

RESULTS REGARDING THE WINTER MONITORING OF THE BIRDS SPECIES WITHIN THE WETLAND BISTREȚ – CÂRNA (DOLJ)

MIRELA SABINA RIDICHE

Abstract. The paper briefly renders the results of the quantitative evaluation of the species of birds that stationed within the wetland Bistreț – Cârna in the month of January between 2003 and 2007. The results of the research are reported to the meteorological conditions, which influenced the state of the biotopes, respectively the presence or the absence of the birds. The data of these local censuses correlated with the national and international ones allow us to draw certain conclusions regarding the tendencies of the studied populations (increase, decrease or stability tendencies) at a global level, as well as the determination of certain areas with high avifaunal importance, the purpose of which is the preservation of the species of great community interest.

Key words: winter monitoring, birds, wetland Bistret

Rezumat. Rezultate privind monitoringul de iarnă al speciilor de păsări din zona umedă Bistreț – Cârna (Dolj). Lucrarea prezintă sintetic rezultatele evaluării cantitative a speciilor de păsări care au staționat în zona umedă Bistreț – Cârna, în luna ianuarie a anilor 2003 – 2007. Rezultatele cercetărilor sunt raportate la condițiile meteo, care au influențat starea biotopurilor, respectiv prezența sau absenteismul păsărilor. Datele acestor recensământuri locale, coroborate cu cele din plan național și respectiv internațional, permit unele concluzii privind tendințele populațiilor studiate (de creștere, de scădere sau stabilitate) la nivel global, precum și desemnarea unor arii de importanță avifaunistică cu scopul conservării speciilor de interes comunitar.

Cuvinte cheie: monitoring de iarna, păsări, zona umedă Bistret

INTRODUCTION

The annual census of the aquatic birds is an important action; there are involved numerous European countries, as well as countries from other continents and the census takes place in January according to an international program coordinated by Wetlands International, the headquarters of which is in Wageningen (Netherlands). It centralizes and interprets the data supplied by all the participant countries.

The practical utility of this regular action of birds' effectives evaluation within the wintering places is to establish the tendencies of the investigated populations (the diminution, increase or stability tendency), on the basis of which there are taken decisions with regard to the hunting quotas or, on the contrary, there are imposed protective legislative measures (MUNTEANU, 2005).

At the same time, on the basis of the quantitative and qualitative values determined in different wetlands, it is established the avifaunal importance of the studied areas and promoting certain measures able to preserve the habitats becomes compulsory.

Beginning with 1997, our attention focused on the avifauna of the ecosystems from Bistreț – Cârna (Dolj County). Located within the Danube alluvial plain, at about 5 km north of the river, the lake Bistreț – Cârna is an objective easy to spot, which displays a great scientific and economic interest. It is fitted out for intensive piscicultural exploitation and it is supplied by the Desnățui River in the North; thus, the lake represented a permanent attraction point for the aquatic birds, especially for the migratory and/or partially migratory birds.

MATERIAL AND WORKING METHOD

The paper presents a synthesis of the direct ornithological research made by mid January in the area of the piscicultural basins from Bistreț – Cârna and in their neighbourhood.

We used the binoculars 10 x. for observations, while for the identification process we consulted the guide for determining bird species (BERTEL BRUUN et al., 1999).

Although our research started in 1997 (RIDICHE, 2000, 2004, RIDICHE et al., 2006), in the present study, there were interpreted only the observations made between 2003 and 2007, as starting with this date we constantly participated in the Winter census of the aquatic birds coordinated by the Romanian Ornithological Society at a national level.

For choosing the observation spots, there were taken into account the conditions of each basin of the lake; consequently, we appreciate that the identified species, as well as the estimated number of birds are somehow numerically under-evaluated as the analysed territory was not entirely covered.

During the research, there were also taken into account the meteorological conditions and the state of the biotopes, which influenced the presence or the absence of the birds.

RESULTS AND DISCUSSIONS

According to Table 1, the ornithological research that took place in the month of January of the last five years led us to the identification of a total number of 37 species, 19 of them aquatic species (Pelecaniformes Order - 2 species,

Ciconiiformes Order – 3 species, Anseriformes Order – 6 species, Gruiformes Order – 2 species, Charadriiformes Order – 7 species) and 18 non-aquatic (Falconiformes Order – 4 species, Galliformes Order – 1 species, Piciformes Order – 1 species, Passeriformes Order – 12 species).

