

## DATA ON THE CHEWING LOUSE FAUNA (PHTHIRAPTERA: AMBLYCERA, ISCHNOCERA) FROM SOME ROMANIAN AUTOCHTHONOUS AND EXOTIC BIRDS

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**Abstract.** The results on the studies on chewing lice collected along eight years (1999-2007) from 85 birds belonging to 38 species (autochthonous and exotic) of the Romanian territory are presented. Out of the 69 chewing louse species identified in the studied material, 11 represent new reports for the Romanian parasitological fauna, three were reported before but with other names, and for other three species new hosts were identified. Also I report several cases of desertion on atypical hosts for several individuals of six chewing louse species.

**Résumé.** On présente les résultats des recherches sur les mallophages collectés le long d'une période de huit ans (1999-2007) sur 85 oiseaux appartenant à 38 espèces (autochtones et exotiques) provenant du territoire de la Roumanie. Du nombre total de 69 espèces de mallophages identifiées dans le matériel investigué, 11 représentent de nouvelles espèces signalées pour la faune parasitologique de la Roumanie, trois ont déjà été signalées mais sous d'autres noms, tandis que pour trois autres nous signalons leur présence sur d'autres hôtes. Nous signalons aussi plusieurs cas de désertion sur des hôtes atypiques pour plusieurs individus qui appartiennent à six espèces de mallophages.

**Key words:** Phthiraptera, Amblycera, Ischnocera, chewing lice, birds, fauna, Romania.

### INTRODUCTION

By this paper I continue the publication of the results of the studies on chewing lice collected from different bird species of the Romanian fauna, keeping the same style adopted in the paper published in 2006 (Adam & Daróczy). Thus, for each identified species of our material, I try to make an analysis from parasite species – host species association point of view and faunistic one, these data being related to the already existing data in the literature, limited to the Romanian territory. Also, in this paper I included the chewing lice collected from some exotic birds to the Romanian fauna, brought from a Romanian zoological garden or a farm. I included these chewing lice, too, because the hosts I collected, as *Rhea americana*, *Chrysolophus pictus*, *C. amherstiae* and *Pavo cristatus*, are very frequent species in the Romanian zoological gardens and farms.

By the results of my studies included in this paper, together with the data already present in literature, I continue to complete the faunistic list of the parasite chewing louse species on the autochthonous and exotic birds of Romania. I can assert that this faunistic list is surely incomplete taking into consideration the host species present in Romania. Also here, I try to correct some taxonomical errors or to discuss some possible errors of such kind occurred in specialized literature dealing with the Romanian chewing louse fauna.

And not the least, in this paper I report the following aspects: special cases of poly-parasitism with chewing lice (the presence of four or even five chewing louse species on the same host); the presence of a hyperparasite of chewing lice rarely mentioned in the specialized literature; some uncommon desertions of some

chewing lice on some atypical hosts; the presence of some chewing louse species on new hosts which can be considered common hosts because they belong to the same group with the typical host of the respective chewing louse species; some cases of massive infestations with chewing lice occurred in some of the studied birds.

#### MATERIAL AND METHOD

The material was collected along the period 09<sup>th</sup> of March 1999 – 05<sup>th</sup> of March 2007. Studied birds originate in 38 localities (Tab. 1) of the following 16 counties, most of them from South, South-West, South-East and Central Romania: Brăila (BR), Buzău (BZ), Caraş-Severin (CS), Constanţa (CT), Dâmboviţa (DB), Galaţi (GL), Giurgiu (GR), Harghita (HR), Ialomiţa (IL), Ilfov (IF), Mehedinţi (MH), Mureş (MS), Prahova (PH), Sălaj (SJ), Teleorman (TR) and Tulcea (TL). A large part of the studied birds were captured or found dead in their natural environment, another part are from the collections of “Grigore Antipa” National Museum of Natural History (Bucharest), only some of them originating in a zoological garden and only one from a private farm. The ectoparasite collecting on the living birds was made after their plumage had been treated with an anti-ectoparasitic spray with pyrethrin. In the dead specimens or in those from the museum collections (skins or preserved in alcohol or frozen), chewing louse collecting was made directly, using the entomological clamps through the entire bird plumage and collecting each remarked parasite. Collected material was labelled and preserved in 80% alcohol. Totally, 155 birds (146 adults and nine juveniles) which belong to 45 species of 24 families and 12 orders were studied. From all these studied birds, on only 85 specimens (belonging to 38 species of 22 families and 12 orders) I found chewing lice (Tab. 1, fig. 1).

For identification, a part of the collected material was mounted in Entellan (a synthetic balsam), following the classical technics of inclusion in balsam. The rest of the material is preserved in 80% alcohol. The photos were made using an “Olympus” microscope with digital camera, using oculars 15X or 10X and objective 4X.

The species identification was made using the same microscope and the papers signed by: Ansari (1956), Bechet (1962, 1965, 1968), Clay (1940, 1962), Eichler (1947, 1954), Kéler (1939), Mey (1998), Modrzejewska & Złotorzycka (1977), Price (1975, 1977), Price, Hellenthal & Palma (2003), Scharf & Price (1983), Złotorzycka (1972 a, b, 1976, 1977). Scientific names of the chewing lice used in this paper are according to the chewing louse list made by Price, Hellenthal & Palma (op. cit.), and those used for the host species are according to the list of the world birds published by Dickinson (2003).

For the collectors' names I used the following abbreviations: A.P. – Angela Petrescu, C.A. – Costică Adam, G.C. – Gabriel Chişamera, M.C. – Mircea Ciobanu, M.G.B. – Mircea Gogu Bogdan, M.P.B. – Matei Petre Bogdan, M.T. – Matei Tâlpeanu, R.P. – Radu Pană and S.D. – Szilárd J. Daróczy.

#### RESULTS AND DISCUSSIONS

From the entire collected material, 4,161 chewing louse specimens were identified. Later, these chewing lice were identified as belonging to 39 genera and 69 species. From the 4,161 collected specimens, 1,329 are females (31.94%), 1,187 males (28.53%) and 1,645 nymphs (39.53%).

Table 1

Studied host bird species and their chewing louse parasites (Phthiraptera: Amblycera, Ischnocera).

Hosts			Parasites				
Order/Family/ Species	Number of specimens	Collecting data	Species	Number of specimens			
				♀♀	♂♂	Nymphs	Total
Rheiformes: Rheidae							
<i>Rhea americana</i> (L.)	1 adult	Zoological Garden (Bucharest); 09.03.1999; Leg.: Angela Petrescu	<i>Struthiolipeurus nandu</i> Eichler, 1950	25	26	122	173
			<i>Struthiolipeurus stresemanni</i> Kéler, 1960	5	11	6	22
	1 adult	Zoological Garden (Bucharest); 15.10.1999; Leg.: Angela Petrescu	<i>Struthiolipeurus nandu</i> Eichler, 1950	7	5	0	12
			<i>Struthiolipeurus stresemanni</i> Kéler, 1960	3	1	0	4
	1 adult	Zoological Garden (Bucharest); 24.01.2000; Leg.: Angela Petrescu	<i>Struthiolipeurus nandu</i> Eichler, 1950	16	16	1	33
			<i>Struthiolipeurus stresemanni</i> Kéler, 1960	9	6	0	15
Galliformes: Phasianidae							
<i>Tetrao urogallus</i> L.	1 adult (♂)	The Southern Carpathians (Unknown locality); 18.04.2006; Leg.: Radu Pană	<i>Goniodes bituberculatus</i> Rudow, 1869	7	8	22	37
			<i>Oxylipeurus tetraonis</i> (Grube, 1851)	2	0	2	4
			<i>Lagopoecus pallidovittatus</i> (Grube, 1851)	2	0	0	2
	1 adult (♂)	The Southern Carpathians (Unknown locality); 26.04.2006; Leg.: Costică Adam	<i>Goniodes bituberculatus</i> Rudow, 1869	40	37	75	152
			<i>Oxylipeurus tetraonis</i> (Grube, 1851)	7	10	13	30
			<i>Lagopoecus pallidovittatus</i> (Grube, 1851)	27	12	5	44
<i>Phasianus colchicus</i> L.	1 adult (♀)	Zoological Garden (Bucharest); 12.09.2000; Leg.: Angela Petrescu	<i>Menacanthus cornutus</i> (Schömmmer, 1913)	1	0	0	1
			<i>Menacanthus phasiani</i> (Modrzejewska & Złotorzycka, 1977)	1	0	0	1
			<i>Goniodes capitatus</i> (Kéler, 1939)	0	0	13	13
			<i>Goniocotes chrysocephalus</i> Giebel, 1874	21	4	2	27
			<i>Bovicola (Bovicola) ovis</i> (Schrank, 1781)	0	1	0	1

Table 1 (continued)

Hosts			Parasites				
Order/Family/ Species	Number of specimens	Collecting data	Species	Number of specimens			
				♀♀	♂♂	Nymphs	Total
<i>Chrysolophus pictus</i> (L.)	1 adult (♀)	Zoological Garden (Bucharest); 12.09.2000; Leg.: Angela Petrescu	<i>Amyrsidea (Argimenopon) perdicis</i> (Denny, 1842)	55	50	43	148
	1 adult (♀)	Bucharest (from a farm); 15.01.2003; Leg.: Costică Adam	<i>Menopon gallinae</i> (Linnaeus, 1758)	40	34	33	107
			<i>Menacanthus cornutus</i> (Schömmmer, 1913)	3	1	2	6
<i>Chrysolophus amherstiae</i> (Leadbeater)	1 adult (♀)	Zoological Garden (Bucharest); 12.09.2000; Leg.: Angela Petrescu	<i>Menacanthus cornutus</i> (Schömmmer, 1913)	24	14	20	58
			<i>Goniodes chrysolophi</i> Clay, 1940	2	3	4	9
<i>Pavo cristatus</i> L	1 adult	Zoological Garden (Bucharest); 12.12.2000; Leg.: Matei Petre Bogdan	<i>Amyrsidea (Argimenopon) minuta</i> Emerson, 1961	30	13	12	55
			<i>Goniodes pavonis</i> (Linnaeus, 1758)	11	15	34	60
	1 adult	Zoological Garden (Bucharest); 06.01.2001; Leg.: Matei Petre Bogdan	<i>Amyrsidea (Argimenopon) minuta</i> Emerson, 1961	4	5	2	11
			<i>Goniodes pavonis</i> (Linnaeus, 1758)	0	0	1	1
	1 juvenile (♀)	Zoological Garden (Bucharest); 06.01.2001; Leg.: Matei Petre Bogdan	<i>Goniodes pavonis</i> (Linnaeus, 1758)	71	101	55	227
	1 adult (♀)	Zoological Garden (Bucharest); 29.10.2003; Leg.: Matei Petre Bogdan	<i>Goniodes pavonis</i> (Linnaeus, 1758)	50	54	24	128
	1 adult (♂)	Zoological Garden (Bucharest); 29.10.2003; Leg.: Matei Petre Bogdan	<i>Amyrsidea (Argimenopon) minuta</i> Emerson, 1961	6	2	0	8
<i>Goniodes pavonis</i> (Linnaeus, 1758)			24	24	11	59	
Anseriformes: Anatidae							
<i>Branta ruficollis</i> (Pallas)	1 adult	Pecineaga (TL); 15.02.2002; Leg.: Costică Adam	<i>Anaticola beieri</i> Eichler, 1954	1	0	1	2

Table 1 (continued)

Hosts			Parasites				
Order/Family/ Species	Number of specimens	Collecting data	Species	Number of specimens			
				♀♀	♂♂	Nymphs	Total
<i>Tadorna tadorna</i> (L.)	1 adult	Salcia (MH); 04.12.2002; Leg.: Gabriel Chișamera	<i>Anatoecus icterodes</i> (Nitzsch, 1818)	4	4	5	13
<i>Anas crecca</i> L.	1 adult	Giurgeni (IL); 17.03.2005; Leg.: Mircea Ciobanu	<i>Trinoton querquedulae</i> (Linnaeus, 1758)	0	2	0	2
Ciconiiformes: Ciconiidae							
<i>Ciconia ciconia</i> (L.)	1 juvenile	Tunari (IF); 26.08.2003; Leg.: Gabriel Chișamera	<i>Neophilopterus incompletus</i> (Denny, 1842)	7	11	1	19
	1 adult	Poiana (TR); 08.08.2003; Leg.: Angela Petrescu	<i>Colpocephalum zebra</i> Burmeister, 1838	31	30	24	85
			<i>Neophilopterus incompletus</i> (Denny, 1842)	2	2	0	4
	1 juvenile	Dumbrăvioara (MS); 21.08.2006; Leg.: Szilárd J. Daróczi	<i>Neophilopterus incompletus</i> (Denny, 1842)	16	12	3	31
	1 juvenile	Gornești (MS); 05.09.2006; Leg.: Szilárd J. Daróczi	<i>Ciconiphilus quadripustulatus</i> (Burmeister, 1838)	31	16	14	61
			<i>Colpocephalum zebra</i> Burmeister, 1838	7	6	3	16
			<i>Ardeicola ciconiae</i> (Linnaeus, 1758)	5	3	18	26
<i>Neophilopterus incompletus</i> (Denny, 1842)			55	63	18	136	
Ciconiiformes: Ardeidae							
<i>Nycticorax nycticorax</i> (L.)	1 adult	Zoological Garden (Bucharest); 22.08.2003; Leg.: Gabriel Chișamera	<i>Menacanthus stramineus</i> (Nitzsch, 1818)	3	3	7	13
<i>Ardea cinerea</i> L.	1 adult	Zoological Garden (Bucharest); 27.09.2003; Leg.: Gabriel Chișamera	<i>Ciconiphilus decimfasciatus</i> (Boisduval & Lacordaire, 1835)	1	1	1	3
Pelecaniformes: Phalacrocoracidae							
<i>Phalacrocorax carbo</i> (L.)	1 adult	Zoological Garden (Bucharest); 04.10.2003; Leg.: Gabriel Chișamera	<i>Pectinopygus gyricornis</i> (Denny, 1842)	0	0	23	23

Hosts			Parasites				
Order/Family/ Species	Number of specimens	Collecting data	Species	Number of specimens			
				♀♀	♂♂	Nymphs	Total
Falconiformes: Accipitridae							
<i>Accipiter gentilis</i> (L.)	1 adult	Zoological Garden (Bucharest); 12.09.2000; Leg.: Angela Petrescu	<i>Menacanthus cornutus</i> (Schömmmer, 1913)	4	2	3	9
			<i>Menacanthus phasiani</i> (Modrzejewska & Złotorzycka, 1977)	1	0	0	1
			<i>Goniodes capitatus</i> (Kéler, 1939)	0	0	1	1
<i>Buteo buteo</i> (L.)	1 juvenile	Săbed (MS); 22.08.2006; Leg.: Szilárd J. Daróczi	<i>Degeeriella fulva</i> (Giebel, 1874)	191	132	123	446
Gruiformes: Rallidae							
<i>Fulica atra</i> L.	1 adult	Bucharest; 03.02.2000; Leg.: Angela Petrescu	<i>Actornithophilus hoplopteri</i> (Mjöberg, 1910)	0	1	0	1
			<i>Pseudomenopon pilosum</i> (Scopoli, 1763)	22	12	2	36
			<i>Pseudomenopon pilosum</i> (Scopoli, 1763)	27	45	64	136
	1 adult	Năvodari (CT); 28.01.2006; Leg.: Angela Petrescu & Gabriel Chișamera	<i>Laemobothrion (Eulaemobothrion) atrum</i> (Nitzsch, 1818)	1	3	2	6
			<i>Fulicoffula lurida</i> (Nitzsch, 1818)	4	3	10	17
			<i>Rallicola (Rallicola) fulicae</i> (Denny, 1842)	10	17	19	46
	1 adult	Vadu (CT); 28.01.2006; Leg.: Angela Petrescu & Gabriel Chișamera	<i>Pseudomenopon pilosum</i> (Scopoli, 1763)	19	14	21	54
			<i>Rallicola (Rallicola) fulicae</i> (Denny, 1842)	4	9	6	19
	1 adult	Vadu (CT); 28.01.2006; Leg.: Angela Petrescu & Gabriel Chișamera	<i>Pseudomenopon pilosum</i> (Scopoli, 1763)	3	2	1	6
			<i>Rallicola (Rallicola) fulicae</i> (Denny, 1842)	0	1	0	1
			<i>Pseudomenopon pilosum</i> (Scopoli, 1763)	5	14	9	28
	1 adult	Vadu (CT); 28.01.2006; Leg.: Angela Petrescu & Gabriel Chișamera	<i>Fulicoffula lurida</i> (Nitzsch, 1818)	1	0	0	1
			<i>Rallicola (Rallicola) fulicae</i> (Denny, 1842)	6	7	3	16
			<i>Pseudomenopon pilosum</i> (Scopoli, 1763)	22	19	16	57
	1 adult	Vadu (CT); 28.01.2006; Leg.: Angela Petrescu & Gabriel Chișamera	<i>Fulicoffula lurida</i> (Nitzsch, 1818)	1	1	4	6
<i>Rallicola (Rallicola) fulicae</i> (Denny, 1842)			4	14	9	27	
<i>Incidifrons fulicae</i> (Linnaeus, 1758)			2	2	7	11	

Table 1 (continued)

Hosts			Parasites				
Order/Family/ Species	Number of specimens	Collecting data	Species	Number of specimens			
				♀♀	♂♂	Nymphs	Total
Charadriiformes: Scolopacidae							
<i>Gallinago gallinago</i> (L.)	1 adult	Ostrovlul Moldova Veche (CS); 24.09.2002; Leg.: Gabriel Chişamera	<i>Rhynonirmus scolopacis</i> (Denny, 1842)	1	0	0	1
			<i>Cummingsiella ambigua</i> (Burmeister, 1838)	2	1	0	3
	1 adult	Ostrovlul Moldova Veche (CS); 24.09.2002; Leg.: Gabriel Chişamera	<i>Austromenopon durisetosum</i> (Blagoveshtchensky, 1948)	1	0	0	1
<i>Limosa limosa</i> (L.)	1 adult	Vadu – Grindul Chituc (CT); 13.03.2004; Leg.: Matei Tâlpeanu	<i>Actornithophilus spinulosus</i> (Piaget, 1880)	1	0	1	2
			<i>Lunaceps limosella</i> Timmermann, 1954	0	0	1	1
	1 adult	Vadu – Grindul Chituc (CT); 13.03.2004; Leg.: Matei Tâlpeanu	<i>Saemundssonina</i> ( <i>Saemundssonina</i> ) <i>thompsoni</i> Timmermann, 1951	0	1	0	1
Charadriiformes: Laridae							
<i>Larus cachinnans</i> Pallas	1 juvenile	Bucharest; 05.03.2007; Leg.: Costică Adam	<i>Saemundssonina</i> ( <i>Saemundssonina</i> ) <i>lari</i> (Fabricius [O.], 1780)	4	0	1	5
Columbiformes: Columbidae							
<i>Columba livia</i> Gmelin	1 adult	Bucharest; 03.10.2006; Leg.: Matei Petre Bogdan	<i>Columbicola columbae</i> (Linnaeus, 1758)	13	24	9	46
<i>Streptopelia decaocto</i> (Frivaldszky)	1 adult	Naipu (GR); 12.08.2006; Leg.: Gabriel Chişamera	<i>Bonomiella concii</i> Eichler, 1947	1	0	0	1
			<i>Coloceras piageti</i> (Johnston & Harrison, 1912)	1	1	6	8
	1 adult	Naipu (GR); 12.08.2006; Leg.: Gabriel Chişamera	<i>Columbicola bacillus</i> (Giebel, 1866)	2	2	4	8
			<i>Bonomiella concii</i> Eichler, 1947	7	1	0	8
		<i>Columbicola bacillus</i> (Giebel, 1866)	2	1	0	3	

Table 1 (continued)

Hosts			Parasites				
Order/Family/ Species	Number of specimens	Collecting data	Species	Number of specimens			
				♀♀	♂♂	Nymphs	Total
<i>Streptopelia decaocto</i> (Frivaldszky)	1 adult	Tăricești (PH); 18.08.2006; Leg.: Gabriel Chișamera	<i>Bonomiella concii</i> Eichler, 1947	1	0	0	1
			<i>Columbicola bacillus</i> (Giebel, 1866)	1	1	0	2
	1 adult	Tăricești (PH); 18.08.2006; Leg.: Gabriel Chișamera	<i>Columbicola bacillus</i> (Giebel, 1866)	12	16	0	28
			<i>Bonomiella concii</i> Eichler, 1947	1	0	0	1
			<i>Coloceras piageti</i> (Johnston & Harrison, 1912)	5	3	27	35
1 adult	Snagov (IF); 09.10.2006; Leg.: Gabriel Chișamera	<i>Columbicola bacillus</i> (Giebel, 1866)	1	2	10	13	
		<i>Columbicola bacillus</i> (Giebel, 1866)	0	1	5	6	
Strigiformes: Strigidae							
<i>Strix uralensis</i> Pallas	1 adult	Miercurea-Ciuc (HR); 08.04.2006; Leg.: Szilárd J. Daróczi	<i>Strigiphilus heterocerus</i> (Grube, 1851)	5	2	0	7
<i>Athene noctua</i> (Scopoli)	1 adult	Lucianca (DB); 31.07.2004; Leg.: Gabriel Chișamera	<i>Strigiphilus cursitans</i> (Nitzsch [in Giebel], 1861)	4	5	16	25
Piciformes: Picidae							
<i>Dendrocopos major</i> (L.)	1 adult	Cotorca (BZ); 10.06.2005; Leg.: Gabriel Chișamera	<i>Menacanthus pici</i> (Denny, 1842)	0	1	0	1
			<i>Penenirmus auritus</i> (Scopoli, 1763)	15	5	13	33
Passeriformes: Laniidae							
<i>Lanius collurio</i> L.	1 adult (♂)	Câmpurelu (GR); 13.06.2005; Leg.: Gabriel Chișamera	<i>Philopterus coarctatus</i> (Scopoli, 1763)	0	1	0	1
	1 adult (♂)	Tinosu (PH); 21.08.2005; Leg.: Gabriel Chișamera	<i>Menacanthus camelinus</i> (Nitzsch [in Giebel], 1874)	6	1	19	26
	1 juvenile	Hăbud (PH); 22.07.2006; Leg.: Gabriel Chișamera	<i>Menacanthus camelinus</i> (Nitzsch [in Giebel], 1874)	1	0	4	5



