

**CHEWING LICE (PHTHIRAPTERA:  
AMBLYCERA, ISCHNOCERA)  
COLLECTED ON SOME BIRD SPECIES OF ROMANIA\***

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**Abstract.** I present the partial results of the research on the ectoparasitic material collected from some bird species of the Romanian fauna, along a 6 year period (1996-2002); from the 20 identified chewing louse species, *Austromenopon circinatum* (Piaget, 1890) is a new mention for the Romanian entomological fauna, and the species *Colpocephalum flavescens* (Haan, 1829) and *Ciconiphilus decimfasciatus* (Boisduval et Lacordaire, 1835) were previously mentioned but on other hosts, not on those which I found; also three cases of secondary infestations with chewing lice are mentioned.

**Résumé.** On present les résultats partiels de la recherche sur le matériel ectoparasitologique, capturé sur des certaines espèces d'oiseaux de la faune de Roumanie au long d'une période de 6 ans (1996-2002). Des 20 espèces de mallophages identifiées, *Austromenopon circinatum* (Piaget, 1890) est mentionné pour la première fois pour la faune de Roumanie. Pour *Colpocephalum flavescens* (Haan, 1829) et *Ciconiphilus decimfasciatus* (Boisduval et Lacordaire, 1835) on mentionne des nouvelles espèces-hôtes. De même on signale trois cas d'infestations secondaires avec des mallophages.

**Key words:** Phthiraptera, chewing lice, atypical parasite, atypical host, ectoparasites.

Data on the ectoparasitic fauna of the Romanian birds I also published in a previous paper (Petrescu & Adam, 2001). Those data referred to the chewing lice collected on *Merops apiaster*. In this paper I present data on the chewing lice collected on other bird species, but including some data published previously. Here I also present the remarked cases of secondary infestation. I have to mention that the term of secondary infestation is used for the cases in which one or several chewing lice belonging to a certain species passes from a typical host species to an atypical one, under some circumstances. It can survive or not on this last host. So, the respective chewing lice will be considered atypical parasites for this host species. In this paper I do not include data on other groups of ectoparasites as Ixodidae, Hippoboscidae and Carnidae (Petrescu & Adam, 2000), collected on the studied birds within the same period. It is necessary these studies to be continued on the chewing lice on the birds of Romania because still there are many host species on which no ectoparasitic species was collected and mentioned. As a matter of fact, in this paper I present only the partial results on the identification of the collected chewing lice by us within the period 1996-2002, and later on, as the whole collected material within this period is identified, to publish the other results.

*MATERIAL AND METHODS*

Our material was collected and studied along the period 23<sup>rd</sup> of March 1996 – 16<sup>th</sup> of January 2002. The studied birds are from 12 different places of Romania (Tab. 1). A small part of them are domestic and the others are wild, both free and in

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captivity. The studied captive birds are from the Zoo of Bucharest (Tab. 1). Totally 65 birds (59 adults and 6 juveniles), belonging to 11 species, were studied. From them, only 6 (belonging to 2 species) were domestic and the others, wild. From the last ones only 3 (belonging to 3 species) were taken from captivity. From *Buteo buteo* I studied both captive specimens and some taken from their natural environment. Some of them were dead.

In order to identify them, a part of the collected material was mounted in Canada balm, using the classical technics. The rest of the material is preserved in 80% alcohol.

For the identification of the species I used Złotorzycka's (1977), Price & Beer's (1963), Séguy's (1944) and Bechet's (1962) papers. Latin names of chewing lice are according to the chewing louse list published by Hopkins & Clay (1952), excepting genera *Olivinirmus*, *Turdinirmus* and *Meropsiella*, to which I adopted taxonomical classification used by Złotorzycka (1994). In a single case, chewing lice were identified till the genus level. Host-birds were identified by different ornithologists, and their Latin names used in this paper are according to the last bird list of Romania published by Munteanu (2001).

Table 1 consists of the list of the host-species (in a systematical order), collecting data, list of chewing lice collected on them as well the number of the collected specimens.

#### RESULTS AND DISCUSSIONS

From the material collected from the 65 studied birds (belonging to 11 species) 895 chewing louse specimens were identified. Later on, it was established that the identified chewing lice belonged to 14 genera and 20 species, a part of them being illustrated at the end of the paper (Figs 3-8). From the 895 collected specimens, 333 are females, 243 males and 319 nymphs. The studied birds belong to the following orders (the number of the species which the studied birds belong is given between brackets): Ciconiiformes (1), Anseriformes (1), Falconiformes (2), Galliformes (1), Charadriiformes (1), Strigiformes (1), Coraciiformes (1) and Passeriformes (3). In this paper, the birds where I did not find any chewing louse were not taken into consideration.

Most of the chewing lice of the suborder Amblycera, collected by me, belong to the genus *Colpocephalum* (315 specimens), and those of the suborder Ischnocera to genera *Degeeriella* (101 specimens), *Craspedorrhynchus* (92 specimens) and *Meropoeus* (194 specimens).

