

DATA ON THE BIRD LICES (*Mallophaga*) PARASITING THE BIRD SPECIES OF THE DANUBE DELTA (ROMANIA)

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DATE ASUPRA MALOFAGELOR (*Mallophaga*) PARAZITE ALE SPECIILOR DE PASARI DIN DELTA DUNARII (ROMANIA)

Summary. In the present paper the authors present the bird lice (*Mallophaga*) species sampled found in wild birds in the 1983 - 1994 period. 195 specimens of birds (belonging to 59 species) have been subject to ectoparasitological investigations. A total number of 1019 lice have been collected from 81 host animals belonging to 46 bird-species (78,57 % of the total investigated species). 40 genera (77 species) of bird lice have been identified. The most common species belong to the genera: *Austromenopon*, *Holomenopon* and *Trinoton* (Subord. *Amblycera*), respectively *Anaticola*, *Anatoecus*, *Quadriceps* and *Saemundssonina*, (Subord. *Ichnocera*). The highest number of species have been found on the following host-species: *Anser anser*, *Netta rufina*, *Calidris alba*, *Sterna hirundo*. The highest parasite fauna have occurred in one specimen of woodcock (*Scolopax rusticola*): 75 specimens of lice. Among the identified species there are 24 new species and subspecies for the Romanian *Mallophaga*-fauna. These result stresses the necessity of continuing these studies.

KEYWORDS: bird lice; parasites; birds; Danube Delta; Romania.

INTRODUCTION

The present paper deals with bird lice (*Mallophaga*) of birds belonging to 13 orders. In the last decades few papers on the bird lice from the Danube Delta and from the neighbouring areas have been published (Rékási and Kiss 1977, 1980, 1984a, 1984b, 1994).

MATERIALS AND METHODS

In the 1983 - 1994 period lice found in 204 birds have been analysed. The birds were seized in 19 places from the Danube Delta and its neighbouring areas (Fig. 1). In most of the cases the age and sex of the hosts were determined. The samples (lice) fixed in alcohol 70% were identified under a binocular stereomicroscope.

Tables I - IV contain the list of the found lice, the host birds, the collecting site and data. The taxonomic classification of the parasites corresponds to the one published by Hopkins and Clay (1955), the new species for the Romanian fauna were decided after comparisons with the lists published by Bechet (1956 a, b, c), Hopkins and Clay (1955), Knechtel and Cătuneanu (1955), Price (1967), Rékási and Kiss (1977, 1980, 1984 a,b), Vasiliu (1946). The names of the host-birds are in accordance with the most recent catalogue (Munteanu, 1992).