Table 1 (continued)

Hosts			Parasites				
Order/Family/ Species	Number of specimens	Collecting data	Species	Number of specimens			
				♀♀	♂♂	Nymphs	Total
<i>Lanius minor</i> Gmelin	1 adult	Sfântu Gheorghe (TL); 20.06.2002; Leg.: Mircea Gogu Bogdan	<i>Menacanthus camelinus</i> (Nitzsch [in Giebel], 1874)	61	42	186	289
Passeriformes: Oriolidae							
<i>Oriolus oriolus</i> (L.)	1 juvenile	Ghimpăți (GR); 11.08.2006; Leg.: Gabriel Chișamera	<i>Sturnidoecus radui</i> Bechet, 1965	0	0	3	3
Passeriformes: Corvidae							
<i>Corvus corax</i> L.	1 adult	Zoological Garden (Bucharest); 27.09.2003; Leg.: Gabriel Chișamera	<i>Brueelia argula</i> (Burmeister, 1838)	108	136	308	552
Passeriformes: Paridae							
<i>Parus major</i> L.	1 adult (♂)	Târgu Mureș (MS); 24.11.2005; Leg.: Szilárd J. Daróczi	<i>Menacanthus sinuatus</i> (Burmeister, 1838)	38	3	8	49
	1 adult (♂)	Bucharest ("Nicolae Titulescu" Street, sector 1); 11.12.2006; Leg.: Costică Adam	<i>Menacanthus sinuatus</i> (Burmeister, 1838)	1	1	6	8
Passeriformes: Hirundinidae							
<i>Riparia riparia</i> (L.)	1 adult (♂)	Vidra (GR); 14.06.2006; Leg.: Gabriel Chișamera	<i>Myrsidea latifrons</i> (Carriker [& Shull], 1910)	0	1	0	1
	1 adult (♂)	Vidra (GR); 14.06.2006; Leg.: Gabriel Chișamera	<i>Myrsidea latifrons</i> (Carriker [& Shull], 1910)	1	0	0	1
	1 adult (♂)	Vidra (GR); 14.06.2006; Leg.: Gabriel Chișamera	<i>Machaerilaemus clayae</i> (Balát, 1966)	1	0	0	1
	1 adult (♂)	Vidra (GR); 14.06.2006; Leg.: Gabriel Chișamera	<i>Machaerilaemus clayae</i> (Balát, 1966)	1	0	0	1
	1 adult (♀)	Vidra (GR); 14.06.2006; Leg.: Gabriel Chișamera	<i>Myrsidea latifrons</i> (Carriker [& Shull], 1910)	0	1	0	1

Table 1 (continued)

Hosts			Parasites				
Order/Family/ Species	Number of specimens	Collecting data	Species	Number of specimens			
				♀♀	♂♂	Nymphs	Total
<i>Riparia riparia</i> (L.)	1 adult (♂)	Vidra (GR); 14.06.2006; Leg.: Gabriel Chişamera	<i>Machaerilaemus clayae</i> (Balát, 1966)	1	0	2	3
	1 adult (♂)	Vidra (GR); 14.06.2006; Leg.: Gabriel Chişamera	<i>Machaerilaemus clayae</i> (Balát, 1966)	1	1	0	2
	1 adult (♂)	Vidra (GR); 14.06.2006; Leg.: Gabriel Chişamera	<i>Machaerilaemus clayae</i> (Balát, 1966)	1	2	6	9
	1 adult (♂)	Vidra (GR); 14.06.2006; Leg.: Gabriel Chişamera	<i>Machaerilaemus clayae</i> (Balát, 1966)	1	0	0	1
			<i>Myrsidea latifrons</i> (Carriker [& Shull], 1910)	0	0	1	1
	1 adult (♂)	Vidra (GR); 14.06.2006; Leg.: Gabriel Chişamera	<i>Machaerilaemus clayae</i> (Balát, 1966)	0	1	0	1
	1 adult (♀)	Vidra (GR); 18.06.2006; Leg.: Gabriel Chişamera	<i>Myrsidea latifrons</i> (Carriker [& Shull], 1910)	0	2	2	4
	1 adult (♂)	Vidra (GR); 18.06.2006; Leg.: Gabriel Chişamera	<i>Machaerilaemus clayae</i> (Balát, 1966)	2	0	2	4
1 adult (♀)	Vidra (GR); 18.06.2006; Leg.: Gabriel Chişamera	<i>Myrsidea latifrons</i> (Carriker [& Shull], 1910)	0	1	0	1	
<i>Hirundo rustica</i> L.	1 adult (♂)	Şarânga (BZ); 08.06.2005; Leg.: Gabriel Chişamera	<i>Brueelia domestica</i> (Kellogg & Chapman, 1899)	1	1	0	2
	1 adult (♂)	Căpâţâneşti (BZ); 09.06.2005; Leg.: Gabriel Chişamera	<i>Myrsidea rustica</i> (Giebel, 1874)	3	0	0	3
	1 adult	Vlădeşti (GL); 17.08.2005; Leg.: Gabriel Chişamera	<i>Myrsidea rustica</i> (Giebel, 1874)	7	0	2	9
Passeriformes: Sylviidae							
<i>Phylloscopus trochilus</i> (L.)	1 adult	Hăbud (PH); 17.09.2006; Leg.: Gabriel Chişamera	<i>Menacanthus agilis</i> (Nitzsch, 1866)	2	0	6	8

Table 1 (continued)

Hosts			Parasites				
Order/Family/ Species	Number of specimens	Collecting data	Species	Number of specimens			
				♀♀	♂♂	Nymphs	Total
<i>Sylvia borin</i> (Boddaert)	1 adult	Ghimpați (GR); 11.08.2006; Leg.: Gabriel Chișamera	<i>Menacanthus curuccae</i> (Schrank, 1776)	0	0	1	1
	1 adult (♀)	Hăbud (PH); 18.08.2006; Leg.: Gabriel Chișamera	<i>Penenirmus affectator</i> (Złotorzycka, 1976)	4	2	9	15
			<i>Penenirmus affectator</i> (Złotorzycka, 1976)	0	1	5	6
1 adult	Hăbud (PH); 17.09.2006; Leg.: Gabriel Chișamera	<i>Penenirmus affectator</i> (Złotorzycka, 1976)	0	0	1	1	
Passeriformes: Sturnidae							
<i>Sturnus vulgaris</i> L.	1 adult	Piatra (TR); 23.04.2005; Leg.: Gabriel Chișamera	<i>Myrsidea cucullaris</i> (Nitzsch, 1818)	0	2	2	4
			<i>Brueelia nebulosa</i> (Burmeister, 1838)	3	0	4	7
			<i>Sturnidoecus sturni</i> (Schrank, 1776)	0	1	2	3
	1 juvenile	Vidra (GR); 14.06.2006; Leg.: Gabriel Chișamera	<i>Myrsidea cucullaris</i> (Nitzsch, 1818)	2	0	0	2
			<i>Brueelia nebulosa</i> (Burmeister, 1838)	4	4	0	8
			<i>Sturnidoecus sturni</i> (Schrank, 1776)	0	1	1	2
1 adult (♂)	Bogdana (TR); 13.08.2006; Leg.: Gabriel Chișamera	<i>Menacanthus eurysternus</i> (Burmeister, 1838)	1	0	4	5	
		<i>Brueelia nebulosa</i> (Burmeister, 1838)	1	0	0	1	
Passeriformes: Turdidae							
<i>Turdus merula</i> L.	1 adult (♀)	Stana (SJ); 17.02.2007; Leg.: Costică Adam	<i>Brueelia merulensis</i> (Denny, 1842)	4	1	4	9
	1 adult (♀)	Izvoarele (DB); 24.02.2007; Leg.: Costică Adam	<i>Brueelia merulensis</i> (Denny, 1842)	1	3	2	6
<i>Turdus philomelos</i> C. L. Brehm	1 adult	Mamaia (CT); 11.11.2006; Leg.: Costică Adam	<i>Menacanthus eurysternus</i> (Burmeister, 1838)	2	2	24	28
			<i>Brueelia turdinulae</i> Ansari, 1956	1	0	1	2
Passeriformes: Passeridae							
<i>Passer domesticus</i> (L.)	1 adult (♂)	Tofalău (MS); 07.01.2006; Leg.: Szilárd J. Daróczy	<i>Philoapterus fringillae</i> (Scopoli, 1772)	0	0	3	3

Table 1 (continued)

Hosts			Parasites				
Order/Family/ Species	Number of specimens	Collecting data	Species	Number of specimens			
				♀♀	♂♂	Nymphs	Total
<i>Passer domesticus</i> (L.)	1 adult (♂)	Sângeorgiu de Mureș (MS); 29.01.2006; Leg.: Szilárd J. Daróczi	<i>Phlopterus fringillae</i> (Scopoli, 1772)	1	2	7	10
	1 adult (♀)	Naipu (GR); 12.08.2006; Leg.: Gabriel Chișamera	<i>Sturnidoecus refractariolus</i> (Złotorzycka, 1964)	1	0	0	1
<i>Passer montanus</i> (L.)	1 adult	Brăila – Monument Park (BR); 05.03.2001; Leg.: Costică Adam	<i>Myrsidea balati</i> Machažek, 1977	1	0	5	6
			<i>Brueelia cyclothorax</i> (Burmeister, 1838)	3	3	2	8

From the chewing lice collected by us, 1,398 specimens (487 females, 351 males and 560 nymphs) (33.60%) belong to the suborder Amblycera, the best represented being genus *Menacanthus* (509 specimens: 149 females, 70 males and 290 nymphs), and the rest of 2,763 specimens (842 females, 836 males and 1,085 nymphs) (66.40%) belong to the suborder Ischnocera, the best represented in our material being genus *Goniodes* (686 specimens: 205 females, 242 males and 239 nymphs). From the number of the species point of view, from the 69 chewing louse species identified by me, 27 (from 13 genera and two families) belong to the suborder Amblycera, and 42 (from 26 genera and two families) belong to the suborder Ischnocera. Also, from the species number point of view, the best represented genus of the suborder Amblycera was genus *Menacanthus* in my material, with nine species, and from the suborder Ischnocera, the best represented being the genus *Brueelia*, with six species. It can be remarked that in my material the Ischnocera are prevalent, as in number of specimens and as number of species.

For each chewing louse species from the following systematical list I specify all common host species, too, according to the data offered by the most recent chewing louse list of the world fauna, published by Price, Hellenthal & Palma (2003).

I made this in order to compare the host species mentioned by the above mentioned authors for the respective chewing louse species with the hosts on which I had found that species, or the hosts on which other Romanian authors found. The host species from which the type specimens of the respective chewing louse species was collected are preceded by „•”. Chewing louse genera are listed further on, in a systematical order presented by Złotorzycka (1994), and the species are alphabetically ordered within the genera.

*Systematical list of the collected and identified chewing louse species*

Suborder Amblycera

Family Menoponidae

Genus *Amyrsidea* Ewing, 1927

Subgenus *Argimenopon* Eichler, 1947

*Amyrsidea (Argimenopon) minuta* Emerson, 1961

(Fig. 2 A, B)

*Material*: 30 ♀♀, 13 ♂♂ and 12 nymphs, from an adult specimen of *Pavo cristatus* L. (exotic species to Romania), 12.12.2000, Zoological Garden (Bucharest), M.P.B.; 4 ♀♀, 5 ♂♂ and 2 nymphs, from an adult specimen of *P. cristatus*, 06.01.2001, Zoological Garden (Bucharest), M.P.B.; 6 ♀♀ and 2 ♂♂, from an adult male of *P. cristatus*, 29.10.2003, Zoological Garden (Bucharest), M.P.B.

*Hosts*: •*Pavo cristatus* L. and *Pavo muticus* L. (Galliformes: Phasianidae).

*Remarks*. Pisciă (1996) mentioned this species as parasite species on peacock and probably present in Romania.

All three birds on which I collected the chewing lice of this species were also parasited by *Goniodes pavonis*, a typical parasite for *P. cristatus* (Tab. 1), too.

*This species is reported for the first time in the Romanian parasitological fauna.*

*Amyrsidea (Argimenopon) perdicis* (Denny, 1842)

(Figs 2 C, D, 3 A)

*Material:* 55 ♀♀, 50 ♂♂ and 43 nymphs, on an adult female of *Chrysolophus pictus* (L.) (exotic species to Romania), 12.09.2000, Zoological Garden (Bucharest), A.P.

*Hosts:* *Alectoris rufa* (L.), *Bonasa umbellus* (L.), *Francolinus capensis* (Gmelin), *Perdix perdix* (L.), *Phasianus colchicus* L., *Syrmaticus reevesii* (Gray), *Tympanuchus cupido* (L.), *T. pallidicinctus* (Ridgway) and *T. phasianellus* (L.) (Galliformes: Phasianidae).

*Remarks.* This species was reported before in Romania by Rékási & Kiss, as follows: in 1980 and 1997 on *Perdix perdix* and, under the synonym name *Amyrsidea megalosoma*, on *Phasianus colchicus*; and in 1984, 1994 and 1997 on *P. colchicus* under two synonym names, namely *Menopon hexapilosum* and *A. megalosoma*.

I report the presence of this species on the host species *C. pictus* for the first time.

Genus *Bonomiella* Conci, 1942

*Bonomiella concii* Eichler, 1947

(Fig. 3 B-D)

*Material:* 1 ♀, from an adult specimen of *Streptopelia decaocto* (Frivaldszky), 12.08.2006, Naipu (GR), G.C.; 7 ♀♀ and 1 ♂, from an adult specimen of *S. decaocto*, 12.08.2006, Naipu (GR), G.C.; 1 ♀, from an adult specimen of *S. decaocto*, 18.08.2006, Tăricești (PH), G.C.; 1 ♀, from an adult specimen of *S. decaocto*, 09.10.2006, Snagov (IF), G.C.

*Host:* *Streptopelia decaocto decaocto* (Frivaldszky) (Columbiformes: Columbidae).

*Remarks.* This species was reported from Romania before, also on the typical host, by Bechet (1964).

Two of the four birds from which I collected the chewing lice of this species were also parasited by *Columbicola bacillus*, and the other two were parasited both by *C. bacillus*, and *Coloceras piageti*, all being typical parasites for *S. decaocto* (Tab. 1).

I report the presence of this species for the second time in Romania, being a rarely occurred parasite and in a small number of specimens. In the collected material I identified a male, too, males being rarely occurred.

Genus *Menopon* Nitzsch, 1818

*Menopon gallinae* (Linnaeus, 1758)

(Fig. 4 A, B)

*Material:* 40 ♀♀, 34 ♂♂ and 33 nymphs, from an adult female of *Chrysolophus pictus* (L.) (exotic species to Romania), 15.01.2003, Bucharest (from a farm), C.A.

*Hosts:* this species has a parasitary specificity less obvious, at present being found on the representatives of several species of family Phasianidae (Galliformes). According to the most recent of world chewing louse list (Price, Hellenthal &

Palma, 2003) it was reported from 15 species of the following genera, for the time being: *Caloperdix*, *Gallus*, *Lophura*, *Meleagris*, *Numida*, *Syrmaticus* and *Tragopan*.

**Remarks.** This species was reported before in the Romanian entomofauna on hen (under the synonym name *Liotheum pallidum*), by Leon (1912), but without specifying collecting data. Also on domestic hen, it was reported by Constantineanu et al. (1955), Bechet (1956, 1962), Voicu (1973), Pisciă (1980, 1985, 1996) and Adam (2003), but mentioning collecting data. On the domestic turkey it was reported by Bechet (1956) and Pisciă (1980, 1996). It was reported on the guinea fowl by Iordan-Georgescu (1941) (under the synonym name *Menopon albicans*), Bechet (1961 a), Voicu (1973) and Pisciă (1980, 1996). Constantineanu & Pisciă (1959) reported it as the synonym *Menopon productum*, present on some specimens of *Lophura nycthemera* (cited by authors under the name *Gennaes nycthemerus*) and *Chrysolophus pictus*, from some farms from Romania. Pisciă (1980) reported the presence of the species „*Menopon fulvomaculatus* Denny, 1842” also on specimens of *Lophura nycthemera* (cited by the author under the name *Gennaes nycthemerus*) and *Chrysolophus pictus*, from some farms from Romania. This author also mentioned for this chewing louse species the synonym name *Menopon productum* Piaget, 1880. But *Menopon fulvomaculatus* is the synonym for *Amysidea fulvomaculata* (Denny, 1842), and *Menopon productum* is the synonym of *M. gallinae* (Price, Hellenthal & Palma, op. cit.). Considering that *A. fulvomaculata* is a typical parasite for *Coturnix coturnix*, it is possible to be about also by *M. gallinae* as in the case of the species mentioned by Pisciă (1980).

It is possible that the bird studied by me, taken from a farm, might have taken over this chewing louse species from other domestic birds (hens or turkeys), but it is very interesting that the chewing louse adapted very well on this new host and multiplied enough (among the specimens collected by me there were many nymphs). Also the bird was parasited by *Menacanthus cornutus*, a typical parasite for the hen (Tab. 1).

Genus *Menacanthus* Neumann, 1912

*Menacanthus agilis* (Nitzsch, 1866)

(Fig. 4 C, D)

**Material:** 2 ♀♀ and 6 nymphs, from an adult specimen of *Phylloscopus trochilus* (L.), 17.09.2006, Hăbud (PH), G.C.

**Hosts:** *Muscicapa striata* (Pallas) (Passeriformes: Muscipidae); *Phylloscopus affinis subaffinis* (Ogilvie-Grant), *P. collybita* (Vieillot), *P. trochilus* (L.) (Passeriformes: Sylviidae); •*Phoenicurus ochruros gibraltariensis* (Gmelin), *P. phoenicurus* (L.) (Passeriformes: Turdidae).

**Remarks.** This species was reported before in Romania by Negru (1963 a, 1965), under the synonym name *Menacanthus phylloscopi*, on *Phylloscopus c. collybita*.

*I report this species for the first time in Romania under this name and on the host species P. trochilus.*

*Menacanthus camelinus* (Nitzsch [in Giebel], 1874)

**Material:** 6 ♀♀, 1 ♂ and 19 nymphs, from an adult male of *Lanius collurio* L., 21.08.2005, Tinosu (PH), G.C.; 1 ♀ and 4 nymphs, from a juvenile of *L. collurio*, 22.07.2006, Hăbud (PH), G.C.; 61 ♀♀, 42 ♂♂ and 186 nymphs, from an adult male of *L. minor* Gmelin, 20.06.2002, Sfântu Gheorghe (TL), M.G.B.

*Hosts:* it is a specific parasite of the genus *Lanius* (Passeriformes: Laniidae), at present being reported on 11 species of this genus (including on *L. collurio* and *L. minor*).

*Remarks.* This species was reported before in Romania on *L. excubitor* by Bechet (1961 a, 1962) and Rékási & Szombath (2000). On *L. collurio* it was reported under the synonym name of *M. inaequalis* by Bechet (1961 a, 1962), and on *L. minor*, under the synonym name *M. brevidentatus* by Constantineanu et al. (1958) and by Bechet (1961 a, 1962). Basing on a material collected by Professor Nițulescu, from Romania, on *Corvus monedula* (mentioned as *Coloeus monedula*), Séguy (1944) reported the species „*Myrsidea inaequalis*”, the inclusion within the genus *Myrsidea* being incorrect, in fact it was about the species *Menacanthus inaequalis* (synonym name with *M. camelinus*). Also, it might be an error in the identification of the host, too (*Corvus monedula*).

*Menacanthus cornutus* (Schömmer, 1913)

(Fig. 5 A, B)

*Material:* 1 ♀, from an adult female of *Phasianus colchicus* L., 12.09.2000, Zoological Garden (Bucharest), A.P.; 3 ♀♀, 1 ♂ and 2 nymphs, from an adult female of *Chrysolophus pictus* (L.) (exotic species to Romania), 15.01.2003, Bucharest (from a farm), C.A.; 24 ♀♀, 14 ♂♂ and 20 nymphs, from an adult female of *C. amherstiae* (Leadbeater) (exotic species to Romania), 12.09.2000, Zoological Garden (Bucharest), A.P.; 4 ♀♀, 2 ♂♂ and 3 nymphs, from an adult specimen of ? *Accipiter gentilis* (L.), 12.09.2000, Zoological Garden (Bucharest), A.P.

*Host:* •*Gallus gallus* (L.) (Galliformes: Phasianidae).

*Remarks.* This species was reported before in Romania on hen, by Constantineanu et al. (1955, 1961), Bechet (1961 a, 1962), Șerban (1970) and Pisiță (1980, 1985), and in 1996, also Pisiță reported it on a hen under the synonym name *Gallacanthus cornutus*.