As regards the diversity of the chewing louse species found on the approached bird groups, most of the species were found on the representatives of the orders Falconiformes (6) and Charadriiformes (4) (the number of the found chewing louse species is given between brackets). But if I refer the number of the chewing louse species found in every bird group to the number of the species of the respective group to which the studied individuals belong, I can observe that the greatest diversity of the found chewing louse species is in the representatives of the order Charadriiformes, where on 2 individuals belonging to the same species (*Stercorarius parasiticus*) I found 4 chewing louse species (Fig. 1).

As regards the infestation degree with chewing lice, the highest degree was observed in the following cases (the number of chewing lice found on the respective bird is given between brackets): an adult of *Buteo buteo* (305) and an adult of *Accipiter gentilis* (92) (Tab. 1). The specimen of *Buteo buteo* was dead and was

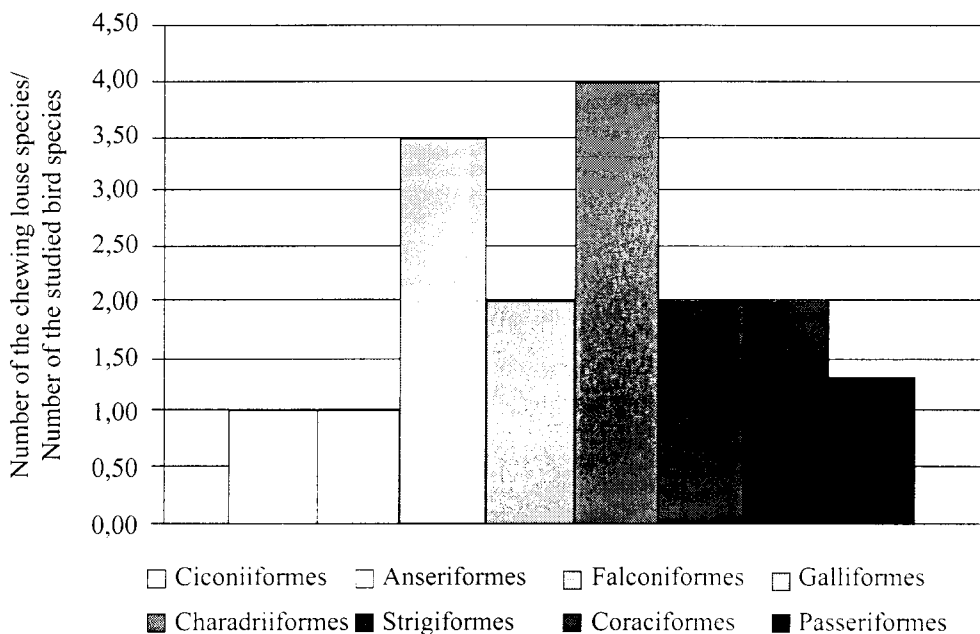


Fig. 1 – Diversity of the chewing louse species collected from the 8 bird groups

taken from the Zoo of Bucharest, its death being generated by some internal illnesses and stress. The specimen of *Accipiter gentilis* was found dead in its own environment and maybe its death was also caused by some internal illnesses. Sick birds, because of their incapability to make their body toilet, are the best environments for the development of chewing louse populations. And if I refer to the bird groups on whose representatives I collected material and refer the number of collected chewing lice to the number of the studied birds, it can be observed that the highest degree of infestation with chewing lice occurs on the representatives of the order Falconiformes (Fig. 2).

There are several papers on chewing lice on the birds of Romania, in which some chewing louse species were cited being found on the same host-species on which I also collected them (Bechet, 1962; Constantineanu et al, 1961; Negru, 1958; Pisičă, 1980, 1996; Pisičă & Andriescu, 1972; Rékási & Kiss, 1980, 1994, 1997; Voicu, 1973).

Making a comparison between our results and the data from the mentioned papers, it can be said that from the 20 chewing louse species collected by me, the species *Austromenopon circinatum* (Piaget, 1890) is cited for the first time in Romania. Also, the species *Ciconiphilus decimfasciatus* (Boisduval et Lacordaire, 1835), collected by me on an individual of *Ardea cinerea*, was cited once by Bechet (1962), as being found on *Ardea purpurea*. But the typical-host for this chewing louse species is considered *Ardea cinerea*, according to Hopkins & Clay's list (1952).