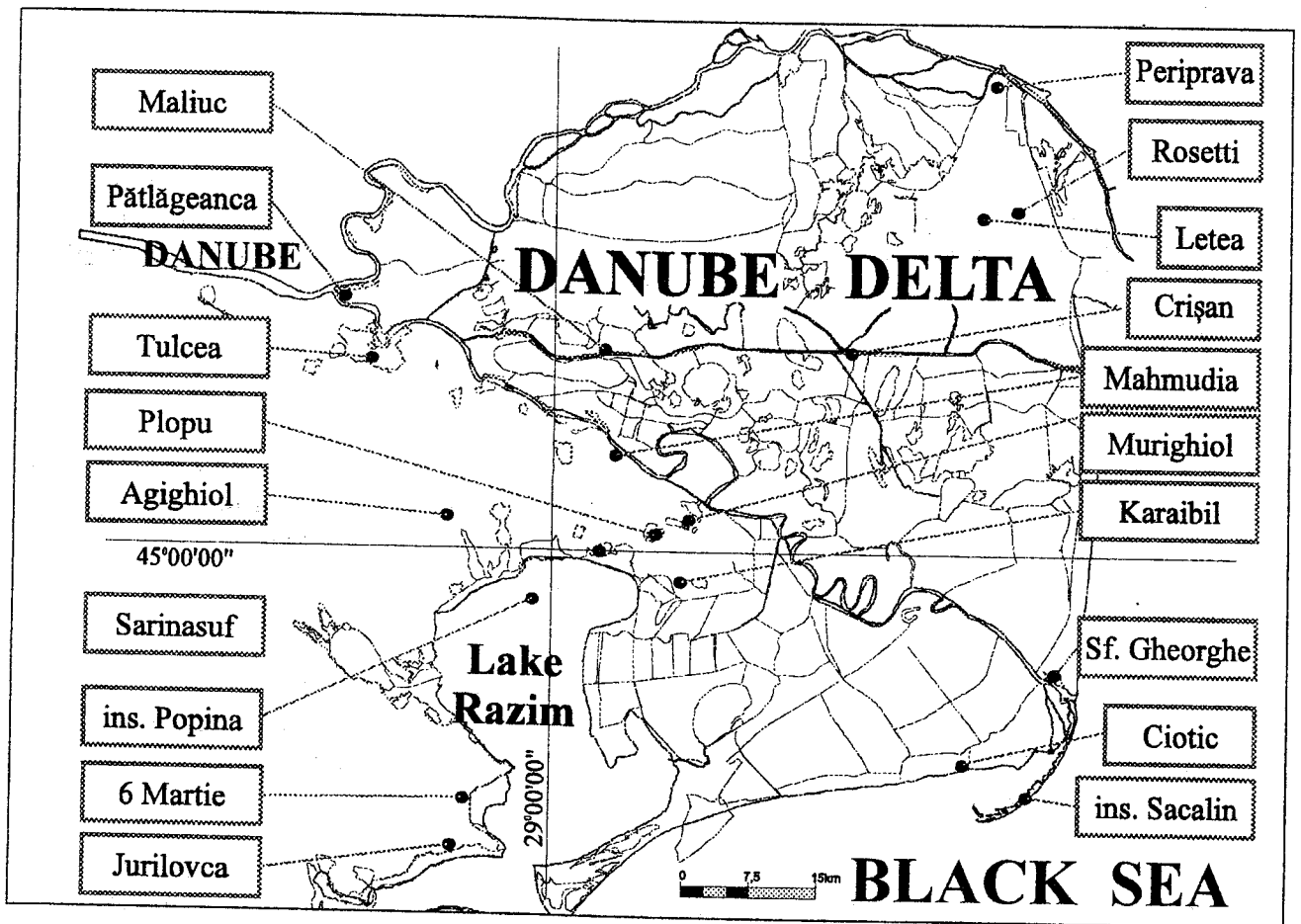
RESULTS AND DISCUSSIONS

The 204 analysed birds belong to 59 species (13 order). There have been lice on 81 birds (46 species, representing 78,57% of the studied bird species). No *Mallophaga sp.* have been sampled from the following species (the numbers in brackets represent the number of the analysed bird specimens): *Pelecanus onocrotalus* (1), *Botaurus stellaris* (1), *Aythya ferina* (1),

Porzana parva (1), *Pluvialis squatarola* (1), *Limosa limosa* (1), *Tringa glareola* (1), *Cuculus canorus* (1), *Picus canus* (1), *Dendrocopos minor* (1), *Lymnocyptes minimus* (2), *Streptopelia decaocto* (2), *Gallinago media* (3).

1019 specimens of lice have been found on the studied birds. The lice belong to 77 species (40 genera).

Fig. 1. Location of the sampling places.



The highest degrees of infestation were observed in case of: one specimen of *Anser anser* (165 lice) and one specimen of *Scolopax rusticola* (75 lice).

In case of the birds firstly described as host-species the authors have found the followings:

Eudromias morinellus (Dotterel). The parasites occurred at the upper parts of the breast and back, and at the base of the neck.

One healthy and very big sized woodcock (*Scolopax rusticola*) was heavily infested with lice. The parasites have been found especially at the top of the head, the base of the bill, around the ears and eyes. In case of other 45 specimens of woodcock no bird lice have been sampled.

Tab. I. List of the Mallophaga (Subord. Ischnocera, Fam. Philopteridae). New taxa for the Romanian fauna.