All hosts on which I found this species were either from the Zoological Garden (Bucharest), or from a farm, places where there were hens from which they could take over parasites either by direct contact (in farms) or by some intermediary transporters (in the zoological garden). Much more interesting is that I found this species on *A. gentilis*, which is an atypical host not only for this species but also for the genus *Menacanthus*, in general. Taking into consideration that on this *A. gentilis* I also found the species *Menacanthus phasiani* and *Goniodes capitatus*, typical parasites for *P. colchicus*, it might be possible that these parasites to reach *A. gentilis* by the direct contact of this specimen with *P. colchicus*, studied by us and taken from the zoological garden. More than that, all three chewing louse species which I found on *A. gentilis*, I also found on *P. colchicus* and, in addition I found on it the species *Goniocotes chrysocephalus* and *Bovicola ovis*. Also, the specimen of *C. pictus* was parasited by *Menopon gallinae*, and that of *C. amherstiae* was parasited by *Goniodes chrysolophi*, too (Tab. 1).

*Menacanthus curuccae* (Schränk, 1776)

(Fig. 5 C)

*Material:* 1 nymph (1 ♀ in the 3<sup>rd</sup> larvar stage), from an adult specimen of *Sylvia borin* (Boddaert), 11.08.2006, Ghimpați (GR), G.C.



*Hosts:* this species has a parasitary specificity less obvious, till now being found on the representatives of several species of the families Sylviidae and Vireonidae (Passeriformes). According to the most recent world chewing louse list (Price, Hellenthal & Palma, 2003), it was reported on ten species of the genera *Acrocephalus*, *Phylloscopus* and *Sylvia* (including on *S. borin*) (Sylviidae) and on four species of the genus *Vireo* (Vireonidae), for the time being.

*Remarks.* The birds on which I found this species was also parasited by *Penenirmus affectator*, a typical parasite for *S. borin*, too (Tab. 1).

*This species is reported for the first time in the Romanian parasitological fauna.*

*Menacanthus eurysternus* (Burmeister, 1838)

(Figs 5 D, 6 A)

*Material:* 1 ♀ and 4 nymphs, from an adult male of *Sturnus vulgaris* L., 13.08.2006, Bogdana (TR), G.C.; 2 ♀♀, 2 ♂♂ and 24 nymphs, from an adult specimen of *Turdus philomelos* C. L. Brehm, 11.11.2006, Mamaia (CT), C.A.

*Hosts:* this species has the weakest parasitary specificity from all chewing louse species, at present being found on the representatives of numerous families of orders Piciformes and Passeriformes. According to the most recent list of the world chewing lice (Price, Hellenthal & Palma, op. cit.), it was reported from eight species of five genera (two families) of the order Piciformes and from 168 species (including *S. vulgaris* and *T. philomelos*) of 98 genera (35 families) of the order Passeriformes.

*Remarks.* This species was reported from Romania under the synonym name *Menopon eurysternum* on *Pica pica* by Marcu (1929) and Knechtel (1934). Also it was reported by Bechet (1962) from *P. pica*, by Adam & Sándor (2004) from *Sitta europaea*, and Rékási & Kiss (1999) reported the subspecies *M. eurysternus gulabimaina* (invalidated now) from *Sturnus roseus* (mentioned as *Pastor roseus*). Also on *S. roseus* it was reported by Bechet (1962) under the name *M. gulabimaina*. It was reported under the following synonym names: *M. minusculus* by Negru (1960 b, 1962) from *Turdus v. viscivorus* and by Bechet (1961 a, 1962) from *T. philomelos*; *M. mutabilis* by Negru (1959) from *Sturnus vulgaris*, by Bechet (1961 a) from *S. roseus* (mentioned as *Pastor roseus*), by Bechet (1962) from *S. roseus* and *S. vulgaris* and by Rékási & Kiss (1980, 1994, 1997) from *S. vulgaris*; *M. monochromateus* by Bechet (1962) and by Negru (1963 a, 1965), both authors from *Garrulus g. glandarius*; *M. annulatus* by Negru (1963 b) from *Passer d. domesticus*. Adam (2003) reported the species *Myrsidea indivisa* from *Garrulus glandarius* and *Turdus merula*, but it is an error, in fact being about also by *Menacanthus eurysternus*.

The specimen of *S. vulgaris* on which I found this species was also parasited by *Brueelia nebulosa* (typical parasite for this host), and that of *T. philomelos* was parasited by *Brueelia turdinulae*, too (also typical parasite for this host).

*Menacanthus phasiani* (Modrzejewska & Złotorzycka, 1977)

(Fig. 6 B)

*Material:* 1 ♀, from an adult female of *Phasianus colchicus* L., 12.09.2000, Zoological Garden (Bucharest), A.P.; 1 ♀, from an adult specimen of *?Accipiter gentilis* (L.), 12.09.2000, Zoological Garden (Bucharest), A.P.

*Host:* •*Phasianus colchicus* L. (Galliformes: Phasianidae).

*Remarks.* In 1956, Bechet reported *M. pallidulus* from *P. colchicus torquatus* (under the synonym name *Menopon pallidulum*), and in 1962 Pisciă (1980) reported it from *P. colchicus*, under the synonym name of *Uchida pallidula*. Considering that *M. phasiani* resembles very much *M. pallidulus*, and Price, Hellenthal & Palma (op. cit.) mentioned only the species *M. phasiani* and *M. stramineus* as parasite on *P. colchicus*, it is possible to be about also by *M. phasiani* in the above-mentioned reports, made by Bechet and Pisciă. In the case in which the specimens of *P. colchicus* live in farms together with hens (typical host of the species *M. pallidulus*), they can take over from the species *M. pallidulus*, too. All these aspects bring to light also the necessity of a minutely taxonomical review of the genus *Menacanthus*, parasite of the representatives of order Galliformes within the next period.

The specimen of *P. colchicus*, on which I found this species was also parasited by other four chewing louse species, and the specimen of *A. gentilis* was parasited by another two chewing louse species (Tab. 1). As a matter of fact, more precisely, the specimen of *A. gentilis* took over all chewing lice which I found on it from the specimen of *P. colchicus*, because they belong to some common parasite species of *P. colchicus*, and the two birds were from the same zoological garden (Tab. 1).

*I report this species for the first time under this name for the Romanian fauna.*

*Menacanthus pici* (Denny, 1842)

(Fig. 6 C)

*Material:* 1 ♂, from an adult specimen of *Dendrocopos major* (L.), 10.06.2005, Cotorca (BZ), G.C.

*Hosts:* this species has a parasitary specificity less obvious, as yet being found on the representatives of several species of the families Capitonidae and Picidae (Piciformes). According to the data offered by Price, Hellenthal & Palma (2003) it was reported on three species of the genus *Megalaima* (Capitonidae) and on 24 species of the genera *Colaptes*, *Dendrocopos* (including *D. major*), *Dryocopus*, *Melanerpes*, *Picoides*, *Picus* and *Sphyrapicus* (Picidae), till now.

*Remarks.* This species was reported from the Romanian parasitofauna by Rékási & Szombath (2000) on *Picus viridis*. Also Bechet (1962) reported it under the synonym name *M. dryobates* on *D. major pinetorum* and on *D. syriacus balcanicus*, and Rékási & Kiss (1984, 1994, 1997) reported it under the synonym name *M. picorum* on *Picus canus*.

The bird on which I found this species was also parasited by *Penenirmus auritus*, a typical parasite for several species of the family Picidae (Piciformes), also for *D. major* (Tab. 1).

*Menacanthus sinuatus* (Burmeister, 1838)

*Material:* 38 ♀♀, 3 ♂♂ and 8 nymphs, from an adult male of *Parus major* L., 24.11.2005, Târgu Mureş (MS), S.D.; 1 ♀, 1 ♂ and 6 nymphs, from an adult male of *P. major*, 11.12.2006, Bucharest („Nicolae Titulescu” Street, District 1), C.A.

*Hosts:* *Parus ater* L., *P. atricapillus* L., *P. bicolor* L., *P. caeruleus* L., *P. gambeli* Ridgway, •*P. major* L., *P. palustris* L. and *P. rufescens* Townsend (Passeriformes: Paridae).

*Remarks.* This species was reported before in Romania by Bechet (1961 a, 1962), on *P. a. ater* and on *P. palustris communis*, and by Negru (1965), on *P. a. ater* and on *P. m. major*.

*Menacanthus stramineus* (Nitzsch, 1818)

(Figs 6 D, 7 A)

*Material:* 3 ♀♀, 3 ♂♂ and 7 nymphs, from an adult specimen of ?*Nycticorax nycticorax* (L.), 22.08.2003, Zoological Garden (Bucharest), G.C.

*Hosts:* *Gallus gallus* (L.), *Lophura leucomelana* (Latham), • *Meleagris gallopavo* L., *Numida meleagris* (L.), *Pavo cristatus* L., *Phasianus colchicus* L. and *Tragopan satyra* (L.) (Galliformes: Phasianidae).

*Remarks.* This species was reported before from the Romanian entomofauna, on domestic turkey, by Leon (1912), under the synonym name *Liotheum stramineum*, without specifying the collecting data. Also on the domestic turkey, it was reported by Iordan-Georgescu (1941) (under the synonym name *Menopon biseriatum*), Bechet (1956) (under the synonym name *Menopon meleagridis*), Bechet (1962) and Pisciă (1980, 1996) (under the synonym name *Eomenacanthus stramineus*). It was also reported from the domestic hen by Constantineanu et al. (1955) (under the synonym name *Eomenacanthus stramineus*), Bechet (1956) (under the synonym name *Menopon meleagridis*), Bechet (1962) and Pisciă (1980, 1985, 1996) (under the synonym name *Eomenacanthus stramineus*). Adam & Daróczy (2006) reported it as a deserter parasite on *Accipiter gentilis*.

I report this species from *N. nycticorax* for the first time, being an atypical parasite for this host. The bird on which I found this species was from the Zoological Garden (Bucharest), a place where it was surrounded by hen from which it could take over this parasite, either by direct contact or by intermediary transporters. It is interesting that I found several specimens of this chewing louse species on this host, most of them being nymphs. It is possible that these chewing lice continued to breed on this atypical host, too.

*I report this species for the first time, as a deserter parasite on N. nycticorax.*

Genus *Machaerilaemus* Harrison, 1915

*Machaerilaemus clayae* (Balát, 1966)

(Figs 7 B-D, 17, 18 A)

*Material:* 1 ♀, from an adult male of *Riparia riparia* (L.), 14.06.2006, Vidra (GR), G.C.; 1 ♀, from an adult male of *R. riparia*, 14.06.2006, Vidra (GR), G.C.; 1 ♀ and 2 nymphs, from an adult male of *R. riparia*, 14.06.2006, Vidra (GR), G.C.; 1 ♀ and 1 ♂, from an adult male of *R. riparia*, 14.06.2006, Vidra (GR), G.C.; 1 ♀, 2 ♂♂ and 6 nymphs, from an adult male of *R. riparia*, 14.06.2006, Vidra (GR), G.C.; 1 ♀, from an adult male of *R. riparia*, 14.06.2006, Vidra (GR), G.C.; 1 ♂, from an adult male of *R. riparia*, 14.06.2006, Vidra (GR), G.C.; 2 ♀♀ and 2 nymphs, from an adult male of *R. riparia*, 18.06.2006, Vidra (GR), G.C.

*Host:* • *Riparia riparia* (L.) (Passeriformes: Hirundinidae).

*Remarks.* This species was reported before in Romania by Adam & Chişamera (2006), also from the typical host.

Only one bird from the eight on which I found this species was also parasited by *Myrsidea latifrons*, a typical parasite for this host species (Tab. 1).

In all specimens collected by me, the prosternal plate has more than 32 setae (Adam & Chişamera, 2006: fig. 4 A). Thus, I reconfirm the validity of this species, prosternal chetotaxy representing the most important feature which distinguishes it

from the most related species, i.e. *M. malleus* (Burmeister, 1838) (parasite of seven species of the genus *Hirundo*, of *H. rustica*, too).

Genus *Myrsidea* Waterston, 1915

*Myrsidea balati* Machažek, 1977

(Fig. 8 A, B)

*Material*: 1 ♀ and 5 nymphs, from an adult specimen of *Passer montanus* (L.), 05.03.2001, Brăila – Monument Park (BR), C.A.

*Host*: •*Passer montanus* (L.) (Passeriformes: Passeridae).

*Remarks*. The bird on which I found this species was also parasited by *Brueelia cyclothorax*, a typical parasite for this bird, too (Tab. 1).

*This species is reported for the first time in the Romanian parasitological fauna.*

*Myrsidea cucullaris* (Nitzsch, 1818)

*Material*: 2 ♂♂ and 2 nymphs, from an adult specimen of *Sturnus vulgaris* L., 23.04.2005, Piatra (TR), G.C.; 2 ♀♀, from a juvenile specimen of *S. vulgaris*, 14.06.2006, Vidra (GR), G.C.

*Hosts*: *Sturnus sturninus* (Pallas), •*S. vulgaris* L. (Passeriformes: Sturnidae).

*Remarks*. This species was reported before in Romania, also on *S. vulgaris*, by Negru (1959), Bechet (1961 a, 1962) and Rékási & Kiss (1980, 1994, 1997).

Both birds on which I found this species were also parasited by *Brueelia nebulosa* and *Sturnidoecus sturni*, typical parasites for *S. vulgaris* (Tab. 1).

*Myrsidea latifrons* (Carriker [& Shull], 1910)

*Material*: 1 ♂, from an adult male of *Riparia riparia* (L.), 14.06.2006, Vidra (GR), G.C.; 1 ♀, from an adult male of *R. riparia*, 14.06.2006, Vidra (GR), G.C.; 1 ♂, from an adult female of *R. riparia*, 14.06.2006, Vidra (GR), G.C.; 1 nymph, from an adult male of *R. riparia*, 14.06.2006, Vidra (GR), G.C.; 2 ♂♂ and 2 nymphs, from an adult female of *R. riparia*, 18.06.2006, Vidra (GR), G.C.; 1 ♂, from an adult female of *R. riparia*, 18.06.2006, Vidra (GR), G.C.

*Host*: •*Riparia riparia* (L.) (Passeriformes: Hirundinidae).

*Remarks*. This species was reported before in Romania by Adam & Chișamera (2006), also from the typical host.

Only a single bird from the six on which I found this species was also parasited by *Machaerilaemus clayae*, a typical parasite for *R. riparia* (Tab. 1).

*Myrsidea rustica* (Giebel, 1874)

*Material*: 3 ♀♀, from an adult male of *Hirundo rustica* L., 09.06.2005, Căpățânești (BZ), G.C.; 7 ♀♀ and 2 nymphs, from an adult specimen of *H. rustica*, 17.08.2005, Vlădești (GL), G.C.

*Hosts*: •*Hirundo rustica* L., *H. spilodera* Sundevall, *H. tahitica neoxena* Gould (Passeriformes: Hirundinidae).

*Remarks*. This species was reported before in Romania, also from *H. rustica*, by Negru (1958), Bechet (1961 a, 1962) and Rékási & Kiss (1997). Bechet (1961 a, 1962) reported it from *Delichon urbica*, too.

Genus *Austromenopon* Bedford, 1939*Austromenopon durisetosum* (Blagoveshtchensky, 1948)

(Fig. 8 C)

*Material:* 1 ♀, from an adult specimen of *Gallinago gallinago* (L.), 24.09.2002, Ostrovul Moldova Veche (CS), G.C.

*Host:* •*Gallinago gallinago* (L.), *G. media* (Latham), *G. nigripennis* Bonaparte (Charadriiformes: Scolopacidae).

*Remarks.* This species is reported for the first time in the Romanian parasitological fauna.

Genus *Actornithophilus* Ferris, 1916*Actornithophilus spinulosus* (Piaget, 1880)

*Material:* 1 ♀ and 1 nymph, from an adult specimen of *Limosa limosa* (L.), 13.03.2004, Vadu – Grindul Chituc (CT), M.T.

*Host:* •*Limosa limosa* (L.) (Charadriiformes: Scolopacidae).

*Remarks.* This species was reported before in Romania, also on *L. limosa*, by Bechet (1961 a, 1962) and Rékási & Kiss (1977, 1980, 1994, 1997).

The bird on which I found this chewing louse species was also parasited by *Lunaceps limosella*, typical parasite for *L. limosa* (Tab. 1).

*Actornithophilus hoplopteri* (Mjöberg, 1910)

(Fig. 8 D)

*Material:* 1 ♂, from an adult specimen of ?*Fulica atra* L., 03.02.2000, Bucharest, A.P.

*Hosts:* at present, genus *Actornithophilus* consists of 36 valid species which parasite some representatives of the families Burhinidae, Charadriidae, Chionidae, Dromadidae, Glareolidae, Haematopodidae, Ibisidae, Laridae, Recurvirostridae, Rostratulidae and Scolopacidae (Charadriiformes). According to the data given by Price, Hellenthal & Palma (op. cit.), *A. hoplopteri* was reported from 13 species of the family Charadriidae, till now, i.e. a species of the genus *Antibyx*, a species of the genus *Charadrius* and 11 species of the genus *Vanellus*.

*Remarks.* *F. atra* is an atypical host for the genus *Actornithophilus*. The specimen which I found probably succeeded to desert on this host, either by direct contact between it and the typical host or by some intermediary transporters. From the hosts mentioned by Price, Hellenthal & Palma (op. cit.) for *A. hoplopteri*, in the Romanian avifauna there is only the species *Vanellus leucurus* (Lichtenstein) (summer guest) and the species *Charadrius vociferus* L. and *Vanellus spinosus* (L.) (mentioned as accidental species) (Munteanu, 2001). Considering that I collected this chewing louse from a specimen of *F. atra* at the beginning of February (in plain winter), it is less probable that it came from *V. leucurus*, because, normally, this host species reaches Romania later and does not occur in the region from where the specimen of *F. atra* originated. Also, it is almost impossible that this chewing louse to come from *C. vociferus* or from *V. spinosus*, because these two bird species are occurred accidentally in Romania. It is possible that this chewing louse to come from another typical host (also of family Charadriidae), present in the Romanian fauna and which was not reported, yet. It has to be mentioned that the specimen collected by me has all the features presented by Clay (1962) for *A. hoplopteri* s. l.

The specimen of *F. atra* on which I found this chewing louse was from the wildness and was also parasited by *Pseudomenopon pilosum*, a typical parasite for this host.

*This species is reported for the first time in the Romanian parasitological fauna.*

Genus *Pseudomenopon* Mjöberg, 1910

*Pseudomenopon pilosum* (Scopoli, 1763)

(Fig. 9)

*Material:* 22 ♀♀, 12 ♂♂ and 2 nymphs, from an adult specimen of *Fulica atra* L., 03.02.2000, Bucharest, A.P.; 27 ♀♀, 45 ♂♂ and 64 nymphs, from an adult specimen of *F. atra*, 28.01.2006, Năvodari (CT), A.P. & G.C.; 19 ♀♀, 14 ♂♂ and 21 nymphs, from an adult specimen of *F. atra*, 28.01.2006, Vadu (CT), A.P. & G.C.; 3 ♀♀, 2 ♂♂ and 1 nymph, from an adult specimen of *F. atra*, 28.01.2006, Vadu (CT), A.P. & G.C.; 5 ♀♀, 14 ♂♂ and 9 nymphs, from an adult specimen of *F. atra*, 28.01.2006, Vadu (CT), A.P. & G.C.; 22 ♀♀, 19 ♂♂ and 16 nymphs, from an adult specimen of *F. atra*, 28.01.2006, Vadu (CT), A.P. & G.C.

*Hosts:* this species has a parasitary specificity less obvious, at present being found on the representatives of several species of the orders Charadriiformes and Gruiformes. According to the data presented by Price, Hellenthal & Palma (op. cit.), this species was reported on a species of the genus *Hydrophasianus* (Charadriiformes: Jacanidae) and on 13 species of genera *Podica* (Gruiformes: Heliornithidae), *Fulica* (including *F. atra*) and *Gallinula* (Gruiformes: Rallidae).

*Remarks.* It was reported before in Romania, under the synonym name *Menopon tridens*, by Iordan-Georgescu (1941) on *F. atra*, *Gallinula chloropus* (under the name *Gallinula gallinula*), *Phalacrocorax carbo* and *Podiceps cristatus*, and under the synonym name *P. tridens*, by Constantineanu et al. (1958) on *F. atra* and *Podiceps grisegena*, by Constantineanu et al. (1961) on *P. g. grisegena*, and by Bechet (1959) on *F. atra*, *Podiceps c. cristatus* and *P. r. ruficollis*. Rékási & Kiss (1997), Rékási, Kiss & Török (1997) and Rékási & Szombath (2000) reported it under the synonym name of *P. zlotorzyckae*, on *G. chloropus*. This species was also reported on *F. atra* by Bechet (1961 a, 1962, 1963 b) and by Rékási & Kiss (1977, 1980, 1994, 1997), on *G. chloropus* by Rékási & Kiss (1980, 1994, 1997) and on *P. cristatus* and *P. ruficollis* by Bechet (1962). It was reported a deserting case of this species on *Buteo buteo* by Rékási & Kiss (1997). Also Rékási & Kiss (1984) reported several specimens of the genus *Pseudomenopon* from *G. chloropus*, which he did not identified up to the species level. It is possible to be about *P. pilosum* again.

From the specimens of *P. pilosum* collected on the bird from Năvodari (CT), a male was parasited by the hyperparasite fungus *Trenomyces histophtorus* Chatton & Picard, 1908 (Ascomycota: Laboulbeniomycetes: Laboulbeniaceae) (Fig. 8 C, D). This fungus species was also reported in Romania by Bechet & Bechet (1960) on *Menopon gallinae*, *Menacanthus stramineus*, *Menacanthus cornutus* and *Anaticola crassicornis*. This fungus was reported from Romania on *P. pilosum* by Bechet (1962), too.