From an individual of *Buteo buteo*, from the Zoo of Bucharest, I collected numerous chewing louse specimens belonging to the species *Colpocephalum nanum* (Piaget, 1890) (Fig. 4 B, C, D) and *C. flavescens* (Haan, 1829). According to Hopkins and Clay's list (1952), *C. nanum* is typical for *Buteo buteo*, but

Table 1

Chewing lice (Phthiraptera: Amblycera, Ischnocera) of some birds from Romania

Hosts		Parasites					
Species	Number of specimens	Collecting data	Species	Number of specimens			
				♀♀	♂♂	Nymphs	Total
<i>Ardea cinerea</i>	1 adult	Cefa (Bihor) 29.07.1999 Leg.: Angela Petrescu	<i>Ciconiophilus decinfasciatus</i> (Boisduval et Lacordaire, 1835)	23	8	5	36
<i>Anas domestica</i>	2 juveniles	Țibănești (Brăila) 24-25.06.1998 Leg.: Costică Adam	<i>Ciclotogaster heterographus</i> (Nitzsch in Giebel, 1866)	5	2	0	7
	1 adult	Lehliu (Călărași) 23.03.1996 Leg.: Angela Petrescu	<i>Craspedorrhynchus</i> sp. (Kéler, 1938)	25	10	5	40
	1 adult	Zoological Garden (Bucharest) 08.12.1998 Leg.: Angela Petrescu	<i>Colpocephalum nanum</i> (Piaget, 1890)	50	30	180	260
<i>Buteo buteo</i>	1 juvenile	Lacul Sărat (Brăila) 13.01.2002 Leg.: Costică Adam	<i>Colpocephalum flavescens</i> (Haan, 1829)	15	10	20	45
	1 adult	Târgu Mureș (Mures) 16.01.2002 Leg.: Daróczi Szilard	<i>Degerterella fulva</i> (Giebel, 1874)	7	13	20	40
<i>Accipiter gentilis</i>	1 adult	Câmpina (Prahova) 12.02.1999 Leg.: Angela Petrescu	<i>Degerterella vagans</i> (Giebel, 1874)	45	32	15	92
	2 juveniles	Țibănești (Brăila) 24-25.06.1998 Leg.: Costică Adam	<i>Ciclotogaster heterographus</i> (Nitzsch in Giebel, 1866)	6	3	1	10
<i>Gallus domesticus</i>	1 juvenile + 1 adult	Țibănești (Brăila) 20-21.11.1998 Leg.: Costică Adam	<i>Menopon gallinae</i> (Linné, 1758)	8	5	2	15

Table 1 (continuation)

Species	Hosts		Collecting data	Species	Parasites			
	Number of specimens				♀♀	Number of specimens		Total
						♂♂	Nymphs	
<i>Stercorarius parasiticus</i>	2 adults	Ghiroda Noua (Timiș) 22.09.1996 Leg.: Costin Mancu	<i>Austromenopon circinatum</i> (Piaget, 1890)	1	0	5	6	
				1	0	0	1	
<i>Asio otus</i>	1 adult	Zoological Garden (Bucharest) 15.12.1998 Leg.: Angela Petrescu	<i>Quadraceps normifer</i> (Girube, 1851)	19	14	10	4	
				0	1	0	1	
<i>Merops apiaster</i>	47 adults	Poiana, Ciupereni (Teleorman); Furnica (Constanța) 06.1998-1999 Leg.: Angela Petrescu	<i>Saemundssonina cephalus</i> (Denny, 1842)	2	0	0	2	
				10	2	0	12	
<i>Corvus corax</i>	1 adult	Zoological Garden (Bucharest) 08.12.1998 Leg.: Angela Petrescu	<i>Degeeriella fuba</i> (Giebel, 1874)	70	94	30	194	
				10	3	7	20	
<i>Garrulus glandarius</i>	1 adult	Brăila (Brăila) 26.01.2001 Leg.: Costică Adam	<i>Meropsiella apiastri</i> (Denny, 1842)	3	5	2	10	
				15	3	2	20	
<i>Turdus merula</i>	1 adult	Brăila (Brăila) 05.02.2001 Leg.: Costică Adam	<i>Colpocephalum fragili</i> Denny, 1842	5	1	1	7	
				1	0	0	1	
			<i>Myrsidea indivisa</i> (Nitzsch in Giebel, 1866)	10	4	12	26	