No	Parasite species	Host species
1	<i>Anaticola mergiserrati</i> (De Geer, 1788)	<i>Mergus serrator</i> (L.)
2	<i>Anatoecus icterodes bipunctatus</i> (Giebel, 1874)	<i>Mergus merganser</i> (L.)
3	<i>Anatoecus icterodes simplicatus</i> (Zlotorzycska, 1970)	<i>Anas penelope</i> (L.)
4	<i>Goniocotes simillinus</i> (Keler, 1937)	<i>Perdix perdix</i> (L.)
5	<i>Neophilopterus incompletus</i> (Denny, 1842)	<i>Ciconia ciconia</i> (L.)
6	<i>Ornithobius cygni</i> (Denny, 1842)	<i>Cygnus cygnus</i> (L.)
7	<i>Carduiceps britannicus</i> (Tendeiro, 1974)	<i>Streptopelia turtur</i> (L.)
8	<i>Degeeriella nisus</i> (Giebel, 1866)	<i>Accipiter nisus</i> (L.)
9	<i>Quadriceps charadrii punctifer</i> (Hopkins, 1949)	<i>Charadrius morinellus</i> (L.)
10	<i>Quadriceps lineolatus</i> (Nitzsch, 1866)	<i>Rissa tridactyla</i> (L.)
11	<i>Quadriceps ravus subfuscus</i> (Blagovescenskii, 1948)	<i>Tringa hypoleucos</i> (L.)
12	<i>Rhynonirmus scolopacis</i> (Denny, 1842)	<i>Gallinago gallinago</i>
13	<i>Saemundssonsonia lari tridactylae</i> (Timmermann, 1949)	<i>Rissa tridactyla</i> (L.)
14	<i>Saemundssonsonia platygaster jadvigae</i> (Timmermann, 1949)	<i>Calidris alba</i> (Pall.)
15	<i>Upupicola upupae</i> (Schrank, 1803)	<i>Upupa epops</i> (L.)

Tab. II. Data on sampling sites and sampling period of the Mallophaga (Subord. Ischnocera, Fam. Philopteridae), new taxa for the Romanian fauna.

N	Parasite species	Parasite			Sampling	Sampling
		M	F	L	Site	Period
1	<i>Anaticola mergiserrati</i> (De Geer, 1788)	0	1	0	Sarinasuf	07.03.1985
2	<i>Anatoecus icterodes bipunctatus</i> (Giebel, 1874)	0	1	0	Maliuc	13.03.1983
3	<i>Anatoecus icterodes simplicatus</i> (Zlotorzycska, 1970)	0	1	0	6 Martie	13.03.1985
4	<i>Goniocotes simillinus</i> (Keler, 1937)	0	1	0	6 Martie	10.09.1984
5	<i>Neophilopterus incompletus</i> (Denny, 1842)	21	25	8	Letea	25.08.1987
6	<i>Ornithobius cygni</i> (Denny, 1842)	2	3	1	Murighiol	03.03.1988
7	<i>Carduiceps britannicus</i> (Tendeiro, 1974)	1	5	2	Rosetti	29.08.1985
8	<i>Degeeriella nisus</i> (Giebel, 1866)	0	0	1	Rosetti	24.11.1989
9	<i>Quadriceps charadrii punctifer</i> (Hopkins, 1949)	3	11	8	Ciotic	08.09.1985
10	<i>Quadriceps lineolatus</i> (Nitzsch, 1866)	5	8	4	6 Martie	30.11.1984
11	<i>Quadriceps ravus subfuscus</i> (Blagovescenskii, 1948)	6	14	5	6 Martie	24.04.1984
12	<i>Rhynonirmus scolopacis</i> (Denny, 1842)	1	0		6 Martie	26.04.1985
13	<i>Saemundssonsonia lari tridactylae</i> (Timmermann, 1949)	8	15	4	6 Martie	30.11.1984
14	<i>Saemundssonsonia platygaster jadvigae</i> (Timmermann, 1949)	0	1	0	Sacalin	15.10.1985
15	<i>Upupicola upupae</i> (Schrank, 1803)	0	1	0	Rosetti	09.08.1988

(Explanation: M - male; F - female; L - larvae).

Tab. III. List of the Mallophaga (Subord. Amblycera, Fam. Menopodidae). New taxa for the Romanian fauna.

