthyophags (Fig.). While comparing the distinguished fragments, the number of entomophags, which was two times higher in the woodless section than on the afforested one draws attention. However, in the latter frag-

ment, remarkably more phytophags were stated, due to a numerous occurrence of Mallard (Fig.). Ichthyophags and poliphags appeared along both sections in similar numbers.

Discussion

The obtained values point out a decidedly more important role of the woodless section for waterbirds. It was reflected by both the number of stated species and the density of individuals. Along the woodless fragment almost two times more species occurred, and the general density of birds was three times higher than along the other fragment. The sections differed in numbers of *Charadriidae*: 134 ind. in the woodless part and 69 ind. in



the afforested one. It resulted from the presence along the first of the mentioned sections of suitable places for foraging: sandy banks and islands with shallows. Similarly, along the woodless part terns and gulls (except for Herring/Yellow Legged Gull) occurred more numerously. Moreover, along the woodless fragment birds were grouped in larger flocks. In addition, distinct differences in shares of trophic groups, especially of entomophags and phytophags were stated. Perhaps the pressure from people who appeared mostly outside the afforested part of the Dnestr course was a decisive factor for the occurrence of Mallard.

Any comparisons of the species composition and bird numbers of the middle Dnestr with other similar rivers are difficult because of different terms of observation trips as well as diversified hydrological and climatic conditions. The only undertaken comparison was between Dnestr and the Warta river in Poland. Along 732 km of the Warta river course, 48 birds species with a mean density of 83 ind./10 km of the riverbed were noted (Lewartowski, 1989). The two-fold higher number of species results probably from the difference in the route length and somewhat later (11-29.08.1972) term of the trip, when more birds migrate. Almost identical density of birds on both rivers should be considered as a coincidence, because on the distinguished sec-

tions of the Warta river, of a length similar to the studied fragment of the Dnestr course, densities were at the level 25,0-296,0 ind./10 km of the riverbed. The index of species similarity (QS) between Dnestr and Warta rivers reached 55,6 % and the index of similarity of densities (PZ) only 29,9 %, which means that bird densities were different. Among the more numerous species stated on both rivers in corresponding densities there were: Greenshank, Green Sandpiper and Kingfisher, while the largest, 6-fold inconsistencies in densities referred to: Grey Heron, Mallard and Lapwing. Probably it was connected with the term of the trip, the character and the size of the compared rivers and their geographical localisation.

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Замітки	Беркут	9	Вип. 1-2	2000	110
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ГНІЗДУВАННЯ СІЛЬСЬКОЇ ЛАСТІВКИ В МЕЛІОРАТИВНІЙ ТРУБІ

Nesting of the Swallow in a land-reclamation pipe. - V.M. Gleba. - *Berkut*. 9 (1-2). 2000. - Two nests were found in a concrete pipe in the Transcarpathians in 1998. [Ukrainian].

У 1998 р. два гнізда сільської ластівки (*Hirundo rustica*) були знайдені у бетонній трубі меліоративної системи серед полів в околицях смт Королеве Виноградівського

р-ну Закарпатської обл. На місці нещільного стику двох частин труби всередину проросло коріння трав. Саме до цього коріння боком і кріпилися гнізда. В обох гніздах успішно вивелися пташенята.

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