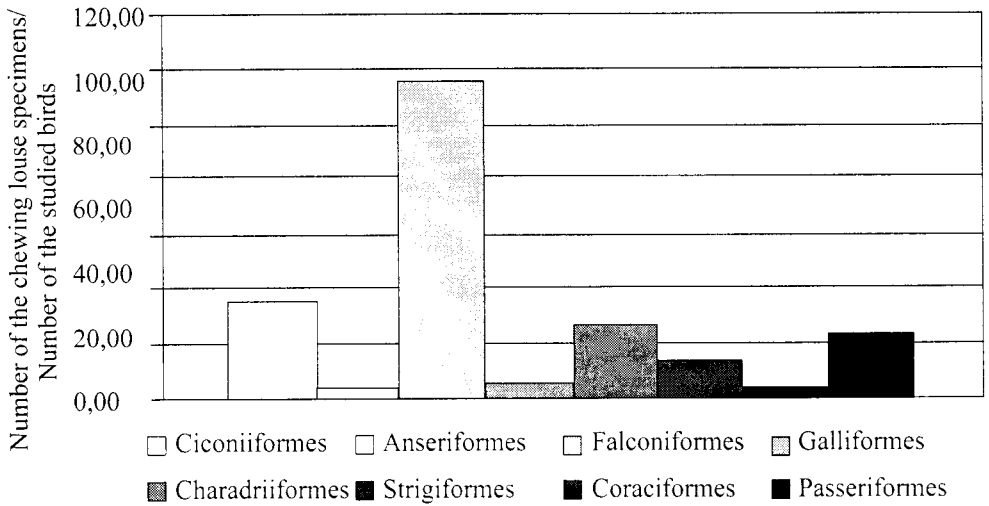


Fig. 2 – The infestation degree with chewing lice in the studied bird groups

*C. flavescens* is typical for *Haliaeetus albicilla*. But *C. flavescens* was cited by several specialists on other representatives of order Falconiformes (Rékási & Kiss, 1980, 1994, 1997; Séguy, 1944; Voicu, 1973; Zlotorzycska, 1961), this thing demonstrating that this chewing louse species has a large distribution within order Falconiformes. Taking this into account as well the number of the specimens collected by me (Tab. 1), I can say that the presence of *C. flavescens* on *Buteo buteo* is not a true case of secondary infestation.

The individuals belonging to the species *Degeeriella fulva* (Giebel, 1874) (Fig. 6 D) and *Craspedorrhynchus aquilinus* (Denny, 1842) (Fig. 7 C, D) collected by me from an individual of *Asio otus*, from the Zoo of Bucharest are atypical parasites for this host-species. They are typical parasites for the representatives of order Falconiformes, and especially for the species *Aquila chrysaetos*. In this case it is about a secondary infestation case which could take place because of the captivity conditions in which the bird had lived, coming into contact with certain falconiforms. As a matter of fact I found only a few such specimens on this individual of *Asio otus*, all adults. The presence of a small number of chewing lice and the absence of their larval stage, seldom shows the presence of some secondary infestation cases. Also, I remarked a case of secondary infestation in *Turdus merula*, from which I collected a single adult individual of *Myrsidea indivisa* (Nitzsch in Giebel, 1866) (Figs 3 D; 4 A), typical chewing louse species for *Garrulus glandarius*. I do not know exactly how this parasite reached the individual of *Turdus merula*, because this bird was captured from its own environment. The last case of secondary infestation was remarked in two juveniles of *Anas domestica* on which I collected some specimens of *Cuclotogaster heterographus* (Nitzsch in Giebel, 1866) (Figs 5 C, D; 6 A), typical species for some representatives of order Galliformes. This secondary infestation took place by the direct contact of the juveniles of *Anas domestica* with the juveniles of *Gallus domesticus*. This chewing louse species was also cited from Romania from atypical hosts as *Anser domesticus* (Pisică, 1980). But, from Romania there is no citing of this chewing louse species found on *Anas domestica*, as yet.



Fig. 3 – *Menopon gallinae* (Linné, 1758): A, female; B, male; C, nymph; *Myrsidea indivisa* (Nitzsch in Giebel, 1866): D, female.