All six birds on which I found this chewing louse species were parasited also by other chewing louse species (Tab. 1).

Genus *Trinoton* Nitzsch, 1818*Trinoton querquedulae* (Linnaeus, 1758)

*Material*: 2 ♂♂, from an adult specimen of *Anas crecca* L., 17.03.2005, Giurgeni (IL), M.C.

*Hosts*: this species has a parasitary specificity less obvious, at present being found on the representatives of numerous species of the family Anatidae (Anseriformes). According to the data presented by Price, Hellenthal & Palma (2003), this species was reported from 68 species of genera *Aix*, *Anas* (including *A. crecca*), *Aythya*, *Bucephala*, *Camptorhynchus*, *Clangula*, *Histrionicus*, *Malacorhynchus*, *Melanitta*, *Mergus*, *Netta*, *Nettapus*, *Oxyura*, *Polysticta*, *Pteronetta*, *Somateria*, *Stictonetta*, *Tadorna* and *Thalassornis* (Anseriformes: Anatidae).

*Remarks*. This species was reported before in Romania by: Constantineanu et al. (1958) from *Anas platyrhynchos* and *Oxyura leucocephala*; Constantineanu et al. (1961) from *A. platyrhynchos*; Bechet (1959) from *A. crecca*; Bechet (1961 a) from *A. querquedula*; Bechet (1962) from *A. crecca*, *A. platyrhynchos* and, as deserter, from *Circus cyaneus*; Rékási & Kiss (1977) from *A. crecca*, *A. platyrhynchos*, *A. querquedula* and *Aythya nyroca*; Rékási & Kiss (1980) from *A. platyrhynchos*, *A. querquedula*, *A. strepera*, *Aythya nyroca* and *Netta rufina*; Rékási & Kiss (1984) from *A. platyrhynchos*; Rékási & Kiss (1994) from *A. crecca*, *A. platyrhynchos*, *A. querquedula*, *A. strepera*, *Aythya nyroca* and *Netta rufina*; Rékási & Kiss (1997) from *A. crecca*, *A. platyrhynchos*, *A. querquedula*, *A. strepera* and *Aythya nyroca*; Rékási & Szombath (2000) from *Anas clypeata* and, as deserter, from *Botaurus stellaris*. Also Rékási & Szombath (2000) reported the subspecies *T. q. ludwigfreundi* (from *A. platyrhynchos*) and *T. q. spinosum* (from *A. penelope*). But these two species were invalidated and they are considered synonyms with *T. querquedulae* (Price, Hellenthal & Palma, op. cit.). This species was reported under the following synonym names, too: *T. gracile*, by Rékási & Kiss (1980, 1994, 1997) from *Anas acuta*; *T. lituratum*, by Bechet (1959, 1962) from *Aythya nyroca*; *T. luridum*, by Rékási & Kiss (1977, 1984) from *A. platyrhynchos* and also by Rékási & Kiss (1980, 1994, 1997) from *A. platyrhynchos* and *A. acuta*; *T. nyrocae*, by Rékási & Kiss (1977, 1980, 1994, 1997) from *Aythya nyroca*; *T. spinosum*, by Iordan-Georgescu (1941) from *Cygnus cygnus* (mentioned by the author under the name *Cygnus musicus*), by Bechet (1956) from *Anas p. platyrhynchos*, and by Rékási & Kiss (1984, 1994, 1997) from *Anas penelope*. Also, Rékási & Kiss reported specimens of the genus *Trinoton* (which are identified only up to the genus level) from several species of Anatidae, as follows: in 1977, from *Aythya nyroca*; in 1980, from *Aythya fuligula* and *Netta rufina*; in 1984, from *A. nyroca*; in 1994, from *A. fuligula*, *A. nyroca* and *N. rufina*; in 1997, from *A. fuligula*. Considering the parasitary specificity of the species *T. querquedulae*, it might be possible that in the above-mentioned reports to be about this species, too. Rékási & Kiss (1984) reported *T. squalidum* from *Anas clypeata* and *Aythya nyroca*. But, according to Price, Hellenthal & Palma (op. cit.), *T. squalidum* is invalidated and considered now a synonym of the species *T. anserinum* (Fabricius [J. C.], 1805). Considering that *T. anserinum* is parasite only some of the species of genera *Anser*, *Branta* and *Cygnus*, I consider that probably in the above-mentioned report it is about also *T. querquedulae*.

Genus *Colpocephalum* Nitzsch, 1818*Colpocephalum zebra* Burmeister, 1838

*Material:* 31 ♀♀, 30 ♂♂ and 24 nymphs, from an adult individual of *Ciconia ciconia* (L.), 08.08.2003, Poiana (TR), A.P.; 7 ♀♀, 6 ♂♂ and 3 nymphs, from a juvenile specimen of *C. ciconia*, 05.09.2006, Gornești (MS), S.D.

*Host:* •*Ciconia ciconia* (L.) (Ciconiiformes: Ciconiidae).

*Remarks.* This species was reported before in Romania, also from the typical host, by Negru & Elekeș (1957), Bechet (1959, 1962), Rékási & Kiss (1997) and Rékási, Kiss & Török (1997).

From the two birds on which I found this chewing louse species, one of them was also parasited by *Neophilopterus incompletus*, and the other one by the species *Ciconiphilus quadripustulatus*, *Ardeicola ciconiae* and *N. incompletus* (Tab. 1), all these species being typical parasite for *C. ciconia*.

Genus *Ciconiphilus* Bedford, 1939*Ciconiphilus decimfasciatus* (Boisduval & Lacordaire, 1835)

*Material:* 1 ♀, 1 ♂ and 1 nymph, from an adult individual of *Ardea cinerea* L., 27.09.2003, Zoological Garden (Bucharest), G.C.

*Hosts:* this species has a parasitary specificity less obvious, at present being found on the representatives of numerous species of the family Ardeidae (Ciconiiformes). According to the data presented by Price, Hellenthal & Palma (op. cit.), it was reported from 32 species of the following genera, as yet: *Agamia*, *Ardea* (including *A. cinerea*), *Ardeola*, *Botaurus*, *Bubulcus*, *Butorides*, *Egretta*, *Ixobrychus*, *Nycticorax*, *Pilherodius* and *Tigrisoma* (Ciconiiformes: Ardeidae).

*Remarks.* This species was reported before in Romania by Bechet (1962) from *Ardea purpurea*, by Negru (1962) from *A. c. cinerea*, by Adam (2003) from *A. cinerea* and by Adam & Sándor (2004) from *Nycticorax nycticorax*. This species was reported also under the following synonym names: *C. boisduvali*, by Bechet (1962) from *Egretta garzetta*, by Rékási & Kiss (1980, 1994, 1997) also from *E. garzetta*; *C. nyctardis*, by Bechet (1961 a) from *N. nycticorax*; *C. obscurus*, by Rékási & Kiss (1984, 1994, 1997) from *Egretta alba*; *Colpocephalum importunum*, by Iordan-Georgescu (1941) from *Ardea purpurea* and *Egretta alba*, by Constantineanu et al. (1958, 1961) from *Botaurus stellaris*; *Colpocephalum boisduvali*, by Vasiliu (1946) from *E. garzetta*; *Colpocephalum laticeps*, by Vasiliu (1946) from *B. stellaris*; *Colpocephalum trochioxum*, by Vasiliu (1946) from *A. cinerea*.

*Ciconiphilus quadripustulatus* (Burmeister, 1838)

(Fig. 10 A, B)

*Material:* 31 ♀♀, 16 ♂♂ and 14 nymphs, from a juvenile specimen of *Ciconia ciconia* (L.), 05.09.2006, Gornești (MS), S.D.

*Hosts:* this species has a parasitary specificity less obvious, at present being found on the representatives of several species of the family Ciconiidae (Ciconiiformes). According to the data presented by Price, Hellenthal & Palma (2003), this species was reported from 10 species of the genera *Anastomus*, *Ciconia* (including *C. ciconia*), *Ephippiorhynchus* and *Mycteria* (Ciconiiformes: Ciconiidae), too.



*Remarks.* This species was reported before in Romania, under the synonym name *Colpocephalum quadripustulatum*, by Vasiliu (1946) from *Ciconia nigra*.

The bird on which I found this chewing louse species was also parasited by the species *Colpocephalum zebra*, *Ardeicola ciconiae* and *Neophiloaterus incompletus* (Tab. 1), all of them being typical parasites for *C. ciconia*.

*This parasite species is reported in Romania for the first time on the host species Ciconia ciconia.*

Family Laemobothriidae

Genus *Laemobothrion* Nitzsch, 1818

Subgenus *Eulaemobothrion* Ewing, 1929

*Laemobothrion (Eulaemobothrion) atrum* (Nitzsch, 1818)

(Fig. 10 C, D)

*Material:* 1 ♀ (being at the end of the 3<sup>rd</sup> larvar stage), 3 ♂♂ and 2 nymphs, from an adult specimen of *Fulica atra* L., 28.01.2006, Năvodari (CT), A.P. & G.C.

*Hosts:* *Fulica americana* Gmelin, *F. armillata* Vieillot, •*F. atra* L. and *F. cristata* Gmelin (Gruiformes: Rallidae).

*Remarks.* This species was reported before in Romania, also on *F. atra*, by Bechet (1959, 1962) and by Rékási & Kiss (1980, 1994, 1997). Bechet (1959, 1962) reported this species also as a deserter on *Anas platyrhynchos*. Constantineanu et al. (1958) reported this species under the synonym name *Eulaemobothrion nigrum* from *F. atra*, too. Also Constantineanu et al. (1958) reported *Eulaemobothrion emarginatum* from *F. atra*. But, according to the data presented by Price, Hellenthal & Palma (op. cit.), *Laemobothrion (Eulaemobothrion) emarginatum* Piaget, 1880 is a typical parasite for *Gallinula tenebrosa* Gould, at present being reported only from this host. Considering this, it is probable that the above-mentioned report of the species from *F. atra* to be a wrong identification and to be about the species *L. (E.) atrum*, too.

The bird on which I found this chewing louse species was also parasited by *Pseudomenopon pilosum*, *Fulicoffula lurida* and *Rallicola (Rallicola) fulicae* (Tab. 1), all these species being typical parasites for *F. atra*.

This species is rarely occurred on the Romanian birds and, usually, in a small number of specimens.

Suborder Ischnocera

Family Philopteridae

Genus *Goniodes* Nitzsch, 1818

*Goniodes bituberculatus* Rudow, 1869

*Material:* 7 ♀♀, 8 ♂♂ and 22 nymphs, from an adult male of *Tetrao urogallus* L., 18.04.2006, the Southern Carpathians (unknown locality), R.P.; 40 ♀♀, 37 ♂♂ and 75 nymphs, from an adult male of *T. urogallus*, 26.04.2006, the Southern Carpathians (unknown locality), C.A.

*Host:* •*Tetrao urogallus* L. (Galliformes: Phasianidae).

*Remarks.* This species was reported before in Romania, also from the typical host, by Bechet (1960, 1961 a, 1962) and Rékási & Szombath (2000). This species was reported on *T. urogallus* under the following synonym names, too: *G.*

*chelicorne*, by Marcu (1929); *G. chelicornis*, by Negru & Elekeş (1957); *Zlotorzycella bituberculata*, by Rékási & Kalabér (1994). Jordan-Georgescu (1941) reported also from *T. urogallus* the species *G. dissimilis* Denny, 1842. But, considering the description presented by the author and the fact that *G. dissimilis* is a typical parasite for only three species of the genus *Gallus* (Galliformes: Phasianidae) (according to the data presented by Price, Hellenthal & Palma, op. cit.), it is possible to be about a wrong identification and the species being also *G. bituberculatus*.

Both birds on which I found this chewing louse species were parasited also by *Oxylipurus tetraonis* and *Lagopoecus pallidovittatus* (Tab. 1), both being typical parasites for *T. urogallus*.

*Goniodes capitatus* (Kéler, 1939)

(Fig. 11 A, B)

*Material*: 13 nymphs, from an adult female of *Phasianus colchicus* L., 12.09.2000, Zoological Garden (Bucharest), A.P.; 1 nymph, from an adult specimen of *Accipiter gentilis* (L.), 12.09.2000, Zoological Garden (Bucharest), A.P.

*Host*: •*Phasianus colchicus* L. (Galliformes: Phasianidae).

*Remarks*. Although I had only nymphs at my disposal, the identification till the species level was possible because some of them were in the 3<sup>rd</sup> larval stage and some of their features were obvious (anterior form of the clypeus, body total length) distinguishing this species from *Goniodes colchici* Denny, 1842 (typical parasite also on *P. colchici*). Pisićă (1996) included this species in his monograph paper, but he mentioned that it was not reported from Romania, yet.

Both birds on which I found this chewing louse species were also parasited by other chewing louse species (Tab. 1) (see the remarks on these two birds made for the species *Menacanthus cornutus* and *M. phasiani*).

*This species is reported for the first time in the Romanian parasitological fauna.*

*Goniodes chrysolophi* Clay, 1940

(Fig. 11 C, D)

*Material*: 2 ♀♀, 3 ♂♂ and 4 nymphs, from an adult female of *Chrysolophus amherstiae* (Leadbeater) (exotic species to Romania), 12.09.2000, Zoological Garden (Bucharest), A.P.

*Hosts*: •*Chrysolophus amherstiae* (Leadbeater), *C. pictus* (L.) (Galliformes: Phasianidae).

*Remarks*. Pisićă (1980) reported *G. colchici* from specimens of *Phasianus colchicus*, *Lophura nycthemera* (reported by the author as *Gennaeus nycthemerus*) and *Chrysolophus pictus* (Phasianidae), all these birds being from the same farm. It is possible that *L. nycthemera* and *C. pictus* to take over *G. colchici* (a typical parasite only for *P. colchicus*) by direct contact, being kept in captivity near *P. colchicus*. But it is the possibility of an identification error as in the case of the chewing lice found on *C. pictus* and, in fact, to be about *G. chrysolophi* (the two species resembling one each other very much from the morphological point of view).

The bird on which I found this chewing louse species was also parasited by *Menacanthus cornutus* (Tab. 1), an atypical parasite for *C. amherstiae*.

*This species it is reported for the first time, at least under this name, in the parasitological fauna of Romania on the host C. amherstiae.*

*Goniodes pavonis* (Linnaeus, 1758)

*Material:* 11 ♀♀, 15 ♂♂ and 34 nymphs, from an adult specimen of *Pavo cristatus* L. (exotic species to Romania), 12.12.2000, Zoological Garden (Bucharest), M.P.B.; 1 nymph, from an adult specimen of *P. cristatus*, 06.01.2001, Zoological Garden (Bucharest), M.P.B.; 71 ♀♀, 101 ♂♂ and 55 nymphs, from a juvenile female of *P. cristatus*, 06.01.2001, Zoological Garden (Bucharest), M.P.B.; 50 ♀♀, 54 ♂♂ and 24 nymphs, from an adult female of *P. cristatus*, 29.10.2003, Zoological Garden (Bucharest), M.P.B.; 24 ♀♀, 24 ♂♂ and 11 nymphs, from an adult male of *P. cristatus*, 29.10.2003, Zoological Garden (Bucharest), M.P.B.

*Hosts:* •*Pavo cristatus* L., *P. muticus* L. (Galliformes: Phasianidae).

*Remarks.* This species was reported before in Romania, also from *P. cristatus*, by Bechet (1961 a, 1962) and Pisciă (1980, 1996). Leon (1912) reported this species under the synonym name *G. falcicornis* (in the author's paper it is mention the species „*falcicorius*”, probably being a printing error) also from peacocks, but without mentioning the collecting data for this species.

From the five bird species on which I found this chewing louse species, three were also parasited by *Amyrsidea (Argimenopon) minuta* (Tab. 1), a typical parasite for *P. cristatus*.

Genus *Goniocotes* Burmeister, 1838

*Goniocotes chrysocephalus* Giebel, 1874

*Material:* 21 ♀♀, 4 ♂♂ and 2 nymphs, from an adult female of *Phasianus colchicus* L., 12.09.2000, Zoological Garden (Bucharest), A.P.

*Hosts:* *Bonasa umbellus* (L.), •*Phasianus colchicus* L. (Galliformes: Phasianidae).

*Remarks.* This species was reported before in Romania, also from *P. colchicus*, by Bechet (1961 a, 1962) and by Rékási & Kiss (1977, 1980, 1984, 1994, 1997). Iordan-Georgescu (1941) reported this species from *Numida meleagris* and *Perdix perdix* (mentioned by the author under the name *Perdix cinerea*). But, considering the parasitary specificity of *G. chrysocephalus* and that *N. meleagris* was from a private farm and *P. perdix* from it natural environment, it is less probable that these birds to come into contact with the specimens of *P. colchicus* and to take over this chewing louse species. On *N. meleagris* and *P. perdix* there are as parasite other two distinct species of *Goniocotes*, but rather similar morphologically, namely: *G. maculatus* Taschenberg, 1879 (on *N. meleagris*) and *G. microthorax* (Stephens, 1829) (on *P. perdix*). That is why I consider that it is about the last two species in the above-mentioned report made by Iordan-Georgescu (1941). Pisciă (1980) reported this species from *N. meleagris*, probably an identification error, taking into account the above aspects. Also Pisciă (1980) reported *G. gallinae* (de Geer, 1778) from *P. colchicus*. The presence of the species *G. gallinae* on *P. colchicus* is possible only when these birds are kept in captivity near or just in the same place with the hens (typical host for *G. gallinae*). But if the bird came from the wild that it might be about also the species *G. chrysocephalus*. In 1996, Pisciă included this chewing louse species in his monograph paper, as a typical parasite for

*P. colchicus*, and, at the distribution in Romania, he mentioned the reports made by Bechet (1961 a) and Rékási & Kiss (1977).

The birds on which I found this chewing louse species was also parasited by other four chewing louse species (Tab. 1), two of them being typical for this host and two, atypical parasites (see the observations on the host made at the species *Menacanthus cornutus* and *Bovicola (Bovicola) ovis*).

Genus *Coloceras* Taschenberg, 1882

*Coloceras piageti* (Johnston & Harrison, 1912)

*Material*: 1 ♀, 1 ♂ and 6 nymphs, from an adult specimen of *Streptopelia decaocto* (Frivaldszky), 12.08.2006, Naipu (GR), G.C.; 5 ♀♀, 3 ♂♂ and 27 nymphs, from an adult specimen of *S. decaocto*, 09.10.2006, Snagov (IF), G.C.

*Hosts*: •*Streptopelia bitorquata* (Temminck), •*S. chinensis* (Scopoli) and *S. decaocto* (Frivaldszky) (Columbiformes: Columbidae).

*Remarks*. This species was reported before in Romania, also from *S. decaocto*, by Rékási & Kiss (1980, 1994, 1997) and by Șerban (1970). It was also reported under the following synonym names: *C. softoticus* by Rékási & Kiss (1980), as deserter on *Phasianus colchicus* and *Corvus cornix*, and also by Rékási & Kiss (1984, 1994, 1997) from *S. decaocto*; *Goniodes piageti*, by Constantineanu et al. (1958, 1961) also from *S. decaocto*. Rékási & Kiss (1980) reported this species as a deserter on *Podiceps grisegena*. This species was reported under the synonym name *Goniodes piageti* by Constantineanu et al. (1958, 1961) from *Streptopelia turtur* and by Pistică (1980) from *Columba livia domestica*. Also from *C. livia domestica* it was reported by Șerban (1970). Taking into consideration the parasitary specificity of the species *C. piageti* and that other different species from *Coloceras* are parasites on *S. turtur* and *C. livia domestica*, which resemble very much morphologically (the difference being in some features of the copulatory apparatus), I think it is about an identification error in the above-mentioned reports, and in fact, there are other *Coloceras* species (which are typical parasites for *S. turtur* and *C. livia domestica*).

The two birds on which I found this chewing louse species were also parasited by *Bonomiella concii* and *Columbicola bacillus* (Tab. 1), also typical parasites for this host species.

Genus *Struthiolipeurus* Cummings, 1916

*Struthiolipeurus nandu* Eichler, 1950

(Fig. 12 A, B)

*Material*: 25 ♀♀, 26 ♂♂ and 122 nymphs, from an adult specimen of *Rhea americana* (L.) (exotic species to Romania), 09.03.1999, Zoological Garden (Bucharest), A.P.; 7 ♀♀ and 5 ♂♂, from an adult specimen of *R. americana*, 15.10.1999, Zoological Garden (Bucharest), A.P.; 16 ♀♀, 16 ♂♂ and 1 nymph, from an adult specimen of *R. americana*, 24.01.2000, Zoological Garden (Bucharest), A.P.

*Host*: •*Rhea americana* (L.) (Rheiformes: Rheidae).

*Remarks*. The three birds on which I found this chewing louse species were also parasited by *Struthiolipeurus stresemanni* (Tab. 1), a typical parasite for this host species.

*This species is reported for the first time in the Romanian parasitological fauna, from three birds of an exotic species from the Zoological Garden.*

*Struthiolipeurus stresemanni* Kéler, 1960

(Fig. 12 C, D)

*Material:* 5 ♀♀, 11 ♂♂ and 6 nymphs, from an adult specimen of *Rhea americana* (L.) (exotic species to Romania), 09.03.1999, Zoological Garden (Bucharest), A.P.; 3 ♀♀ and 1 ♂, from an adult specimen of *R. americana*, 15.10.1999, Zoological Garden (Bucharest), A.P.; 9 ♀♀ and 6 ♂♂, from an adult specimen of *R. americana*, 24.01.2000, Zoological Garden (Bucharest), A.P.