Table 1. Quantitative and Qualitative List of the Birds under Observation at Census of the Winter 2003 - 2004

Tabel 1. Lista calitativă și cantitativă a păsărilor observate la recensământul de iarnă 2003-2007

| | Species | Jan. 15 th 2003 | Jan. 15 th 2004 | Jan. 17 th 2005 | Jan. 17 th 2006 | Jan. 18 th 2007 |
|----|---|-------------------------------|-------------------------------|----------------------------|-------------------------------|-------------------------------|
| 1 | <i>Phalacrocorax carbo sinensis</i> (BLUMENBACH) | | | | 10-15 | + 30 |
| 2 | <i>Phalacrocorax pygmeus</i> (PALL.) | | | 3 | 7-9 | 5-8 |
| 3 | <i>Egretta g. garzetta</i> (L.) | | | | | 1 |
| 4 | <i>Egretta a. alba</i> (L.) | | | 3 | 2 | 1 |
| 5 | <i>Ardea c. cinerea</i> (L.) | 1 yung | 2 (1 ad.+1 yung) | 2 | | 27 |
| 6 | <i>Anser a. albifrons</i> (SCOP.) | | | 11 | | |
| 7 | <i>Anser erythropus</i> (L.) | | | | | |
| - | <i>Anser sp.</i> | | | 12 – 14 | | 5 |
| 8 | <i>Tadorna tadorna</i> (L.) | | | 1 | 10 | |
| - | <i>Anas sp.</i> | | 7 | | | |
| 9 | <i>Anas c. crecca</i> (L.) | | | about 200 | | + 800 |
| 10 | <i>Anas p. platyrhynchos</i> (L.) | | | 120-150 | | + 250 |
| 11 | <i>Mergus m. merganser</i> (L.) | | | 70 -80 | | |
| 12 | <i>Accipiter n. nisus</i> (L.) | | 1 | | | |
| 13 | <i>Buteo b. buteo</i> (L.) | | | 1 | | |
| 14 | <i>Buteo l. lagopus</i> (PONT.) | | 1 | | | |
| 15 | <i>Falco t. tinnunculus</i> (L.) | 1 | | | | |
| 16 | <i>Perdix p. perdix</i> (L.) | 10 | | | | |
| 17 | <i>Rallus aquaticus</i> (L.) | 2 | | | | |
| 18 | <i>Fulica a. atra</i> (L.) | | | | 5 | +12 |
| 19 | <i>Calidris sp.</i> | | | 7-8 | | |
| 20 | <i>Limosa l. limosa</i> (L.) | | | | | 80 |
| 21 | <i>Numenius a. arquata</i> (L.) | | | 100 | 12 | |
| 22 | <i>Larus r. ridibundus</i> (L.) | | | + 50 | 8 | 60-70 |
| 23 | <i>Larus canus</i> (L.) | | | 9-12 | | |
| 24 | <i>Larus argentatus cachinnans</i> (PALL.) | | | 7 | | |
| 25 | <i>Dendrocopos major pinetorum</i> (CH. L. BREHM) | | 1 | | | |
| 26 | <i>Galerida c. cristata</i> (L.) | + 20 in | 8 | 20-30 | 1 | |
| 27 | <i>Phoenicurus o.</i> | | | | 1 | |
| 28 | <i>Pica p. pica</i> (L.) | 12 | 6 | | 12-15 | |
| 29 | <i>Corvus monedula soemmeringii</i> (FISCH.) | | 30 | | | |
| 30 | <i>Corvus f. frugilegus</i> (L.) | 4 | 12 | | | |
| 31 | <i>Corvus corone cornix</i> (L.) | 8 | 2 | | | |
| 32 | <i>Passer d. domesticus</i> (L.) | | 20 | | | |
| 33 | <i>Passer m. montanus</i> (L.) | | 20-30 | | +18 | |
| 34 | <i>Fringilla c. coelebs</i> (L.) | | | | 1 | |
| 35 | <i>Emberiza c. citrinella</i> (L.) | 50-70 in | 12-15 | | | |
| 36 | <i>Emberiza hortulana</i> (L.) | | | | | |
| 37 | <i>Emberiza schoeniclus</i> (L.) | | 7-9 in | 2 | | |
| | TOTAL | +132 in. | + 144 in. | + 630 in. | + 100 | + 1300 |

Legend: in. – individ

Taking into account the climatic conditions that were different from one year to another (table no. 2), we admit that they influenced the state of the biotopes and, consequently, the dynamics of the birds' populations.

Table 2. The meteorological Conditions during the Observations
Tabel 2. Condiții meteo în timpul observațiilor

| Jan. 15 th 2003 | Jan. 15 th 2004 | Jan. 17 th 2005 | Jan. 17 th 2006 | Jan. 18 th 2007 |
|---|--|--|--|--|
| Frozen soil and pools (15-20 cm.); Snow cover: 10-25 cm thick. Cloudy sky 2/8, T-5°C. Intense wind W>E | Severe weather: T 2°C, overcast sky 8/8, rain and sleet. Ice and snow cover of 5mm – 1cm thick; 70% of the pool covered. Slow wind. | Relatively warm weather. The pool and the fields around it were not frozen. T about 3°C, overcast sky 6/8. | T: -2° – 0°C. The terrain and the pool were frozen and covered by a thin snow cover. Dense fog, 30-40 m visibility. | Clear sky, average intensity wind, W-E. T. 8-12°C. Snow or other precipitation forms missed during the entire winter. |

From the quantitative point of view, the greatest number of individuals was registered in 2007 (about 1,300 individuals); this winter, the climate was warm (above the normal values for this period) and without precipitations during the entire cold season.

A similar situation was registered in January 2005, when the relatively warm weather did not allowed the freezing of the pools and of their neighbouring fields and thus, the number of identified birds was estimated at 630 individuals.