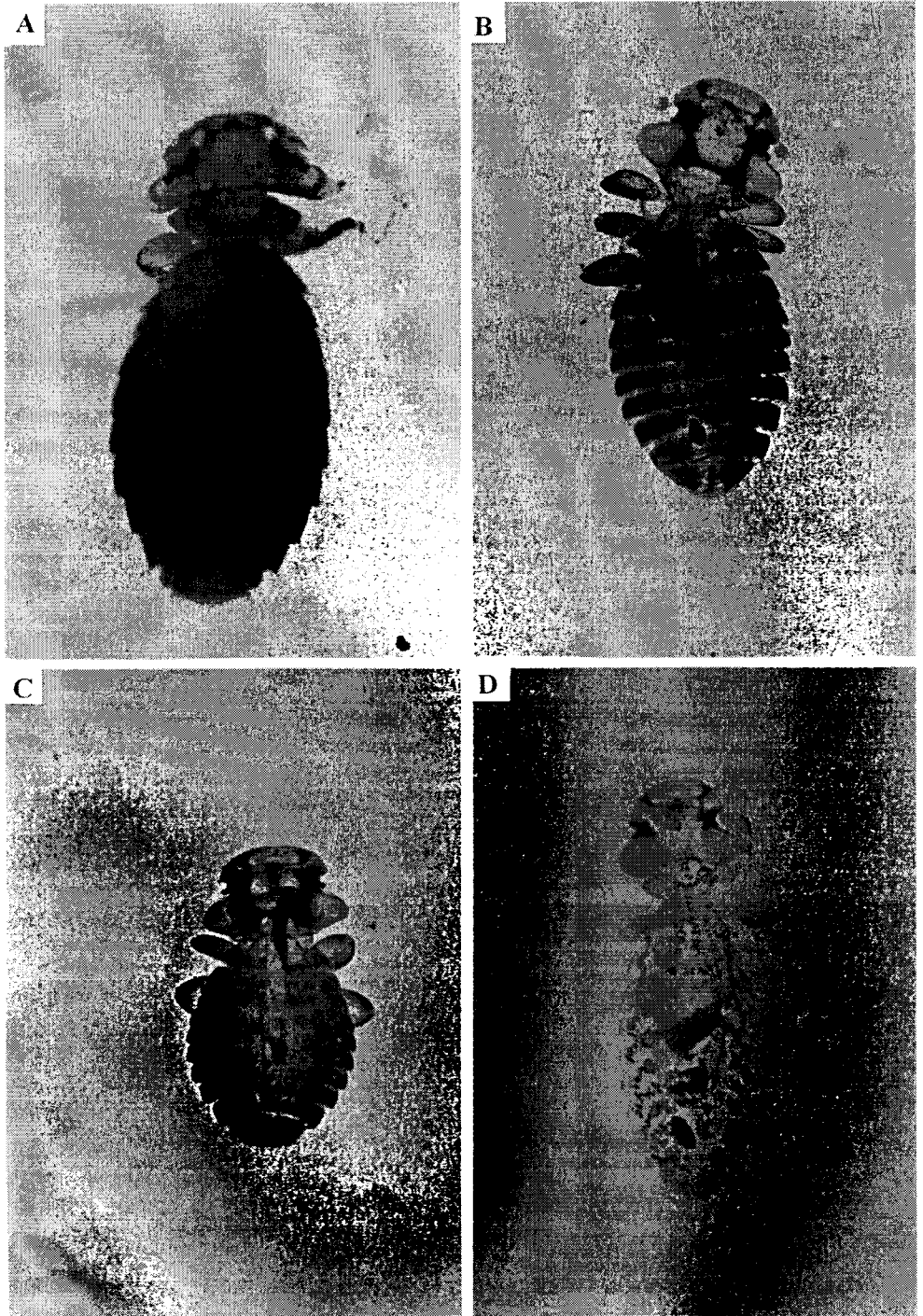


Fig. 4 – *Myrsidea indivisa* (Nitzsch in Giebel, 1866): A, male; *Colpocephalum nanum* (Piaget, 1890): B, female; C, male; D, nymph.