*Host:* •*Rhea americana* (L.) (Rheiformes: Rheidae).

*Remarks.* The three birds on which I found this chewing louse species were also parasited by *Struthiolipeurus nandu* (Tab. 1), a typical parasite for this host species.

*This species is reported for the first time in the Romanian parasitological fauna, from three birds of an exotic species from the Zoological Garden.*

Genus *Oxylipeurus* Mjöberg, 1910

*Oxylipeurus tetraonis* (Grube, 1851)

*Material:* 2 ♀♀ and 2 nymphs, from an adult male of *Tetrao urogallus* L., 18.04.2006, the Southern Carpathians (unknown locality), R.P.; 7 ♀♀, 10 ♂♂ and 13 nymphs, from an adult male of *T. urogallus*, 26.04.2006, the Southern Carpathians (unknown locality), C.A.

*Host:* •*Tetrao urogallus* L. (Galliformes: Phasianidae).

*Remarks.* This species was reported before in Romania, also from the typical host, by Bechet (1960, 1961 a, 1962) and Rékási & Szombath (2000). Also, it was reported from *T. urogallus* and under the following synonym names: *Lipeurus ochraceus*, by Iordan-Georgescu (1941); *Lipeurus tetraonis*, by Marcu (1929); *Reticulipeurus tetraonis tetraonis*, by Rékási & Kalabér (1994).

Both birds on which I found this chewing louse species were also parasited by the species *Goniodes bituberculatus* and *Lagopoecus pallidovittatus* (Tab. 1), both being typical parasites for *T. urogallus*.

Genus *Rhynonirmus* Thompson, 1935

*Rhynonirmus scolopacis* (Denny, 1842)

*Material:* 1 ♀, from an adult specimen of *Gallinago gallinago* (L.), 24.09.2002, Ostrovul Moldova Veche (CS), G.C.

*Hosts:* •*Gallinago gallinago* (L.), *G. nigripennis* Bonaparte (Charadriiformes: Scolopacidae).

*Remarks.* This species was reported before in Romania, also from *G. gallinago*, by Negru (1959) (the author cites the host species under the synonym name *Capella g. gallinago*), Rékási & Kiss (1997), Rékási, Kiss & Török (1997) and Rékási & Szombath (2000).

The bird on which I found this chewing louse species were also parasited by *Cummingsiella ambigua* (Tab. 1), a typical parasite for *G. gallinago*.

Genus *Degeeriella* Neumann, 1906*Degeeriella fulva* (Giebel, 1874)

*Material*: 191 ♀♀, 132 ♂♂ and 123 nymphs, from a juvenile individual of *Buteo buteo* (L.), 22.08.2006, Săbed (MS), S.D.

*Hosts*: this species has a parasitary specificity less obvious, at present being found on the representatives of several species of the family Accipitridae (Falconiformes). According to the data presented by Price, Hellenthal & Palma (op. cit.), this species was reported from 28 species of the genera *Accipiter*, *Aquila*, *Buteo* (including *B. buteo*), *Geranoaetus*, *Hieraaetus*, *Ichthyophaga*, *Melierax*, *Spilornis* and *Spizaetus* (Falconiformes: Accipitridae).

*Remarks*. This species was reported before in Romania by: Bechet (1961 b, 1962) from *Aquila pomarina*, *Buteo buteo* and *B. lagopus*; Rékási & Kiss (1980, 1994, 1997) from *B. buteo*; Adam (2003) from *B. buteo* and, as deserter on *Asio otus* from a zoological garden; Adam & Daróczy (2006) also from *B. buteo*. Rékási & Kiss (1997) and Rékási & Szombath (2000) reported the subspecies *D. fulva giebeli* (now invalidated and considered synonym of *D. fulva*) from *B. buteo*. Also, this species was reported under the following synonym names: *Nirmus angustus*, by Marcu (1929) (the author cites wrongly this species as „*N. angustatus*”) from *Buteo lagopus*; *Nirmus fuscus*, by Marcu (1929) from *B. buteo*, by Iordan-Georgescu (1941) from *B. buteo* (cited by the author under the synonym name *B. vulgaris*) and by Negru & Elekeş (1957) also from *B. buteo*.

Genus *Lagopoecus* Waterston, 1922*Lagopoecus pallidovittatus* (Grube, 1851)

*Material*: 2 ♀♀, from an adult male of *Tetrao urogallus* L., 18.04.2006, the Southern Carpathians (unknown locality), R.P.; 27 ♀♀, 12 ♂♂ and 5 nymphs, from an adult male of *T. urogallus*, 26.04.2006, the Southern Carpathians (unknown locality), C.A.

*Host*: •*Tetrao urogallus* L. (Galliformes: Phasianidae).

*Remarks*. This species was reported before in Romania, also from the typical host, by Bechet (1960, 1961 a, 1962, 1963 a), Rékási & Kalabér (1994) and Rékási & Szombath (2000). Also, it was reported from *T. urogallus*, under the synonym name *Nirmus quadrulatus*, by Iordan-Georgescu (1941) and by Negru & Elekeş (1957).

Both birds on which I found this chewing louse species was also parasited by *Goniodes bituberculatus* and *Oxylipeurus tetraonis* (Tab. 1), both being typical parasites for *T. urogallus*.

Genus *Pectinopygus* Mjöberg, 1910*Pectinopygus gyricornis* (Denny, 1842)

*Material*: 23 nymphs, from an adult specimen of *Phalacrocorax carbo* (L.), 04.10.2003, Zoological Garden (Bucharest), G.C.

*Hosts*: *Phalacrocorax carbo* (L.) (Pelecaniformes: Phalacrocoracidae), •?*Sterna hirundo* L. (Charadriiformes: Sternidae).

*Remarks*. This species was reported before in Romania, also from *P. carbo*, by Bechet (1959, 1962) and by Rékási & Kiss (1977, 1980, 1984, 1994, 1997). Also Rékási & Kiss (1977, 1980, 1984, 1994) reported this species from *Phalacrocorax*

*pygmeus*. Jordan-Georgescu (1941) reported *Lipeurus subsetosus* from *P. carbo* and *Anas crecca* (mentioned by the author under the synonym name *Nettion craeca*). But *L. subsetosus* is, in fact, *Pectinopygus subsetosus* which is an invalidated species and considered synonym with *P. dispar* (Piaget, 1880). Taking into account the parasitary specificity of this chewing louse species (*P. dispar* is parasite of *Phalacrocorax melanoleucos*) and that *P. carbo* is parasited only by *P. gyricornis* (according to the data presented by Price, Hellenthal & Palma, op. cit.), I considered that the above-mentioned report is an identification error and, in fact, it is about *P. gyricornis*.

#### Genus *Fulicoffula* Clay & Meinertzhagen, 1938

##### *Fulicoffula lurida* (Nitzsch, 1818)

**Material:** 4 ♀♀, 3 ♂♂ and 10 nymphs, from an adult specimen of *Fulica atra* L., 28.01.2006, Năvodari (CT), A.P. & G.C.; 1 ♀, from an adult specimen of *F. atra*, 28.01.2006, Vadu (CT), A.P. & G.C.; 1 ♀, 1 ♂ and 4 nymphs, from an adult specimen of *F. atra*, 28.01.2006, Vadu (CT), A.P. & G.C.

**Hosts:** •*Fulica atra* L., *F. cristata* Gmelin, *F. leucoptera* Vieillot (Gruiformes: Rallidae).

**Remarks.** This species was reported before in Romania, also from *F. atra*, by Constantineanu et al. (1958), Bechet (1959, 1962) and Rékási & Kiss (1980, 1984, 1994, 1997). Also, it was reported from the same host, under the synonym name *Lipeurus luridus*, by Jordan-Georgescu (1941).

All three birds on which I found this chewing louse species were also parasited by other chewing louse species, typical parasites for this host species (Tab. 1).

#### Genus *Neophiloaterus* Cummings, 1916

##### *Neophiloaterus incompletus* (Denny, 1842)

**Material:** 7 ♀♀, 11 ♂♂ and 1 nymph, from a juvenile specimen of *Ciconia ciconia* (L.), 26.08.2003, Tunari (IF), G.C.; 2 ♀♀ and 2 ♂♂, from an adult specimen of *C. ciconia*, 08.08.2003, Poiana (TR), A.P.; 16 ♀♀, 12 ♂♂ and 3 nymphs, from a juvenile specimen of *C. ciconia*, 21.08.2006, Dumbrăvioara (MS), S.D.; 55 ♀♀, 63 ♂♂ and 18 nymphs, from a juvenile specimen of *C. ciconia*, 05.09.2006, Gornești (MS), S.D.

**Host:** •*Ciconia ciconia* (L.) (Ciconiiformes: Ciconiidae).

**Remarks.** This species was reported before in Romania, also from the typical host, by Bechet (1962), Negru (1961), Rékási & Kiss (1997) and Rékási, Kiss & Török (1997). Bechet (1959) reported also from *C. ciconia* the chewing louse species *N. tricolor* (Burmeister, 1838). Considering that the species of the genus *Neophiloaterus* characterizes by a high parasitary specificity (each species of the genus being parasite on a single host species) and that *C. ciconia* is parasited only by *N. incompletus*, and *N. tricolor* parasites only *C. nigra* (according to the data presented by Price, Hellenthal & Palma, op. cit.), I considered that the above-mentioned report might be an identification error and, in fact, it might be about also by *N. incompletus*.

From the four birds on which I found this chewing louse species, one was parasited by *Colpocephalum zebra*, and another one, by the species *Ciconiphilus*

*quadripustulatus*, *Colpocephalum zebra* and *Ardeicola ciconiae* (Tab. 1), also typical parasites for this host species.

Genus *Ardeicola* Clay, 1936

*Ardeicola ciconiae* (Linnaeus, 1758)

*Material*: 5 ♀♀, 3 ♂♂ and 18 nymphs, from a juvenile specimen of *Ciconia ciconia* (L.), 05.09.2006, Gornești (MS), S.D.

*Host*: •*Ciconia ciconia* (L.) (Ciconiiformes: Ciconiidae).

*Remarks*. This species was reported before in Romania, also on typical host, by Bechet (1959, 1962). Also, it was reported from *C. ciconia* by Negru & Elekeș (1957), under the synonym name *Lipeurus versicolor*.

The bird on which I found this chewing louse species was also parasited by *Ciconiphilus quadripustulatus*, *Colpocephalum zebra* and *Ardeicola ciconiae* (Tab. 1), chewing louse species which are typical parasites for this host species, too.

Genus *Anaticola* Clay, 1936

*Anaticola beieri* Eichler, 1954

(Fig. 13 A)

*Material*: 1 ♀ and 1 nymph, from an adult specimen of *Branta ruficollis* (Pallas), 15.02.2002, Pecineaga (TL), C.A.

*Host*: •*Branta ruficollis* (Pallas) (Anseriformes: Anatidae).

*Remarks*. Constantineanu et al. (1958, 1961) reported from *B. ruficollis* the species *Anaticola anseris* (Linnaeus, 1758). Taking into account that *B. ruficollis* is parasited only by the species *A. beieri*, and *A. anseris* is the parasite on other species of the genera *Anser* and *Branta* (according to the data presented by Price, Hellenthal & Palma, op. cit.), I consider that it may be about the species *A. beieri* in the above-mentioned report.

*This species is reported for the first time, at least under this name, in the Romanian parasitological fauna on the host species B. ruficollis.*

Genus *Anatoecus* Cummings, 1916

*Anatoecus icterodes* (Nitzsch, 1818)

*Material*: 4 ♀♀, 4 ♂♂ and 5 nymphs, from an adult specimen of *Tadorna tadorna* (L.), 04.12.2002, Salcia (MH), G.C.

*Hosts*: this species has a parasitary specificity less obvious, at present being found on the representatives of numerous species of the family Anatidae (Anseriformes). According to the data presented by Price, Hellenthal & Palma (2003), as yet, it was reported from 70 species of genera *Aix*, *Alopochen*, *Anas*, *Anser*, *Aythya*, *Biziura*, *Branta*, *Bucephala*, *Clangula*, *Cygnus*, *Dendrocygna*, *Hymenolaimus*, *Malacorhynchus*, *Melanitta*, *Mergus*, *Netta*, *Oxyura*, *Plectropterus*, *Sarkidiornis*, *Somateria*, *Tadorna* (including *T. tadorna*) and *Thalassornis* (Anseriformes: Anatidae).

*Remarks*. This species was reported before in Romania by: Bechet (1956, 1962) from *Anas platyrhynchos* and *Mergus serrator*; Bechet (1959) from *Aythya nyroca*; Rékási & Kiss (1977) from *Netta rufina*; Rékási & Kiss (1980) from *Anas acuta*, *A. crecca* and *N. rufina*; Rékási & Kiss (1984) from *A. acuta* and *A. platyrhynchos*; Rékási & Kiss (1994) from *A. acuta*, *A. crecca*, *A. platyrhynchos* and



*N. rufina*; Rékási & Kiss (1997) from *A. acuta*, *A. crecca*, *A. platyrhynchos*, *Mergus albellus* and *N. rufina*; Rékási & Szombath (2000) from *Anas penelope*. This species was also reported under the following synonym names: *A. adustus*, by Pisičá (1980) from *Anser anser domesticus*; *Docophorus icterodes*, by Marcu (1929) from *A. platyrhynchos*, and by Jordan-Georgescu (1941) from *A. crecca* (mentioned by the author under the synonym name *Nettion craeca*) and, as deserter, from *Phalacrocorax carbo*. Constantineanu et al. (1961) reported *Anatoecus dentatus* (Scopoli, 1763) from *Anas crecca crecca*, *Anser anser domesticus* and *Branta ruficollis*, mentioning the synonym for this chewing louse species as *Anatoecus icterodes* between brackets. But *A. icterodes* is not a synonym name for *A. dentatus*, they being two distinct and valid species. This thing makes the authors' identification doubtful. In the material studied by the authors it might be also specimens of *A. dentatus* and of *A. icterodes*, or only of *A. dentatus*, or only of *A. icterodes*. But because the authors found this species also on *B. ruficollis*, I consider that it might be about the species *A. icterodes*, because on *B. ruficollis* only this species of the genus *Anatoecus* was found, as yet (according to the data presented by Price, Hellenthal & Palma, op. cit.). In his monograph paper, Pisičá (1996) includes this species, and at its distribution in Romania he mentioned the reports made by Bechet (1956), Constantineanu et al. (1961) and Pisičá (1980). In Romania, the following invalidated subspecies and considered synonyms of *A. icterodes* (Price, Hellenthal & Palma, op. cit.) were also reported: *A. icterodes adustus*, by Rékási & Kiss (1977, 1980, 1984, 1994, 1997) from *Anser anser*; *A. i. bipunctatus*, by Rékási, Kiss & Török (1997) from *Mergus merganser*; *A. i. boschadis*, by Rékási & Kiss (1980, 1984, 1994, 1997) from *A. platyrhynchos*; *A. i. brantae*, by Rékási & Kiss (1980, 1994, 1997) from *Branta ruficollis*; *A. i. brevimaculatus*, by Rékási & Kiss (1980, 1994, 1997) from *Anser albifrons*; *A. i. catuneanui*, by Bechet (1962) and Rékási & Kiss (1980, 1984, 1994, 1997) from *Aythya nyroca*; *A. i. difficilis*, by Bechet (1962) from *Aythya ferina*; *A. i. icterodes*, by Rékási & Kiss (1997) from *Mergus serrator*; *A. i. obtusus*, by Rékási & Kiss (1977, 1994, 1997) from *Aythya fuligula*; *A. i. pustulosus*, by Rékási & Kiss (1984, 1994, 1997) from *Netta rufina*; *A. i. simplicatus*, by Rékási & Kiss (1997) and Rékási, Kiss & Török (1997) from *Anas penelope*; *A. i. tadornae*, by Rékási & Kiss (1997) from *Tadorna tadorna*.

#### Genus *Columbicola* Ewing, 1929

##### *Columbicola bacillus* (Giebel, 1866)

*Material*: 2 ♀♀, 2 ♂♂ and 4 nymphs, from an adult specimen of *Streptopelia decaocto* (Frivaldszky), 12.08.2006, Naipu (GR), G.C.; 2 ♀♀ and 1 ♂, from an adult specimen of *S. decaocto*, 12.08.2006, Naipu (GR), G.C.; 1 ♀ and 1 ♂, from an adult specimen of *S. decaocto*, 18.08.2006, Tăricești (PH), G.C.; 12 ♀♀ and 16 ♂♂, from an adult specimen of *S. decaocto*, 18.08.2006, Tăricești (PH), G.C.; 1 ♀, 2 ♂♂ and 10 nymphs, from an adult specimen of *S. decaocto*, 09.10.2006, Snagov (IF), G.C.; 1 ♂ and 5 nymphs, from an adult specimen of *S. decaocto*, 14.10.2006, Hăbud (PH), G.C.

*Hosts*: *Streptopelia decaocto* (Frivaldszky), *S. decipiens* (Hartlaub & Finsch), *S. roseogrisea* (Sundevall), *S. semitorquata* (Rüppell), *S. senegalensis cambayensis* (Gmelin), *S. tranquebarica tranquebarica* (Hermann), •*S. turtur turtur* (L.) (Columbiformes: Columbidae).

*Remarks*. This species was reported before in Romania by Bechet (1961 a, 1962) and Adam & Sándor (2005) from *Streptopelia turtur*. Also, it was reported

under the following synonym names: *C. confusissimus*, by Bechet (1961 a) from *S. decaocto*; *Lipeurus baculus*, by Iordan-Georgescu (1941) from *S. decaocto* (mentioned by the author under the synonym name *Turtur auritus*) and *S. turtur* (mentioned by the author under the synonym name *Columba turtur*). This species was also reported as the subspecies of *C. columbae* (Linnaeus, 1758), namely *C. columbae bacillus*, by Rékási & Kiss (1977) from *S. decaocto* and also by Rékási & Kiss (1980, 1984, 1994, 1997) from *S. decaocto* and *S. turtur*. As a matter of fact *C. bacillus* is not a subspecies, but a valide and distinct species from *C. columbae* (Price, Hellenthal & Palma, op. cit.).

From the six birds on which I found this chewing louse species, two were also parasited by *Bonomiella concii* and other two by *B. concii* and *Coloceras piageti* (Tab. 1), all of them being typical parasites for this host species.

*Columbicola columbae* (Linnaeus, 1758)

*Material*: 13 ♀♀, 24 ♂♂ and 9 nymphs, from an adult specimen of *Columba livia* Gmelin (var. *domestica*), 03.10.2006, Bucharest, M.P.B.

*Hosts*: *Columba eversmanni* Bonaparte, *C. guinea* L., •*C. livia* Gmelin, *C. oenas* L. (Columbiformes: Columbidae).

*Remarks*. This species was reported before in Romania, also from *C. livia* var. *domestica*, by Bechet (1956, 1962), Constantineanu et al. (1955, 1958) and Pisiță (1980). Also Pisiță (1996) included this species in his monograph paper, and at its distribution in Romania he mentioned the reports made by Bechet (1956, 1961 a, 1962) and Constantineanu et al. (1955, 1958). In Romania, the following subspecies which are invalidated and considered synonyms with *C. columbae* (Price, Hellenthal & Palma, op. cit.) are also reported: *C. columbae columbae*, by Bechet (1961 a) from *C. livia domestica*, by Rékási & Kiss (1980, 1994, 1997) from *C. livia* and *C. oenas*, and also by Rékási & Kiss (1984) from *C. oenas*; *C. columbae filiformis*, by Rékási & Kiss (1997) from *C. oenas*.

Genus *Rallicola* Johnston & Harrison, 1911

Subgenus *Rallicola* Johnston & Harrison, 1911

*Rallicola (Rallicola) fulicae* (Denny, 1842)

*Material*: 10 ♀♀, 17 ♂♂ and 19 nymphs, from an adult specimen of *Fulica atra* L., 28.01.2006, Năvodari (CT), A.P. & G.C.; 4 ♀♀, 9 ♂♂ and 6 nymphs, from an adult specimen of *F. atra*, 28.01.2006, Vadu (CT), A.P. & G.C.; 1 ♂, from an adult specimen of *F. atra*, 28.01.2006, Vadu (CT), A.P. & G.C.; 6 ♀♀, 7 ♂♂ and 3 nymphs, from an adult specimen of *F. atra*, 28.01.2006, Vadu (CT), A.P. & G.C.; 4 ♀♀, 14 ♂♂ and 9 nymphs, from an adult specimen of *F. atra*, 28.01.2006, Vadu (CT), A.P. & G.C.

*Hosts*: •*Fulica atra* L., *F. cristata* Gmelin (Gruiformes: Rallidae).

*Remarks*. This species was reported before in Romania, also from *F. atra*, by Constantineanu et al. (1958), Bechet (1959, 1962) and by Rékási & Kiss (1980, 1984, 1994, 1997).

All the five birds on which I found this chewing louse species were also parasited by other chewing louse species which are typical parasites of this host species (Tab. 1).

Genus *Cummingsiella* Ewing, 1930*Cummingsiella ambigua* (Burmeister, 1838)

*Material*: 2 ♀♀ and 1 ♂, from an adult specimen of *Gallinago gallinago* (L.), 24.09.2002, Ostrovul Moldova Veche (CS), G.C.

*Hosts*: •*Gallinago gallinago* (L.), *G. nigripennis* Bonaparte (Charadriiformes: Scolopacidae).