The meteorological conditions registered by the middle of January in 2003, 2004, and 2006, characterized as normal for winter in the South of the country, limited the access of the birds in the habitats that became hostile in the wetland Bistreț-Cârna; thus, there were registered between 100 and 144 individuals.

Table 3. The annual numerical values of the birds' populations sributed according to their order
Tabel 3. Valori numerice anuale ale populațiilor de păsări repartizate pe ordine

| Crt. no. | Order | 2003 | 2004 | 2005 | 2006 | 2007 |
|----------|-----------------|---------|---------|---------|-------------|-------------|
| 1 | Pelecaniformes | - | - | 3 in. | 17 – 24 in. | 35 – 38 in. |
| 2 | Ciconiiformes | 1 in. | 2 | 5 in. | 2 in. | 29 in. |
| 3 | Anseriformes | - | 7 | 456 in. | 10 in. | + 1,055 in. |
| 4 | Gruiformes | 2 in. | - | - | 5 in. | + 12 in |
| 5 | Charadriiformes | - | - | 178 in. | + 12 in. | + 150 in. |
| 6 | Other order | 125 in. | 135 in. | 33 in. | + 18 in. | ? |

From the qualitative point of view, Ciconiiformes Order registered a constant presence; it was well represented by the species *Ardea cinerea* and *Egretta alba*. Anseriformes Order was represented by the following duck species: *Anas crecca* and *A. platyrhynchos*, while Charadriiformes Order by the species *Limosa limosa* and *Numenius arquata*.

Phalacrocorax carbo was the representative species for Pelecaniformes Order, while Gruiformes Order was sporadically represented by *Fulica atra* and *Rallus aquaticus*.

Most of the identified species appears on the list of the species of community interest and their preservation requires the designation of the special preservation areas and of the special avifaunal protection areas (Official Gazette No. 442 from the 29th of June 2007).

CONCLUSIONS

During the ornithological research made in the last five years within the framework of the international program for the monitoring of the aquatic birds, we identified a total number of 37 species, 19 of them aquatic and 18 non-aquatic species.

From the quantitative point of view, the greatest number of individuals was registered in 2007 and 2005, when the weather was warm and atypical for this period of the year. On the other hand, the number registered in 2003, 2004, and 2006 was quite low because of the severe weather that is typical for winter.

From the qualitative point of view, Ciconiiformes and Anseriformes Orders registered a constant appearance followed by Charadriiformes and Pelecaniformes Orders.

The presence of the species of community interest justifies the designation of the wetland Bistreț-Cârna as an area with increased avifaunal importance and there were already taken legislative preservation measures.

REFERENCES

BRUUN B., DELIN H., SVENSSON L. 1999. *Păsările din România și Europa. Determinator ilustrat* (versiunea românească: Munteanu D.). Edit. Hamlyn. Londra. 320 p.

- MUNTEANU D. 2005. *Rezultatele monitoringului de iarnă al găștelor din România în perioada 1988 – 1999*. Scripta Ornitologica Romaniae. **II**. Cluj Napoca: 63 – 81.
- RIDICHE MIRELA. 2000. *Ardeidele din bazinele piscicole de la Bistreț-Dunăreni (Dolj)*. Analele Banatului, Șt. Nat.. Timișoara: 147-151.
- RIDICHE MIRELA SABINA. 2004. *Statutul de conservare al avifaunei acvatice din bazinele piscicole Dunăreni-Bistreț (Dj), în raport cu legislația europeană*. Oltenia. Studii și comunicări. Șt. Nat. **XX**. Craiova: 285-290.
- RIDICHE MIRELA, BĂLESCU CARMEN. 2001. *Considerații ecologice privind avifauna acvatică din bazinele piscicole de la Dunăreni-Bistreț*. Oltenia. Studii și comunicări. Șt. Nat. **XVI**. Craiova: 127-130.
- RIDICHE MIRELA, ORZATA NARCISA. 2004. *Analiză de ansamblu asupra ornitofaunei din zona umedă Dunăreni-Bistreț (Dolj)*, Drobeta. Seria Șt. Nat. **XIV**. Drobeta Turnu Severin: 213-222.
- RIDICHE MIRELA, ORZATA NARCISA, STEFANESCU D. 2006 *Carna (Dunăreni)-Bistreț Lake (Dolj, Romania), Important Bird Area and a potential Ramsar site*; Proceedings of the Symposium II International Symposium of Ecologists of the Republic of Montenegro – Kotor, 20-24 septembrie (Centre for Biodiversity of Montenegro): 203-212.
- *** 2007 *Ordonanță de urgență. nr. 57 din 20 iunie 2007 privind regimul ariilor naturale protejate, conservarea habitatelor naturale, a florei și faunei sălbatice*. Guvernul României. Monitorul Oficial nr . 442 din 29 iunie 2007.

Mirela Sabina Ridiche- Muzeul Olteniei Craiova – Științele Naturii
 Str. Popa Șapcă nr. 8, RO-200422
 e-mail: rimirela@yahoo.com