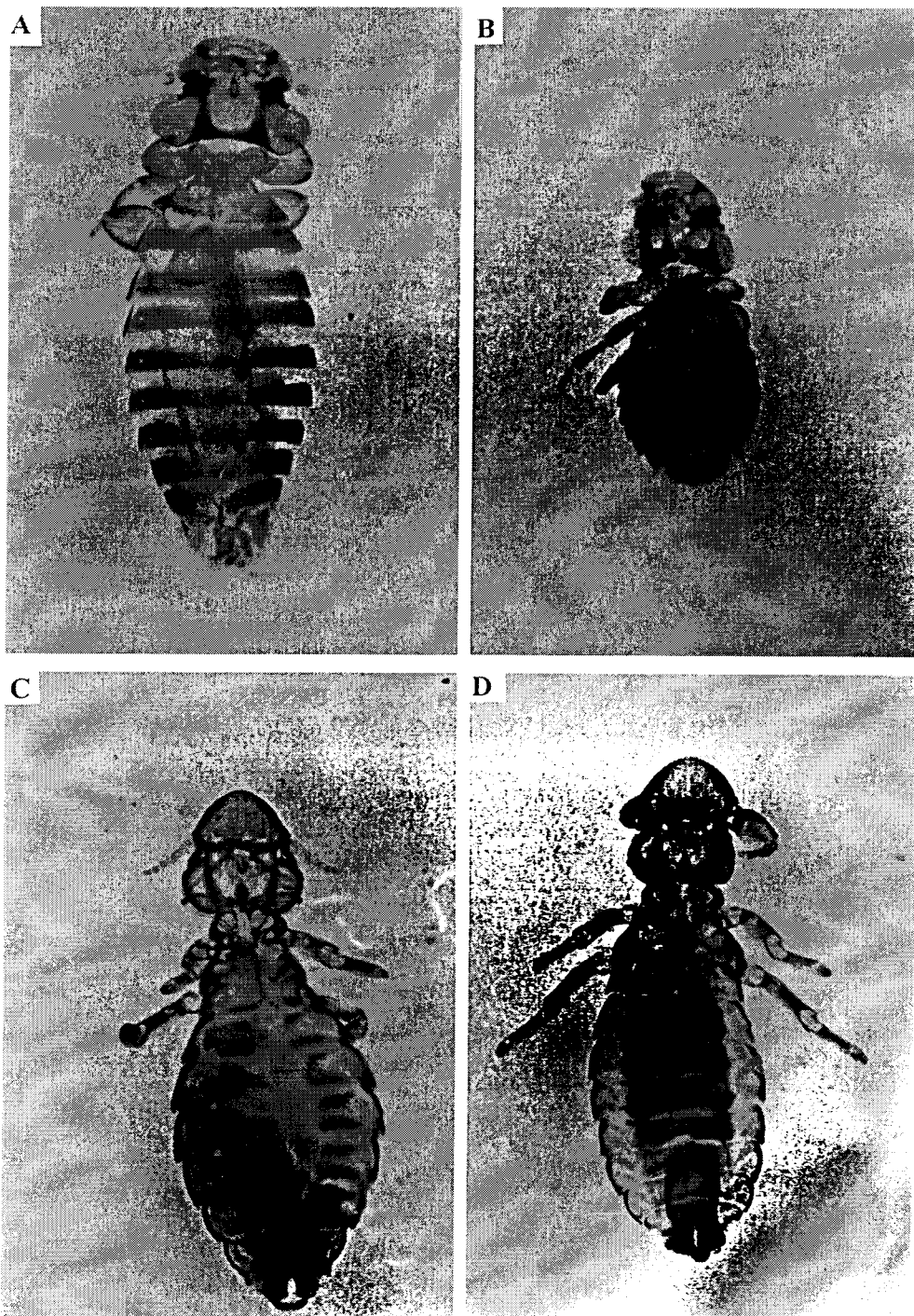


Fig. 5 – *Colpocephalum fregili* Denny, 1842: A. female; B. male; *Cuculotogaster heterographus* (Nitzsch in Giebel, 1866): C. female; D. male.

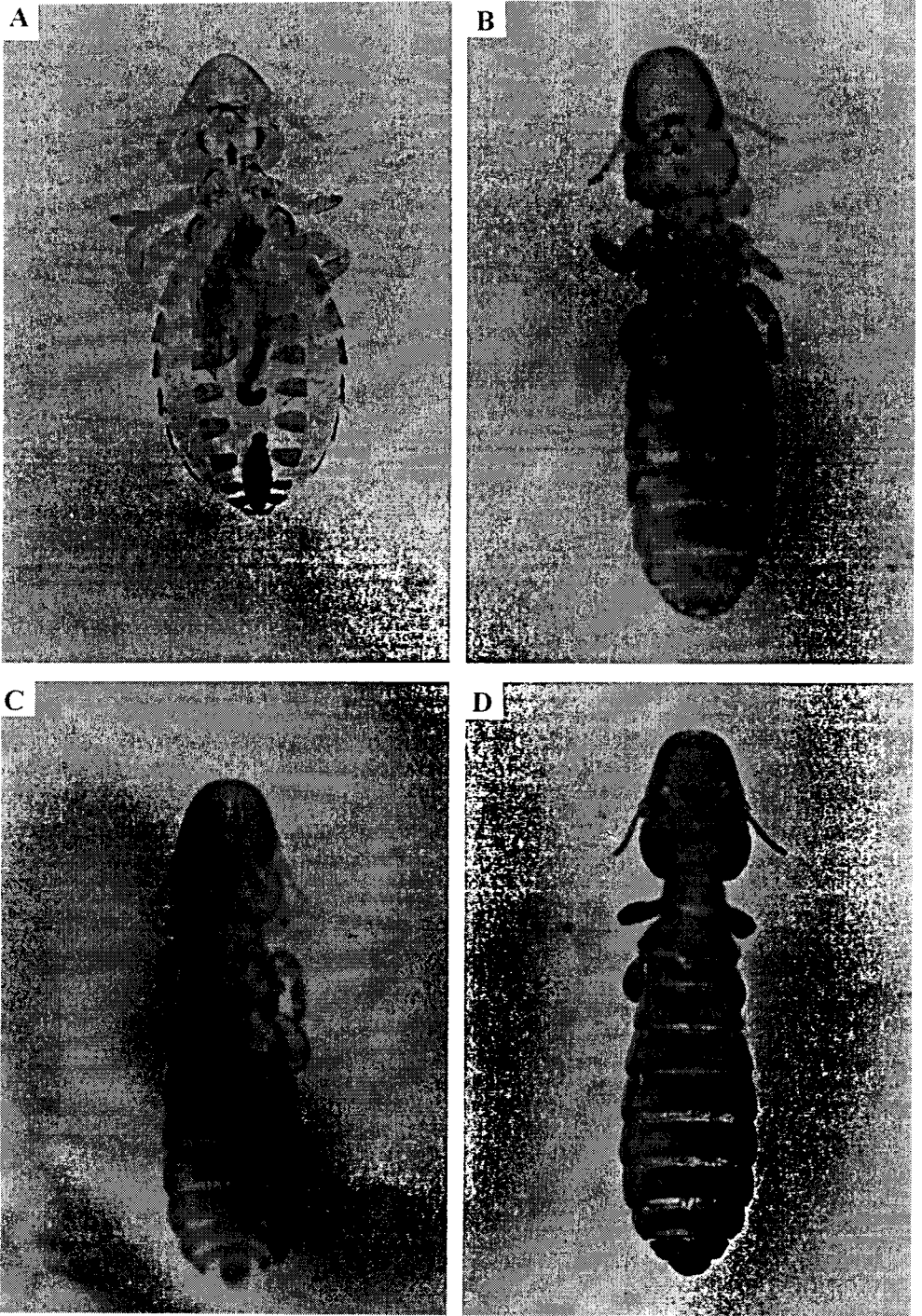


Fig. 6 – *Cuclotogaster heterographus* (Nitzsch in Giebel, 1866): A. nymph; *Degeeriella vagans* (Giebel, 1874): B, female; C, male; *Degeeriella fulva* (Giebel, 1874): D. female.