*Remarks*. This species was reported before in Romania, also from *G. gallinago*, by Negru (1959) (the author mentions the host species under the synonym name *Capella g. gallinago*), by Bechet (1961 a, 1962) (the author mentions the host species under the synonym name *Capella gallinago*) and by Rékási & Kiss (1977, 1994, 1997).

The bird on which I found this chewing louse species was also parasited by *Rhynonirmus scolopacis* (Tab. 1), which is also a typical parasite of this host species.

Genus *Saemondssonina* Timmermann, 1936Subgenus *Saemondssonina* Timmermann, 1936*Saemundssonina (Saemundssonina) lari* (Fabricius [O.], 1780)

*Material*: 4 ♀♀ and 1 nymph, from a juvenile specimen of *Larus cachinnans* Pallas, 05.03.2007, Bucharest, C.A.

*Hosts*: this species has a parasitary specificity less obvious, as yet, being found on the representatives of several species of the family Laridae (Charadriiformes). According to the data presented by Price, Hellenthal & Palma (2003), for the time being, it was reported from 36 species of the genera *Gabianus*, *Larus* (*L. cachinnans* is not mentioned), *Pagophila*, *Rissa* and *Xema* (Charadriiformes: Laridae).

*Remarks*. It was reported before in Romania by: Rékási & Kiss (1977, 1994) from *L. cachinnans* (mentioned by the authors under the name *L. argentatus*), *L. minutus* and *L. ridibundus*; Rékási & Kiss (1980) from *L. cachinnans* (mentioned by authors under the name *L. argentatus*), *L. ridibundus* and, as deserter, from *Podiceps cristatus*; Rékási & Kiss (1997) from *L. cachinnans* (mentioned by the authors under the name *L. argentatus*), *L. genei*, *L. minutus* and *L. ridibundus*; Rékási & Szombath (2000) from *L. ridibundus*. This species was also reported under the following synonym names: *S. breviappendiculata*, by Rékási & Kiss (1980, 1994) from *L. fuscus*; *S. congener*, by Rékási & Kiss (1980, 1984, 1994, 1997) from *L. canus*; *S. gonothorax*, by Bechet (1961 a) from *L. cachinnans* (mentioned by the author under the name *L. argentatus*) and *L. minutus*; *S. muelleri*, by Bechet (1962) and Rékási & Kiss (1977, 1984, 1994, 1977) from *L. ridibundus*; *S. timmermanni*, by Negru (1963 b) from *L. melanocephalus*; *Docophorus lari*, by Marcu (1929) from *L. cachinnans* (mentioned by the author under the name *L. argentatus*). Also Marcu (1929) reported *Docophorus melanocephalus* (synonum name for *S. melanocephalus*), and Bechet (1956) reported *Philopterus melanocephalus* (synonym name for *S. melanocephalus*) from *L. r. ridibundus*. But *S. melanocephalus* is typical parasite for *Sterna albifrons* (Pallas) and *S. nereis* (Gould) (according to the data presented by Price, Hellenthal & Palma, op. cit.). So that, in the case of the two above mentioned reports, surely it is about an

identification error (as Bechet himself recognized later in the paper from 1962, page 392), in fact being also about the species *S. (S.) lari*. In Romania the following subspecies which now are invalidated and considered synonyms with *S. (S.) lari* (Price, Hellenthal & Palma, op. cit.) were also reported: *S. lari breviappendiculata*, by Rékási & Kiss (1997) from *L. fuscus*; *S. l. congener*, by Rékási & Szombath (2000) from *L. canus*; *S. l. tridactylae*, by Rékási & Kiss (1997) and Rékási, Kiss & Török (1997) from *Rissa tridactyla*.

As I have mentioned before, this species was reported from *L. argentatus* in Romania by several authors (which is not present in the Romanian avifauna). But surely, it is not about the species *L. argentatus*, but the species *L. cachinnans*, which was considered a subspecies of *L. argentatus* for a period of time. This thing explains this confused situation. Probably, because of this the species *L. cachinnans* is absent in the list of the host species for *S. (S.) lari*, in the most recent world catalogue of the chewing lice (Price, Hellenthal & Palma, op. cit.).

It is confirmed once again the presence of the chewing louse *S. (S.) lari* on the host species *L. cachinnans* (Charadriiformes: Laridae).

*Saemundssonina (Saemundssonina) thompsoni* Timmermann, 1951

*Material*: 1 ♂, from a juvenile specimen of *Limosa limosa* (L.), 13.03.2004, Vadu – Grindul Chituc (CT), M.T.

*Host*: •*Limosa limosa* (L.) (Charadriiformes: Scolopacidae).

*Remarks*. This species was reported before in Romania, also from the typical host, by Rékási & Kiss (1977, 1980, 1994, 1997) and by Rékási & Szombath (2000).

Genus *Lunaceps* Clay & Meinertzhagen, 1939

*Lunaceps limosella* Timmermann, 1954

(Fig. 13 B, C)

*Material*: 1 nymph (1 ♀ in the 3<sup>rd</sup> stage of larval development), from an adult specimen of *Limosa limosa* (L.), 13.03.2004, Vadu – Grindul Chituc (CT), M.T.

*Host*: •*Limosa lapponica* (L.), *L. limosa* (L.) (Charadriiformes: Scolopacidae).

*Remarks*. Bechet (1968), basing on a material collected from *L. limosa* of Romania, described the subspecies *L. limosella limosae*. But, this subspecies was invalidated and synonymized with the species *L. limosella* (Price, Hellenthal & Palma, op. cit.). Rékási & Kiss (1977, 1994, 1997) reported also from *L. limosa* the species “*Cummingsiella limosae* Timmermann, 1956”. But this species doesn’t exist. In 1956, Timmermann published a single paper in which he did not described any new species of the genus *Cummingsiella* (neither in this paper nor in others) and so much the less to name it „*limosae*”. I was tempted to think it is a printing error and the authors referred to *Austromenopon limosae* Timmermann, 1954. But the authors above mentioned reported “*C. limosae*” together with *A. limosae* and other three chewing louse species which are typical parasite for *L. limosa*. I consider that, in fact, the authors referred to *L. limosella*, because it was the single parasite chewing louse species on *L. limosa* which was not cited by authors; the name of the chewing louse species is almost identical with that reported by the authors and the name of the genus is wrongly written, probably due to a drawing up error.

Bird on which I found this chewing louse species was also parasited by *Actornithophilus spinulosus* (Tab. 1), also a typical parasite for this host species.

Genus *Incidifrons* Ewing, 1929*Incidifrons fulicae* (Linnaeus, 1758)

*Material:* 2 ♀♀, 2 ♂♂ and 7 nymphs, from an adult specimen of *Fulica atra* L., 28.01.2006, Vadu (CT), A.P. & G.C.

*Hosts:* •*Fulica atra* L., *F. cristata* Gmelin (Gruiformes: Rallidae).

*Remarks.* This species was reported before in Romania, also from *F. atra*, by Bechet (1959, 1962) and by Rékási & Kiss (1980, 1984, 1994, 1997). Also, Constantineanu & Pisciă (1959) reported it under the synonym name *I. pertusus* *pertusus*, from *F. atra*.

Bird on which I found this chewing louse species was also parasited by *Pseudomenopon pilosum*, *Fulicoffula lurida* and *Rallicola (Rallicola) fulicae* (Tab. 1), all of them being typical parasites of this host species.

Genus *Strigiphilus* Mjöberg, 1910*Strigiphilus cursitans* (Nitzsch [in Giebel], 1861)

*Material:* 4 ♀♀, 5 ♂♂ and 16 nymphs, from an adult specimen of *Athene noctua* (Scopoli), 31.07.2004, Lucianca (DB), G.C.

*Hosts:* •*Athene noctua* (Scopoli), *Strix butleri* (Hume) (Strigiformes: Strigidae).

*Remarks.* This species was reported before in Romania, also from *A. noctua*, by Negru (1958), Bechet (1961 b, 1962), Rékási & Kiss (1984, 1994, 1997) and Adam & Daróczi (2006). Also, Marcu (1929) reported this species under the synonym name *Docophorus cursitans*, as deserter on *Asio flammeus*. Also on this host, the author reported the species *Strigiphilus cursor* (Burmeister, 1838) (under the synonym name *Docophorus cursor*), which is a typical parasite for *A. flammeus*. Although the author does not give any detail on his reports, I consider that it is not about an identification error because he reported also the typical parasite *S. cursor* from *A. flammeus*, presuming that the author made difference between the two species (*S. cursitans* and *S. cursor*).

*Strigiphilus heterocerus* (Grube, 1851)

*Material:* 5 ♀♀ and 2 ♂♂, from an adult specimen of *Strix uralensis* Pallas, 08.04.2006, Miercurea-Ciuc (HR), S.D.

*Host:* •*Strix uralensis* Pallas (Strigiformes: Strigidae).

*Remarks.* This species was reported before in Romania, also from *S. uralensis*, by Bechet (1961 b, 1962) and Rékási & Szombath (2000). Also, Negru & Elekeş (1957) reported the species *Oncophorus heteroceras* (Nitzsch, 1861) from *S. u. uralensis*. But, in this case it is about the species *Docophorus heteroceros*, which is considered a synonym name for *S. goniodicerus* Eichler, 1949. According to the data presented by Price, Hellenthal & Palma (op. cit.), *S. goniodicerus* is a typical parasite only for *Bubo bubo* (Strigidae). Therefore I consider that in the above mentioned report it is about an error, in fact being also *S. heterocerus*.

Another situation is Bechet's report on *S. heterocerus*, in 1956, from *S. aluco*. In 1962, the author resumed this report in his PhD thesis, making the specification that it is about a distinct subspecies of *S. heterocerus*, but he did not give a name to it and its description. According to the data presented by Price, Hellenthal & Palma (op. cit.), the single typical host from which *S. heterocerus* was reported is *S. uralensis*, and from *S. aluco*, only *S. laticephalus* (Uchida, 1949) and *S. portigi*

Eichler, 1952 were reported. Taking into account these aspects, I consider that in the above mentioned report it is about either *S. laticephalus* or *S. portigi*.

Genus *Brueelia* Kéler, 1936

*Brueelia argula* (Burmeister, 1838)

(Figs 13 D, 14 A, 18 B, 19, 20)

*Material*: 108 ♀♀, 136 ♂♂ and 308 nymphs, from an adult specimen of *Corvus corax* L., 27.09.2003, Zoological Garden (Bucharest), G.C.

*Host*: •*Corvus corax corax* L. (Passeriformes: Corvidae).

*Remarks*. In the case of the studied bird, the intensity of the chewing louse infestation was very great (the bird was parasited only by this chewing louse species), maybe because of the stress generated in captivity and of other internal diseases which finally led to the bird death. Although this bird was captive, it has had autochthonous origin, being caught on the Romanian territory before reaching the Zoological Garden. As a matter of fact, this bird could come into contact directly with other birds of the same species, but which were free and came now and then to that cage. Under these circumstances an exchange of ectoparasites between birds of the same species could take place.

*This species is reported for the first time in the Romanian parasitological fauna.*

*Brueelia cyclothorax* (Burmeister, 1838)

*Material*: 3 ♀♀, 3 ♂♂ and 2 nymphs, from an adult specimen of *Passer montanus* (L.), 05.03.2001, Brăila – Monument Park (BR), C.A.

*Hosts*: *Passer domesticus domesticus* (L.), •*P. montanus* (L.) (Passeriformes: Passeridae).

*Remarks*. This species was reported before in Romania, also from *P. montanus*, by Negru (1960 a), Bechet (1961 a, 1962), Rékási & Kiss (1980, 1994, 1997) and Rékási & Szombath (2000). It was reported from *P. domesticus*, too, by Bechet (1962) and Rékási & Kiss (1980, 1994, 1997). Also Rékási & Kiss (1984, 1994, 1997) reported this species from *Fringilla montifringilla* L. (Passeriformes: Fringillidae). According to the data presented by Price, Hellenthal & Palma (op. cit.), on *F. montifringilla* a single species of the genus *Brueelia* was reported, for the time being, namely *B. glizi* Balát, 1955. Taking into account this thing, I consider that the above-mentioned report is an identification error, probably being about the species *B. glizi*.

*Brueelia domestica* (Kellogg & Chapman, 1899)

*Material*: 1 ♀ and 1 ♂, from an adult male of *Hirundo rustica* L., 08.06.2005, Șarânga (BZ), G.C.

*Host*: •*Hirundo rustica erythrogaster* Boddaert (Passeriformes: Hirundinidae).

*Remarks*. This species was reported before in Romania, also from *H. rustica*, by Bechet (1962) and Rékási & Kiss (1980, 1994, 1997).

*Brueelia merulensis* (Denny, 1842)

*Material*: 4 ♀♀, 1 ♂ and 4 nymphs, from an adult female of *Turdus merula* L., 17.02.2007, Stana (SJ), C.A.; 1 ♀, 3 ♂♂ and 2 nymphs, from an adult female of *T. merula*, 24.02.2007, Izvoarele (DB), C.A.

*Host*: •*Turdus merula* L. (Passeriformes: Turdidae).

*Remarks.* This species was reported before in Romania, also from the typical host by Bechet (1961 a, 1962), Rékási & Kiss (1984, 1994, 1997) and Adam & Sándor (2004). Also, this species was reported by Adam (2003) under the synonym name of *Turdinirmus merulensis*, from *T. merula*.

Constantineanu & Pisciă (1959) reported „*Brueelia brachytorax* (Giebel, 1874)” (correct name is *B. brachytorax*) from *T. merula merula*. But, according to the data presented by Price, Hellenthal & Palma (2003), *B. brachytorax* is a typical parasite only for the host species *Bombycilla garrulus* (L.) (Passeriformes: Bombycillidae). Taking into account this, I consider that the above-mentioned report is an identification error, probably being about one of the four species of *Brueelia* which are typical parasite for the host species *T. merula*. This mentioned report is presented together with an original drawing made by the authors, representing a dorsal view of the general habitus of a female. Although this drawing do not underlines clearly some of the features with a taxonomical value, I think that it is, in fact, about the species *B. jacobii* Eichler, 1951 (a typical parasite of *T. merula*) after the shape of the head.

*Brueelia nebulosa* (Burmeister, 1838)

*Material:* 3 ♀♀ and 4 nymphs, from an adult specimen of *Sturnus vulgaris* L., 23.04.2005, Piatra (TR), G.C.; 4 ♀♀ and 4 ♂♂, from a juvenile specimen of *S. vulgaris*, 14.06.2006, Vidra (GR), G.C.; 1 ♀, from an adult male of *S. vulgaris*, 13.08.2006, Bogdana (TR), G.C.

*Host:* •*Sturnus vulgaris* L. (Passeriformes: Sturnidae).

*Remarks.* This species was reported before in Romania, also from the typical host, by Negru (1958), Bechet (1961 a, 1962), Rékási & Kiss (1977, 1994, 1997) and Rékási & Szombath (2000).

From the three birds on which I found this chewing louse species, two were also parasited by *Myrsidea cucullaris* and *Sturnidoecus sturni*, and the third one, by *Menacanthus eurysternus* (Tab. 1), all of them being typical parasites of this host species.

*Brueelia turdinulae* Ansari, 1956

(Fig. 14 B)

*Material:* 1 ♀ and 1 nymph, from an adult specimen of *Turdus philomelos* Brehm, 11.11.2006, Mamaia (CT), C.A.

*Hosts:* *Turdus philomelos* Brehm, •*T. philomelos philomelos* Brehm (Passeriformes: Turdidae).

*Remarks.* The bird on which I found this chewing louse species was also parasited by *Menacanthus eurysternus* (Tab. 1), a typical parasite for this host species.

*This species is reported for the first time in the Romanian parasitological fauna.*

Genus *Penenirmus* Clay & Meinertzhagen, 1938

*Penenirmus affectator* (Złotorzycka, 1976)

(Figs 14 C, D, 15 A, B)

*Material:* 4 ♀♀, 2 ♂♂ and 9 nymphs, from an adult specimen of *Sylvia borin* (Boddaert), 11.08.2006, Ghimpați (GR), G.C.; 1 ♂ and 5 nymphs, from an adult female of *S. borin*, 18.08.2006, Hăbud (PH), G.C.; 1 nymph, from an adult specimen of *S. borin*, 17.09.2006, Hăbud (PH), G.C.

*Host:* •*Sylvia borin borin* (Boddaert) (Passeriformes: Sylviidae).

*Remarks.* This species was reported before in Romania, also from *S. borin*, only by Rékási & Kiss (1997).

From the three birds on which I found this chewing louse species, one of them was also parasited by *Menacanthus curuccae* (Tab. 1), which has a larger spectrum of host species of the families Sylviidae and Vireonidae (Passeriformes).

I report this species from the Romanian parasitological fauna for the second time.

*Penenirmus auritus* (Scopoli, 1763)

*Material:* 15 ♀♀, 5 ♂♂ and 13 nymphs, from an adult specimen of *Dendrocopos major* (L.), 10.06.2005, Cotorca (BZ), G.C.

*Hosts:* this species has a parasitary specificity less obvious, at present being found on the representatives of numerous species of the family Picidae (Piciformes). According to the data presented by Price, Hellenthal & Palma (2003), as yet, this species was reported from 53 species of genera *Celeus*, *Colaptes*, *Dendrocopos* (including *D. major*), *Dendropicos*, *Dryocopus*, *Eubucco*, *Melanerpes*, *Picoides*, *Piculus*, *Picumnus*, *Picus*, *Sphyrapticus* and *Veniliornis* (Piciformes: Picidae).

*Remarks.* This species was reported before in Romania by: Bechet (1961 a, 1962) from *D. major pinetorum*; Negru (1962) from *D. major pinetorum* (mentioned by the author under the name *Dryobates major pinetorum*); Rékási & Kiss (1977) from *D. syriacus*; Rékási & Kiss (1980) from *Picus canus*; Rékási & Kiss (1994) from *D. syriacus* and *P. canus*; Rékási & Kiss (1997) from *D. major*, *D. syriacus* and *P. canus*; Rékási & Szombath (2000) from *D. major* and *D. minor*. This species was also reported by Knechtel & Cătuneanu (1938) under the synonym name of *Philopterus auritus* from *D. major pinetorum* (mentioned by the authors under the name *Dryobates major pinetorum*) and *D. syriacus romanicus* (mentioned under the name *Dryobates syriacus romanicus*).

A special situation is the report of *P. auritus* made by Bechet (1961 a), from *Picoides tridactylus alpinus* Brehm. In 1962, the author resumed this report in his PhD thesis specifying that it is about a distinct subspecies of *P. auritus*, but he did not give a name or a description of it. According to the data presented by Price, Hellenthal & Palma (op. cit.), *P. tridactylus* is not included in the list of the host species on which *P. auritus* was reported, as yet, on this host species being reported only *P. arcticus* Carriker, 1958, of the genus *Penenirmus*. Taking into account these things, I considered that it is probably about the species *P. arcticus* in the above-mentioned report.

The bird on which I found this chewing louse species was also parasited by *Menacanthus pici* (Tab. 1), a typical parasite for this host species.

Genus *Sturnidoecus* Eichler, 1944

*Sturnidoecus radui* Bechet, 1965

(Fig. 15 C, D)

*Material:* 3 nymphs, from a juvenile specimen of *Oriolus oriolus* (L.), 11.08.2006, Ghimpați (GR), G.C.

*Host:* •*Oriolus oriolus oriolus* (L.) (Passeriformes: Oriolidae).

*Remarks.* This species was firstly described by Bechet (1965) basing on a material represented by two females collected from an adult male of *O. o. oriolus*,



from South-eastern Romania. As a matter of fact, at present, this is the single report of this species in Romania.

Although I had only three nymphs in stage III of larval development at my disposal, some of the specific features of this species could be pointed out.

This species is reported for the second time in the Romania parasitological fauna.

*Sturnidoecus refractariolus* (Złotorzycka, 1964)

(Fig. 16 A)

*Material:* 1 ♀, from an adult female of *Passer domesticus* (L.), 12.08.2006, Naipu (GR), G.C.

*Host:* •*Passer domesticus domesticus* (L.) (Passeriformes: Passeridae).

*Remarks.* This species was reported before in Romania, also from *P. domesticus*, only by Rékási & Kiss (1997), under the synonym name of *Rostrinirmus refractariolus* (in fact, the authors mention the species under the name *Rostrinirmus (Sturnidoecus) refractariolus*, which is incorrect because *Sturnidoecus* was not and is not a subgenus of the invalidated genus *Rostrinirmus*).

This species is reported for the second time in the Romania parasitological fauna.

*Sturnidoecus sturni* (Schrank, 1776)

*Material:* 1 ♂ and 2 nymphs, from an adult specimen of *Sturnus vulgaris* L., 23.04.2005, Piatra (TR), G.C.; 1 ♂ and 1 nymph, from a juvenile specimen of *S. vulgaris*, 14.06.2006, Vidra (GR), G.C.

*Host:* •*Sturnus vulgaris* L. (Passeriformes: Sturnidae).

*Remarks.* This species was reported before in Romania, also from the typical host, by Negru (1958), Bechet (1961 a, 1962), Rékási & Kiss (1977, 1980, 1994) and Rékási & Szombath (2000).

Rékási & Kiss (1997) reported also from *S. vulgaris* the species ?*Sturnicola sturni*. But, the genus *Sturnicola* does not exist, being probably an editorial error. Surely, the authors referred also to the species *Sturnidoecus sturni*.

The two birds on which I found this chewing louse species were also parasited by *Myrsidea cucullaris* and *Brueelia nebulosa* (Tab. 1), both of them typical parasites of this host species.