No	Parasite species	Host species
1	<i>Colpocephalum zebra</i> (Burmeister, 1838)	<i>Ciconia ciconia</i> (L.)
2	<i>Holomenopon leucoxanthum nyrocae</i> (Blagovescenskii, 1940)	<i>Aythya nyroca</i> (Guld.)
3	<i>Menacanthus abdominalis</i> (Piaget, 1880)	<i>Coturnix coturnix</i> (L.)
4	<i>Menacanthus pallens</i> (Clay, 1949)	<i>Perdix perdix</i> L.
5	<i>Actornithophilus umbrinus</i> (Burmeister, 1838)	<i>Calidris alba</i> (Pall.)
6	<i>Austromenopon hystriculum</i> (Zlotorzycska, 1968)	<i>Tringa hypoleucos</i> (L.)
7	<i>Meromenopon meropis</i> (Clay-Meinertzhagen, 1941)	<i>Merops apiaster</i> (L.)
8	<i>Pseudomenopon scopulacorne</i> (Denny, 1842)	<i>Rallus aquaticus</i> (L.)
9	<i>Pseudomenopon zlotorzycskae</i> (Lucinska, 1969)	<i>Gallinula chloropus</i>

Tab. IV. Data on sampling sites and sampling period of the Mallophaga (Subord. Amblycera, Fam. Menopodidae), new taxa for the Romanian fauna.

N	Parasite species	Parasite			Sampling	Sampling
		M	F	L	Site	Period
1	<i>Colpocephalum zebra</i> (Burmeister, 1838)	11	16	6	Letea	25.08.1987
2	<i>Holomenopon leucoxanthum nyrocae</i> (Blagovescenskii, 1940)	2	3	0	Rosetti	28.09.1988
3	<i>Menacanthus abdominalis</i> (Piaget, 1880)	0	1	0	Letea	02.10.1984
4	<i>Menacanthus pallens</i> (Clay, 1949)	4	16	5	Agighiol	14.03.1988
5	<i>Actornithophilus umbrinus</i> (Burmeister, 1838)	0	1	0	Sacalin	15.10.1985
6	<i>Austromenopon hystriculum</i> (Zlotorzycska, 1968)	1	1	0	Malic	06.08.1984
7	<i>Meromenopon meropis</i> (Clay-Meinertzhagen, 1941)	0	1	0	Tulcea	31.05.1984
8	<i>Pseudomenopon scopulacorne</i> (Denny, 1842)	0	1	1	6 Martie	14.11.1985
9	<i>Pseudomenopon zlotorzycskae</i> (Lucinska, 1969)	0	1	1	Tulcea	21.10.1983

(Explanation: M - male; F - female; L - larvae).

Larus melanocephalus (Mediterranean Gull) The specimens of *Saemundssonina* have been found in the region next to the ears, and the specimens of *Austromenopon* have been on the belly, at precise distance from each other.

Larus genei (Slender-billed Gull) The live parasites are pink, as the color of some layers of feather of this bird.

Rissa tridactyla (Kittiwake). Specimens of the genera *Saemundssonina* there were on the head and the upper zones of the neck, and lice of genera *Koenigirmus* on the inferior zones of the neck.

Cuculus canorus (Cuckoo). There were no *Mallophaga* sp. on the analysed specimen. It is interesting that the cuckoo juveniles have not got the parasites of the host birds. The young cuckoo will be infested with cuckoo-specific lice during the contact with another adult bird. The lice is related to the species parasiting the goshawk (*Accipiter gentilis*).

Upupa epops (Hoopoe). Only one specimen of lice has been found on the 14 hosts captured with bird-nets. On two birds there were specimens of *Ornithomya avicularia* (Ord. Diptera, Fam. Hippoboscidae). This fly usually transports the lice (Hill et al., 1967; Keirans, 1975; Udvardy, 1983; Walter von, 1989).

Dendrocopos major (Great Spotted Woodpecker). One specimen was three times captured and released (after it was freed of parasites). The larvae of the lice occurred after 6, respectively 9 days after the previous releasing. It is remarkable that the shocks (produced by the specific manner of food-searching) have no influence on the developing and living of the parasites.

CONCLUSIONS

From the results of our studies derive the following conclusions:

- ⇒ In the 204 analysed bird specimens (belonging to 59 species of 13 orders) collected in the Danube Delta, there were 1019 specimens of lice (belonging to 40 genera and 77 species);
- ⇒ species of avian lice have not been found in the Romanian scientific bibliography, these species being considered as new species for Romania;
- ⇒ taking into account that there are 320 bird species described from the Danube Delta, the total number of the avian lice species could be 650 - 700; till now only a small part of the species have been described;
- ⇒ to know better the *Mallophaga* from the Danube Delta there is a need for further studies, especially on the parasites of the order *Passeriformes*.

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