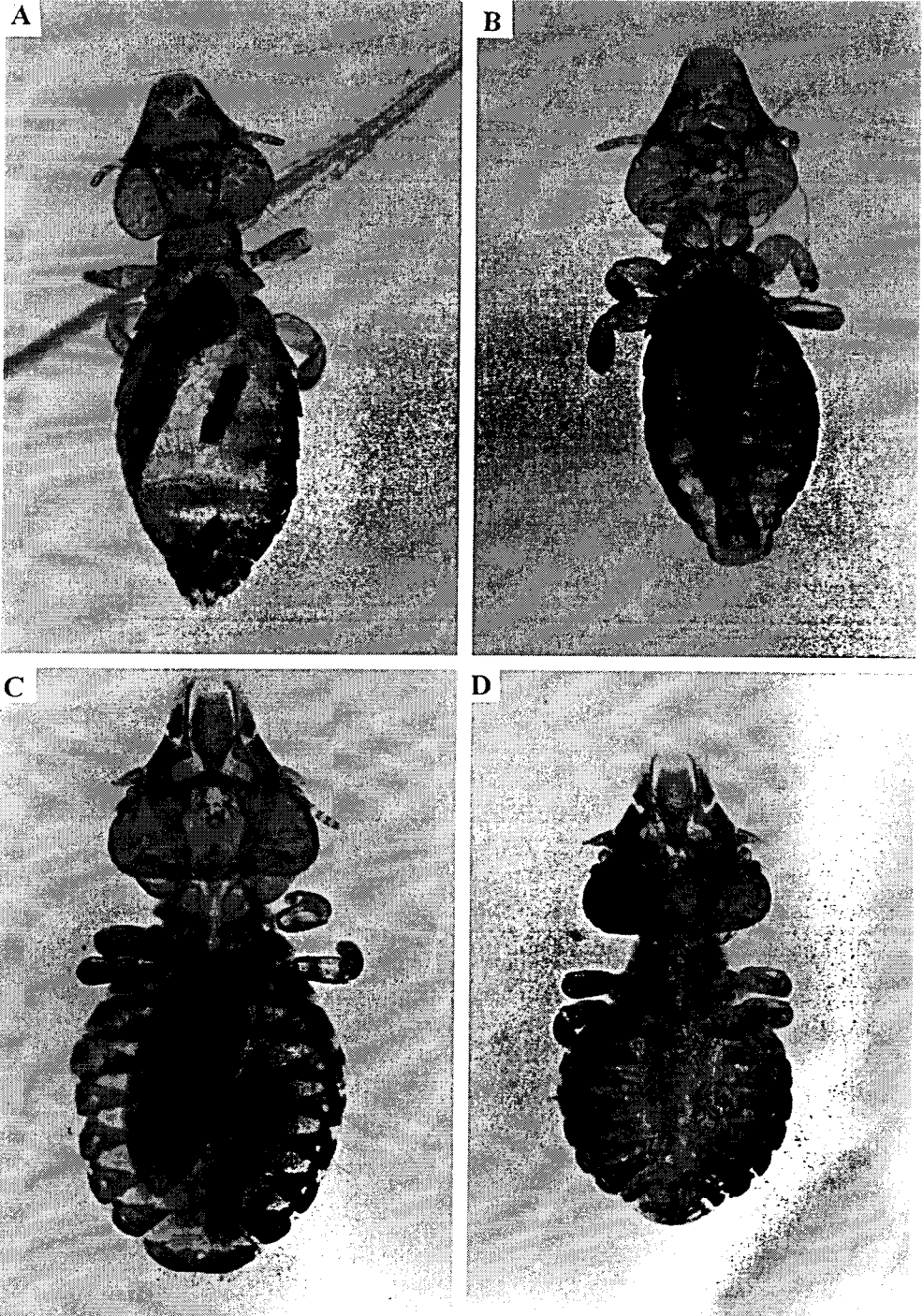


Fig. 7 – *Craspedorrhynchus* sp. Kéler, 1938: A, female; B, male; *Craspedorrhynchus aquilinus* (Denny, 1842): C, female; D, male;