Genus *Phlopterus* Nitzsch, 1818

*Phlopterus coarctatus* (Scopoli, 1763)

*Material:* 1 ♂, from an adult male of *Lanius collurio* L., 13.06.2005, Câmpurelu (GR), G.C.

*Hosts:* •*Lanius collurio* L., *L. excubitor* L., *L. ludovicianus* L., *L. minor* Gmelin (Passeriformes: Laniidae).

*Remarks.* This species was reported before in Romania, also from *L. collurio*, by Negru (1960 a, 1962) and Bechet (1961 a, 1962). Rékási & Szombath (2000) reported this species from *L. excubitor*. Also, it was reported under the following synonym names: *P. coarctatus fuscicollis*, by Rékási & Kiss (1984) from *L. excubitor*; *P. fuscicollis*, by Bechet (1961 a, 1962) and Rékási & Kiss (1977, 1994, 1997) from *L. excubitor*; *Docophorus coarctatus fuscicollis*, by Rékási & Kiss (1994, 1997). In fact, Rékási & Kiss (1994, 1997) reported from *L. excubitor* the

species *P. fuscicollis* and *Docophorulus coarctatus fuscicollis* as two distinct species. They are not distinct species but two synonym names of the species *P. coarctatus*.

Bechet (1956) reported the species ?" *Philoaterus subflavescens* Geoffroy" from *L. e. excubitor*. But it is an unexistent species. Within past years it was wrongly considered a valid species. Later it was proved that „*subflavescens*” does not represent the name of a species but a word from a clause where another species was described. In fact, Bechet (1956) referred also to *P. coarctatus*, for sure.

*Philoaterus fringillae* (Scopoli, 1772)

*Material*: 3 nymphs, from an adult male of *Passer domesticus* (L.), 07.01.2006, Tofalău (MS), S.D.; 1 ♀, 2 ♂♂ and 3 nymphs, from an adult male of *P. domesticus*, 29.01.2006, Sângeorgiu de Mureş (MS), S.D.

*Host*: • *Passer domesticus* (L.) (Passeriformes: Passeridae).

*Remarks*. This species was reported before in Romania by Bechet (1961 a, 1962) also from the typical host. It was reported from *P. domesticus* under the synonym name *Docophorulus fringillae fringillae* by Rékási & Kiss (1980, 1994, 1997), too.

A different situation is represented by some reports from *Passer montanus* (L.). Thus, Bechet (1961 a, 1962) reported *P. fringillae* from *P. montanus*, Rékási & Kiss (1997) reported *Docophorulus fringillae montani* also from *P. montanus*, and Rékási & Szombath (2000) reported *Philoaterus fringillae montani* from the same host species. According to the data presented by Price, Hellenthal & Palma (2003), *P. domesticus* is the only host species from which *P. fringillae* was reported as yet, and from the genus *Philoaterus*, only *P. montani* (Złotorzycka, 1964) was reported from *P. montanus*, considered a valid species, not a subspecies of *P. fringillae*. Taking into account these things, I considered that it is probably about the species *P. montani* in the above two mentioned reports.

Also Rékási & Kiss (1977, 1994, 1997) reported *P. fringillae* from *P. hispaniolensis* (Temminck). According to the data presented by Price, Hellenthal & Palma (op. cit.), at present, from the genus *Philoaterus* only the species *P. hispaniolensis* Fedorenko, 1987 was reported from *P. hispaniolensis*. Taking into account this aspect, I consider that it is probably about *P. hispaniolensis* in the above mentioned report.

Family Trichodectidae

Genus *Bovicola* Ewing, 1929

Subgenus *Bovicola* Ewing, 1929

*Bovicola (Bovicola) ovis* (Schrank, 1781)

(Fig. 16 B)

*Material*: 1 ♂, from an adult female of ?*Phasianus colchicus* L., 12.09.2000, Zoological Garden (Bucharest), A.P.

*Host*: • *Ovis aries* L. (Mammalia: Artiodactyla: Bovidae).

*Remarks*. This species was reported before in Romania, from a sheep, under the following synonym names: *Damalinia ovis*, by Bechet (1961 a, 1962), Negru (1965), Voicu (1973) and Pisciă (1980); *Trichodectes sphaerocephalus*, by Leon (1912) (without specifying the collecting data). Also, Pisciă (1996) included this

species in his monograph paper under the synonym name *Damalinia ovis*, and at its distribution in Romania he mentioned the reports made by Bechet (1961 a, 1962), Negru (1965), Voicu (1973) and Pisićă (1980).

*I report here a case of an exceptional deserting of a typical parasite for a mammal species to an individual which belongs to the bird group.* As a matter of fact, the bird on which I found this chewing louse species was from a zoological garden, and the deserting took place, probably, by an intermediary transporter (as some dipteran species). The direct contact between the bird and the typical host of this chewing louse was not possible because they were in different and remote places.

The bird on which I found this chewing louse species was also parasited by other four chewing louse species (Tab. 1), three of them being typical for this host, and one, an atypical parasite (see the remarks on the host made at the species *Menacanthus cornutus*).

Table 1 includes the systematical list of the host species, with all studied individuals, with proper collecting data, presenting for each host individual the found and identified chewing louse species, as well as the number of the collected specimens. From this table it can be easily seen all polyparasitism cases (the same host individual being parasited by several chewing louse species) which occurred in the studied birds.

If I refer further on to the intensity of the infestation with chewing lice, I can assert that the most of the studied birds were infested weakly to moderately, excepting some cases. This thing explains by that most of the birds were healthy and vigourous, being caught in their natural environment.

From the above-mentioned exception I comment some cases further on. The bird with the highest chewing louse infestation intensity was a dead adult individual of the species *Corvus corax* (Tab. 1), from the Zoological Garden of Bucharest. Its death was caused by different internal diseases and the captivity stress. On this bird I found a number of 552 chewing louse specimens of the suborder Ischnocera which belonged to the species *Brueelia argula*. Other two cases of high intensity with Ischnocera are: a juvenile individual of *Buteo buteo*, taken from its own environment (from central Romania), on which I found 446 specimens of *Degeeriella fulva*; a juvenile female of *Pavo cristatus* from captivity (from the Zoological Garden of Bucharest) on which I found 227 specimens of *Goniodes pavonis* (Tab. 1). If in the case of *P. cristatus* the high intensity of the infestation can be considered a consequence of captivity, as regards the individual of *B. buteo* the high intensity of the infestation is apparently unexplainable because the bird came from the wildness and did not present any sign of disease or other problems. Also, I saw a case of a massive infestation with Amblycera on an adult individual of *Lanius minor* taken from its natural environment (from South-eastern Romania) on which I found 289 specimens of *Menacanthus camelinus* (Tab. 1). This individual of *L. minor* was found dead in the wildness, probably its death being caused by an internal disease. Thus the massive chewing louse infestation of this bird can be explained.

The lowest values of the chewing louse infestation intensity I saw in the 12 birds which belonged to the species *Gallinago gallinago*, *Limosa limosa*, *Lanius collurio*, *Riparia riparia*, *Sylvia borin* and *Passer domesticus*, where I found a single chewing louse on each one (Tab. 1).

If I refer further on to the bird families on whose representatives I found specimens, and I make a ration between the number of the collected chewing lice to

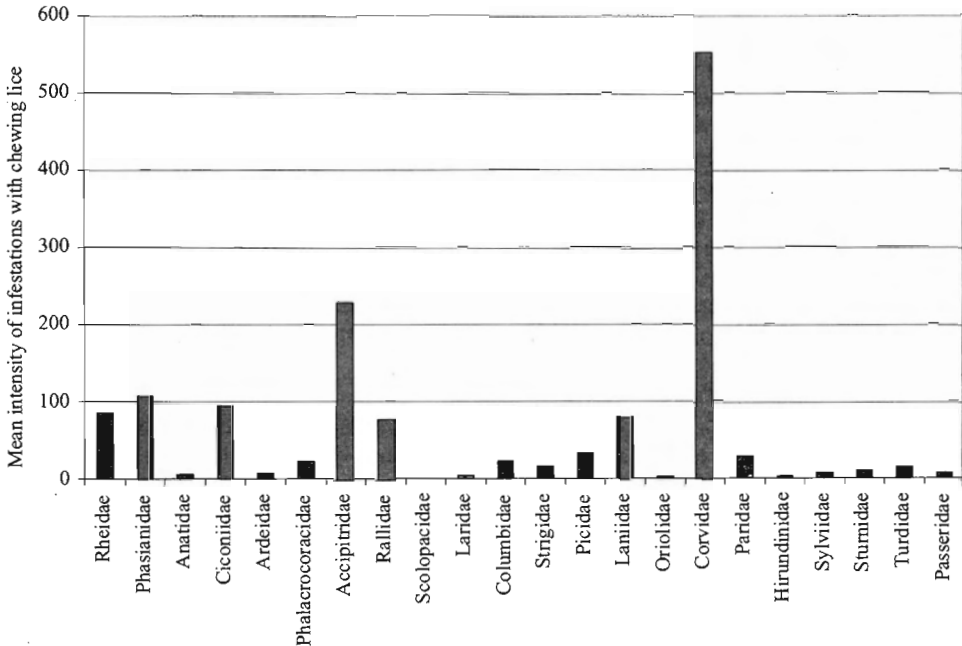


Fig. 1 – Comparative representation of the chewing lice infestation level in the 22 families to which the 85 birds infested with chewing lice belong.

the number of the birds from the respective family, which was studied, it can be observed that the highest level of the chewing louse infestation degree (mean intensity) was occurred in family Corvidae, being followed by the families Accipitridae and Phasianidae (Fig. 1). In our material, the families with the lowest intensity of the infestations were (in the increasing order of the intensity): Scolopacidae, Hirundinidae, Oriolidae, Laridae, Anatidae, Passeridae, Sylviidae and Ardeidae (Fig. 1).

If I refer further on to the chewing louse polyparasitism cases, as regards the birds studied by me I can assert that the most interesting cases were the following: an adult female of *Phasianus colchicus* on which I found five chewing louse species (three of them being typical parasites for this host, and two being atypical parasites); a juvenile individual of *Ciconia ciconia* on which I found four chewing louse species (all being typical parasites for this host species, and as a matter of fact, the only chewing louse species which were reported from *C. ciconia* for the time being); two adult individuals of *Fulica atra* on each of them being four chewing louse species (all being typical parasites for this host species) (Tab. 1).

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## DATE PRIVIND FAUNA DE MALOFAGE (PHTHIRAPTERA: AMBLYCERA, ISCHNOCERA) DE PE UNELE PĂSĂRI AUTOHTONE ȘI EXOTICE DIN ROMÂNIA

## REZUMAT

Sunt prezentate rezultatele cercetării asupra malofagelor colectate de-a lungul unei perioade de opt ani (1999-2007) de pe 85 de păsări aparținând la 38 de specii (autohtone și exotice) provenite de pe teritoriul României. Cele 4161 de malofage colectate au fost identificate ca aparținând la 69 de specii, iar dintre acestea 11 sunt la prima semnalare în fauna parazitologică a României. De asemenea, trei dintre speciile identificate au mai fost semnalate în România dar sub alte nume. Tot în cadrul acestei lucrări mai semnalăm: cazuri deosebite de poliparazitism cu malofage (prezența pe același individ gazdă a patru sau chiar cinci specii de malofage); prezența unui hiperparazit al malofagelor mai rar menționat în literatura de specialitate; dezertări excepționale ale unor malofage pe gazde atipice; prezența unor specii de malofage pe gazde noi care pot fi considerate gazde obișnuite deoarece fac parte din același grup cu gazda tipică a respectivei specii de malofag; câteva cazuri de infestări masive cu malofage întâlnite la unele păsări examinate.

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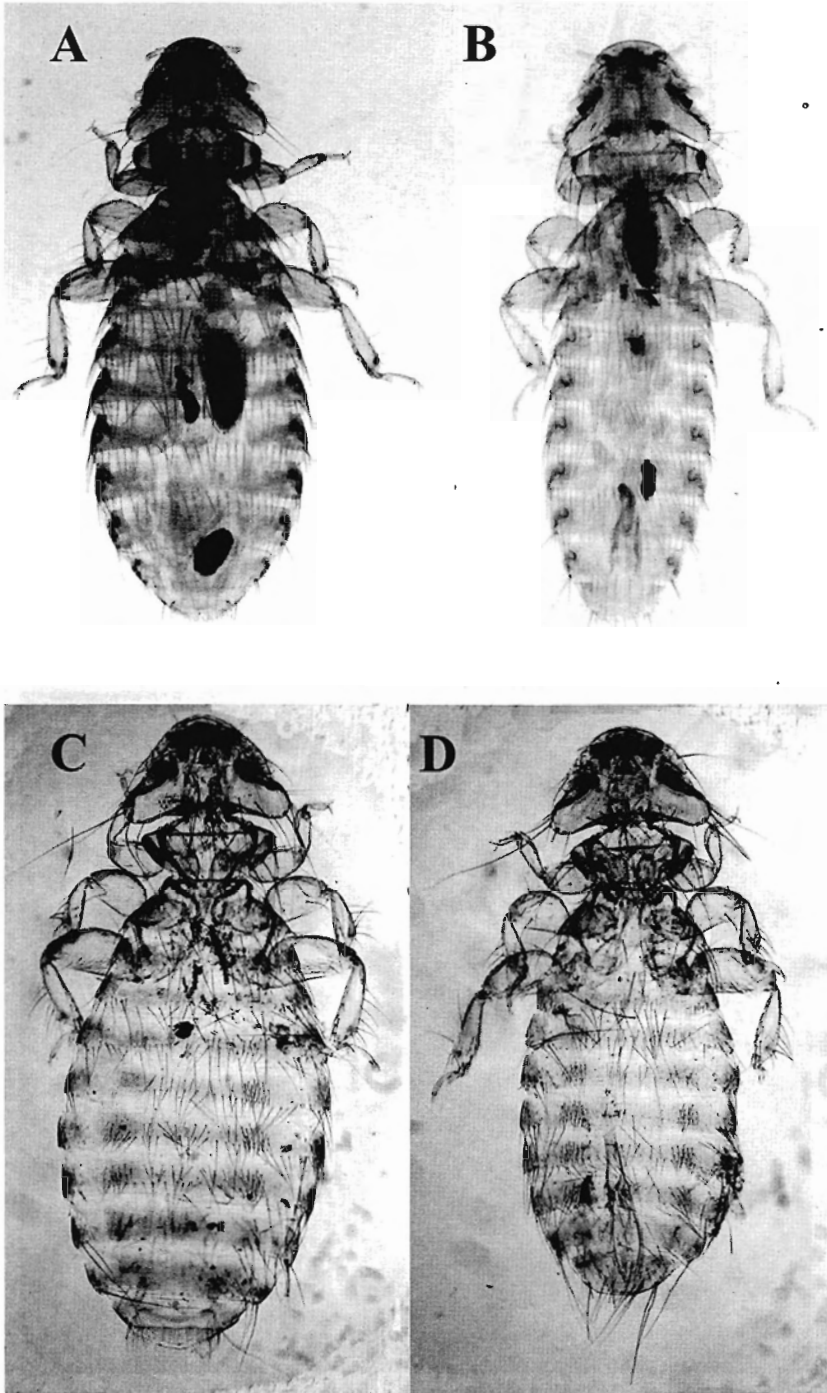


Fig. 2 – *Amyrsidea (Argimenopon) minuta* Emerson, 1961 (from *Pavo cristatus*): A, female; B, male; *Amyrsidea (Argimenopon) perdicis* (Denny, 1842) (from *Chrysolophus pictus*): C, female; D, male.

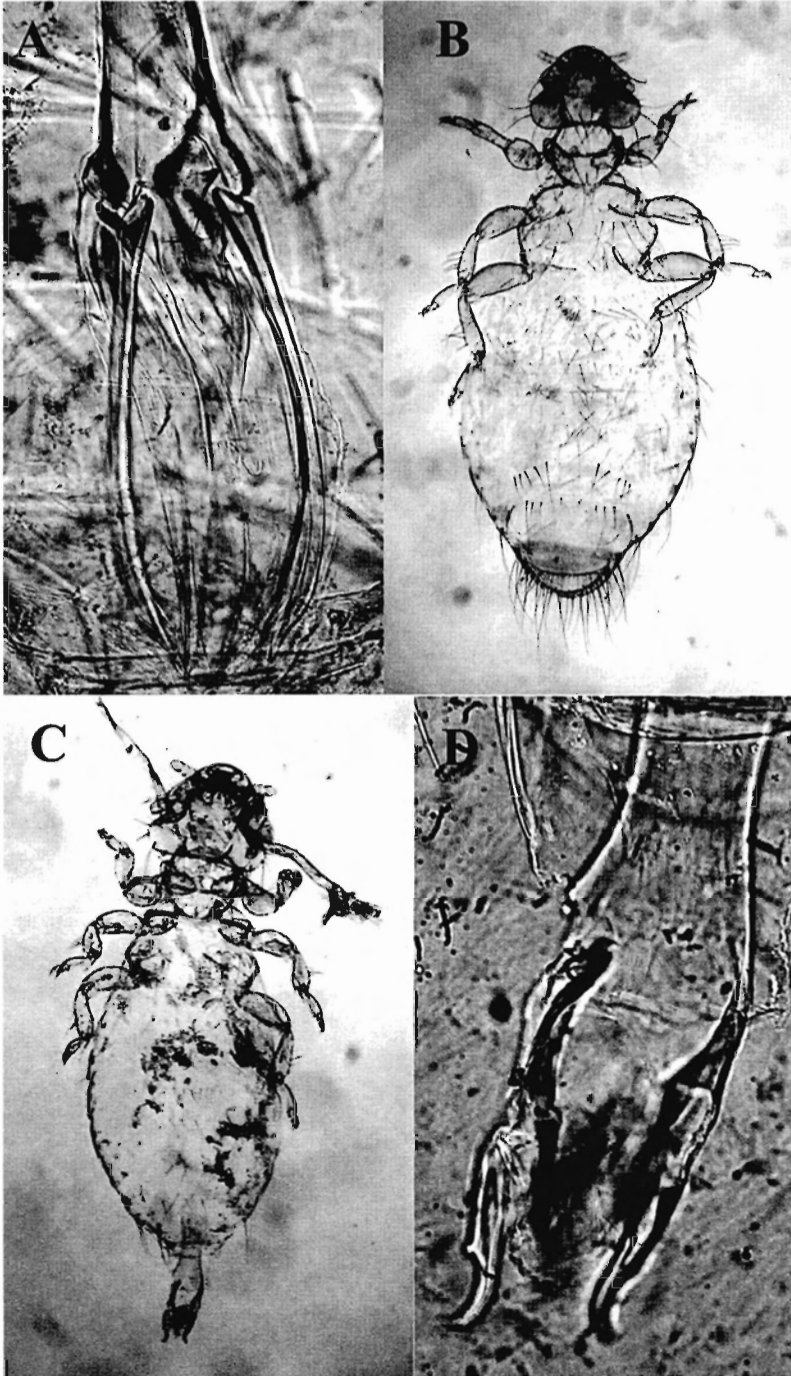


Fig. 3 – *Amyrsidea (Argimenopon) perdicis* (Denny, 1842) (from *Chrysolophus pictus*): A, male genitalia; *Bonomiella concii* Eichler, 1947 (from *Streptopelia decaocto*): B, female; C, male; D, male genitalia.

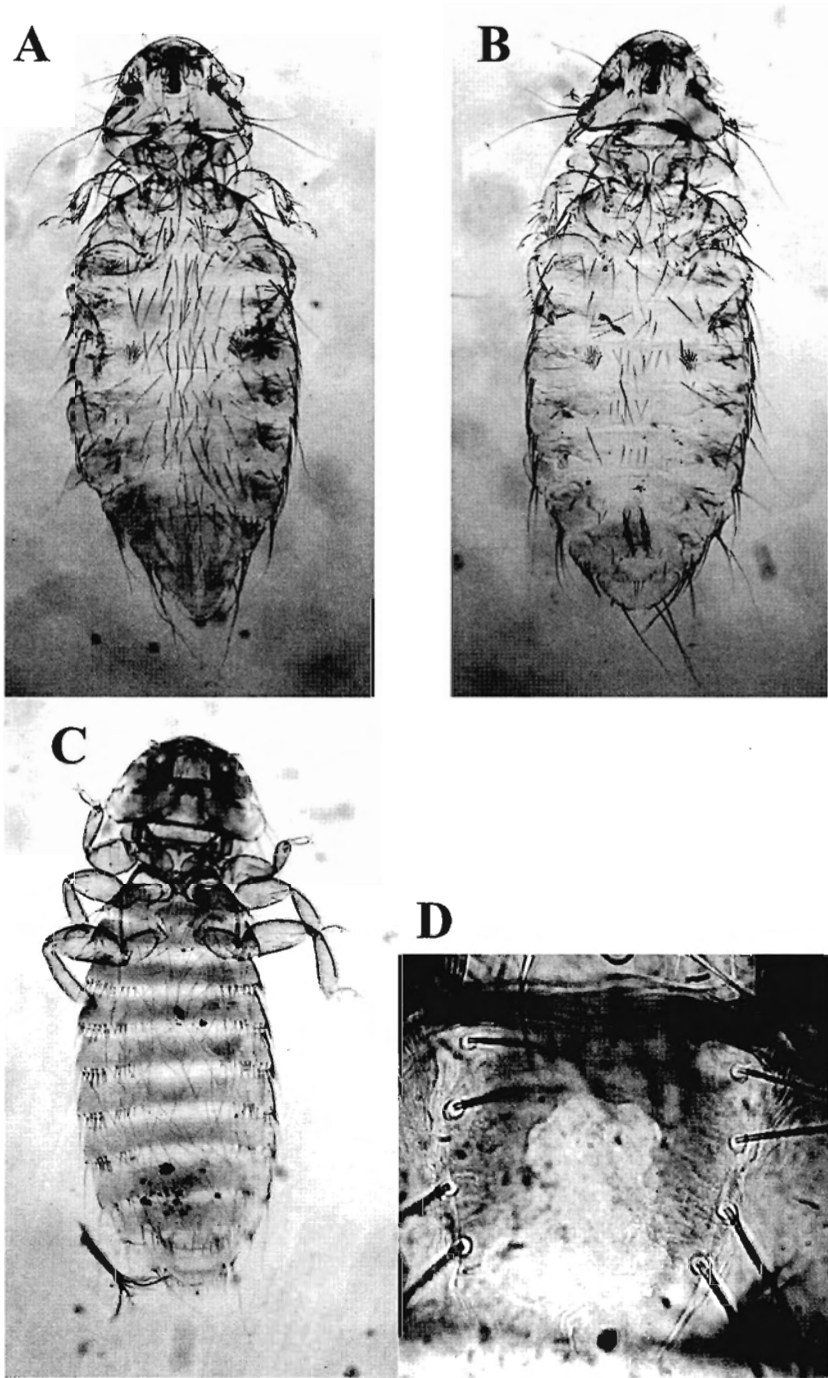


Fig. 4 – *Menopon gallinae* (Linnaeus, 1758) (from *Chrysolophus pictus*): A, female; B, male; *Menacanthus agilis* (Nitzsch, 1866) (from *Phylloscopus trochilus*): C, female; D, gular plate.