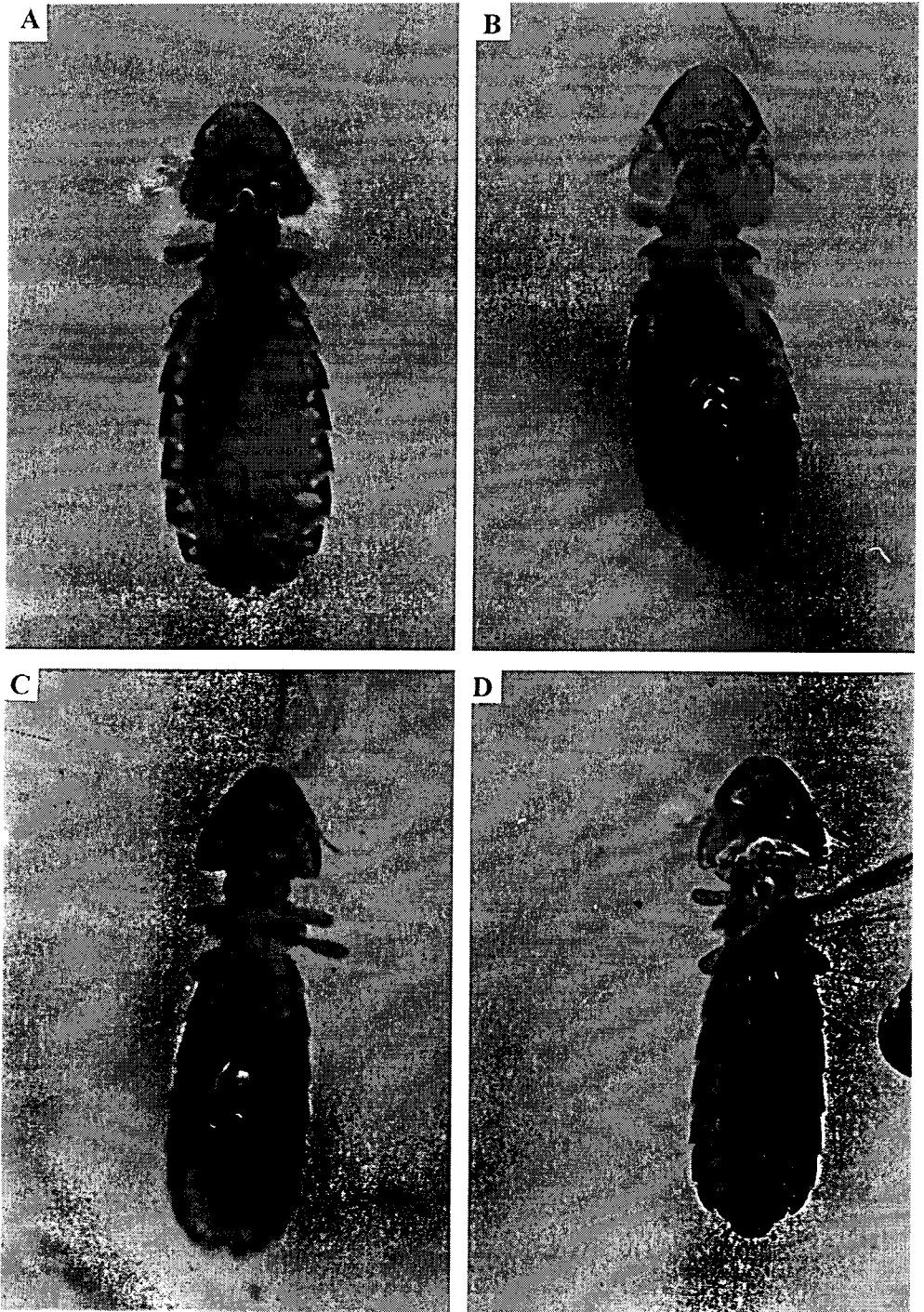


Fig. 8 – *Olivinirmus glandarii* (Denny, 1842): A, female; B, male; *Turdinirmus merulensis* (Denny, 1842): C, female; D, male.

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MALOFAGE (PHTHIRAPTERA: AMBLYCERA, ISCHNOCERA)  
COLECTATE DE PE CÂTEVA SPECII DE PĂSĂRI DIN ROMÂNIA

## REZUMAT

În perioada 23.03.1996–16.01.2002 am colectat malofage (Phthiraptera: Amblycera, Ischnocera) din mai multe puncte de pe teritoriul României. De pe 65 exemplare de păsări-gazdă (aparținând la 11 specii din 8 ordine) am colectat un număr de 895 exemplare de malofage. Acestea au fost determinate ca aparținând la 20 specii și 14 genuri. Comparând rezultatele noastre cu datele din literatura de specialitate avută la dispoziție, am constatat că specia *Austromenopon circinatum* (Piaget, 1890), găsită pe *Stercorarius parasiticus*, nu a mai fost citată până acum în România, iar specia *Ciconiphilus decimfasciatus* (Boisduval et Lacordaire, 1835), colectată de pe un individ de *Ardea cinerea*, a mai fost citată, însă doar pe *Ardea purpurea* (gazda pe care am găsit-o este totuși gazda ei tipică). Și specia *Colpocephalum flavescens* (Haan, 1829), găsită pe *Buteo buteo*, nu a mai fost semnalată pe această gazdă în România. Însă ea a fost citată de mai mulți autori străini ca fiind găsită pe această gazdă. De asemenea am observat și cazuri de infestare secundară la trei din păsările examinate. Aceste infestări secundare sunt mai frecvente și de intensitate mai mare în special la păsările domestice și la cele sălbatice din captivitate.

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