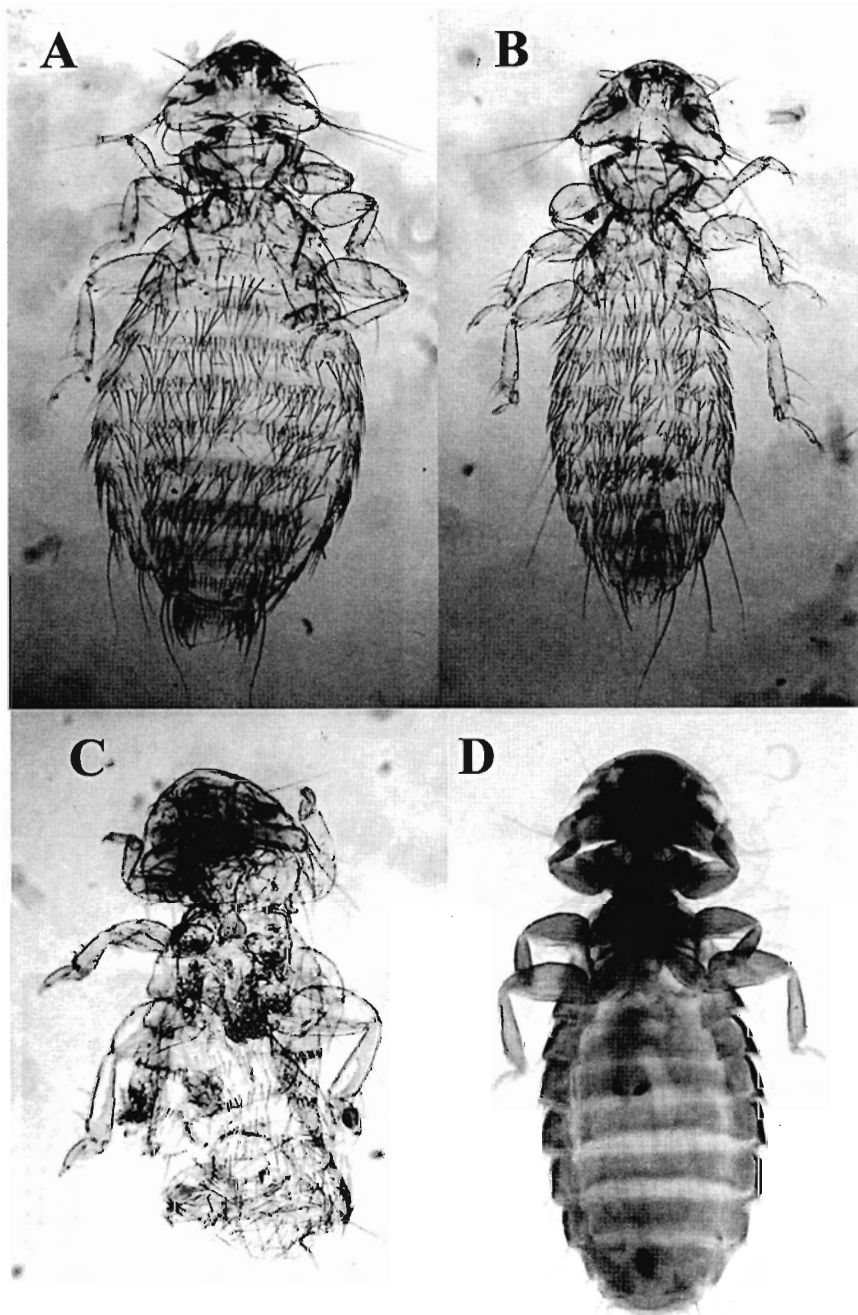


Fig. 5 – *Menacanthus cornutus* (Schömmmer, 1913) (from *Chrysolophus pictus*): A, female; B, male; *Menacanthus curuccae* (Schrank, 1776) (from *Sylvia borin*): C, nymph; *Menacanthus eurysternus* (Burmeister, 1838) (from *Turdus philomelos*): D, female.

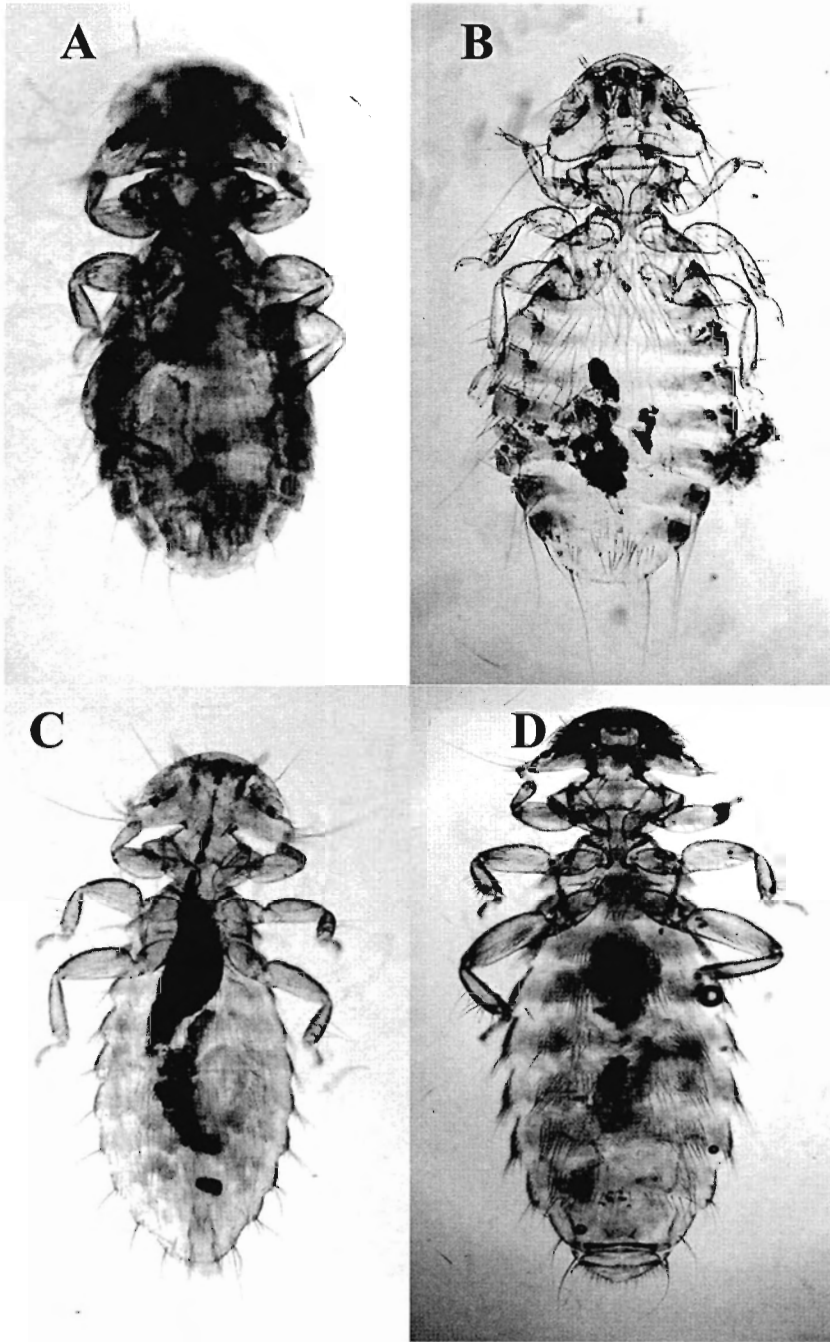


Fig. 6 – *Menacanthus eurysternus* (Burmeister, 1838) (from *Turdus philomelos*): A, male; *Menacanthus phasiani* (Modrzejewska & Złotorzycka, 1977) (from *Phasianus colchicus*): B, female; *Menacanthus pici* (Denny, 1842) (from *Dendrocopos major*): C, male; *Menacanthus stramineus* (Nitzsch, 1818) (from *?Nycticorax nycticorax*): D, female.

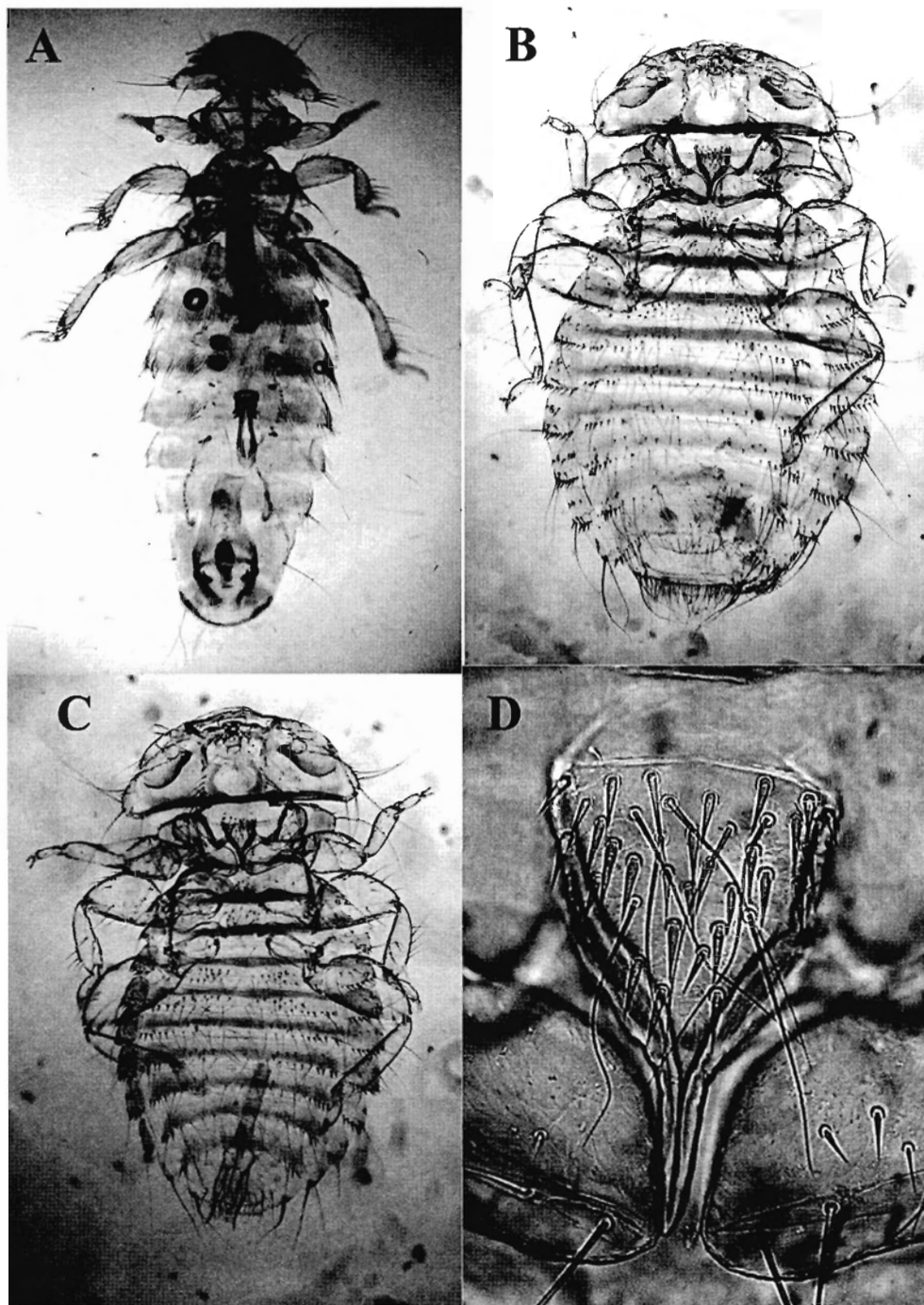


Fig. 7 - *Menacanthus stramineus* (Nitzsch, 1818) (from ?*Nycticorax nycticorax*): A, male; *Machaerilaemus clayae* (Balát, 1966) (from *Riparia riparia*): B, female; C, male; D, prosternal plate of female.



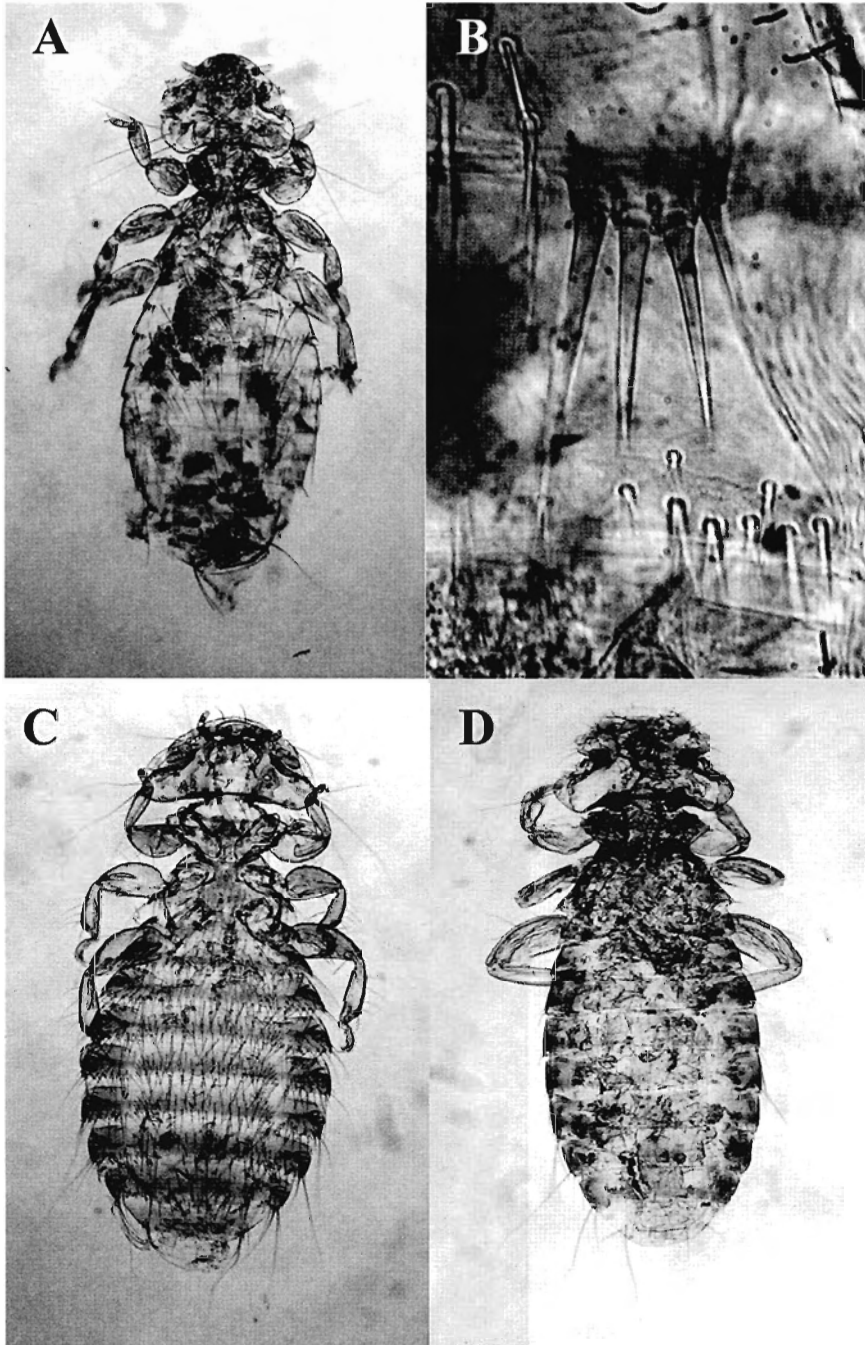


Fig. 8 – *Myrsidea balati* Machažek, 1977 (from *Passer montanus*): A, female; B, spiniform setae on abdominal sternite II (left side angle) in female; *Austromenopon durisetosum* (Blagoveshtchensky, 1948) (from *Gallinago gallinago*): C, female; *Actornithophilus hoplopteri* (Mjöberg, 1910) (from *Fulica atra*): D, male.

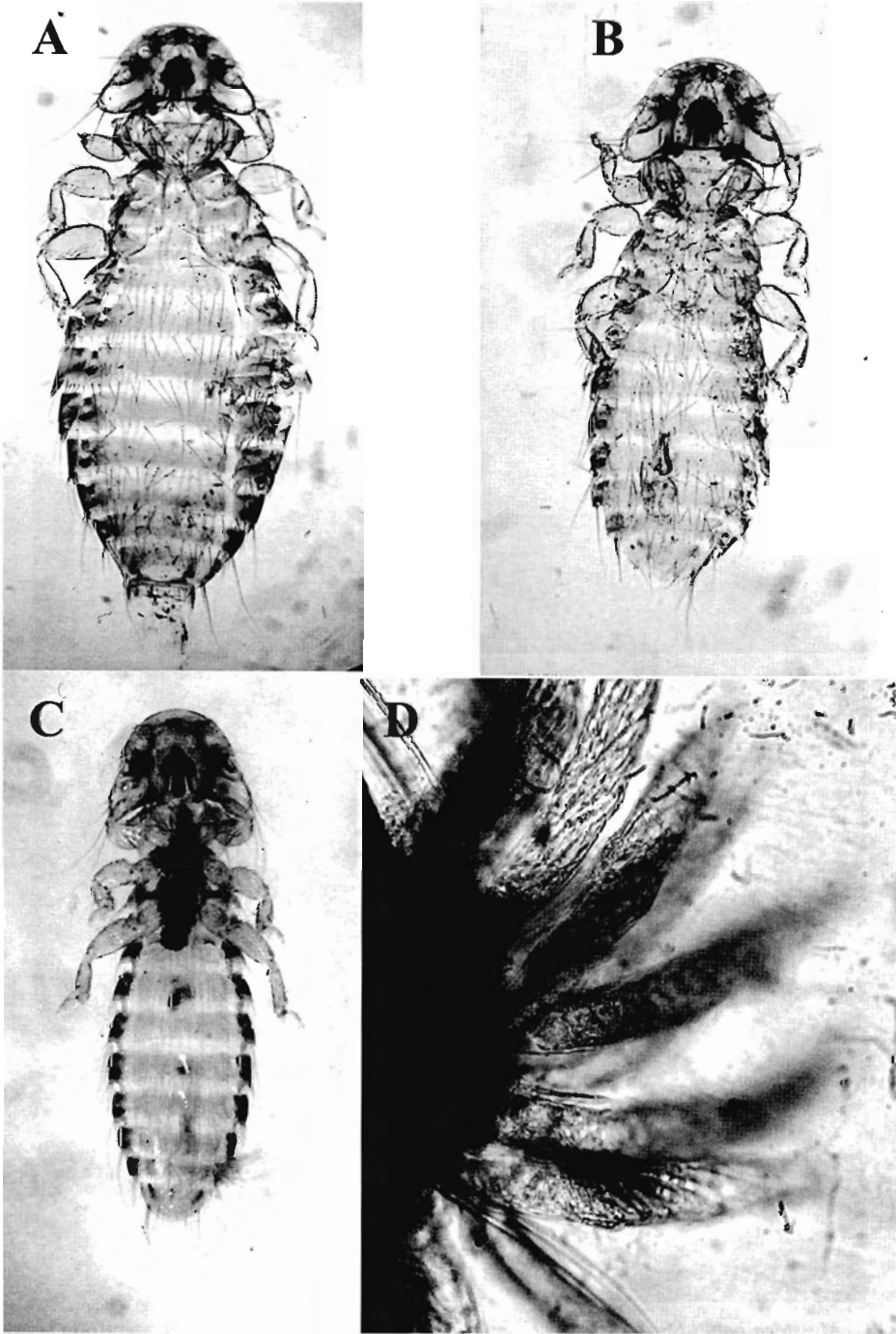


Fig. 9 – *Pseudomenopon pilosum* (Scopoli, 1763) (from *Fulica atra*): A, female; B, male; C, male is parasitized by *Trenomyces histophorus* Chatton & Picard, 1908; D, postero-lateral extremity of the male abdomen is parasitized by *Trenomyces histophorus* Chatton & Picard, 1908.



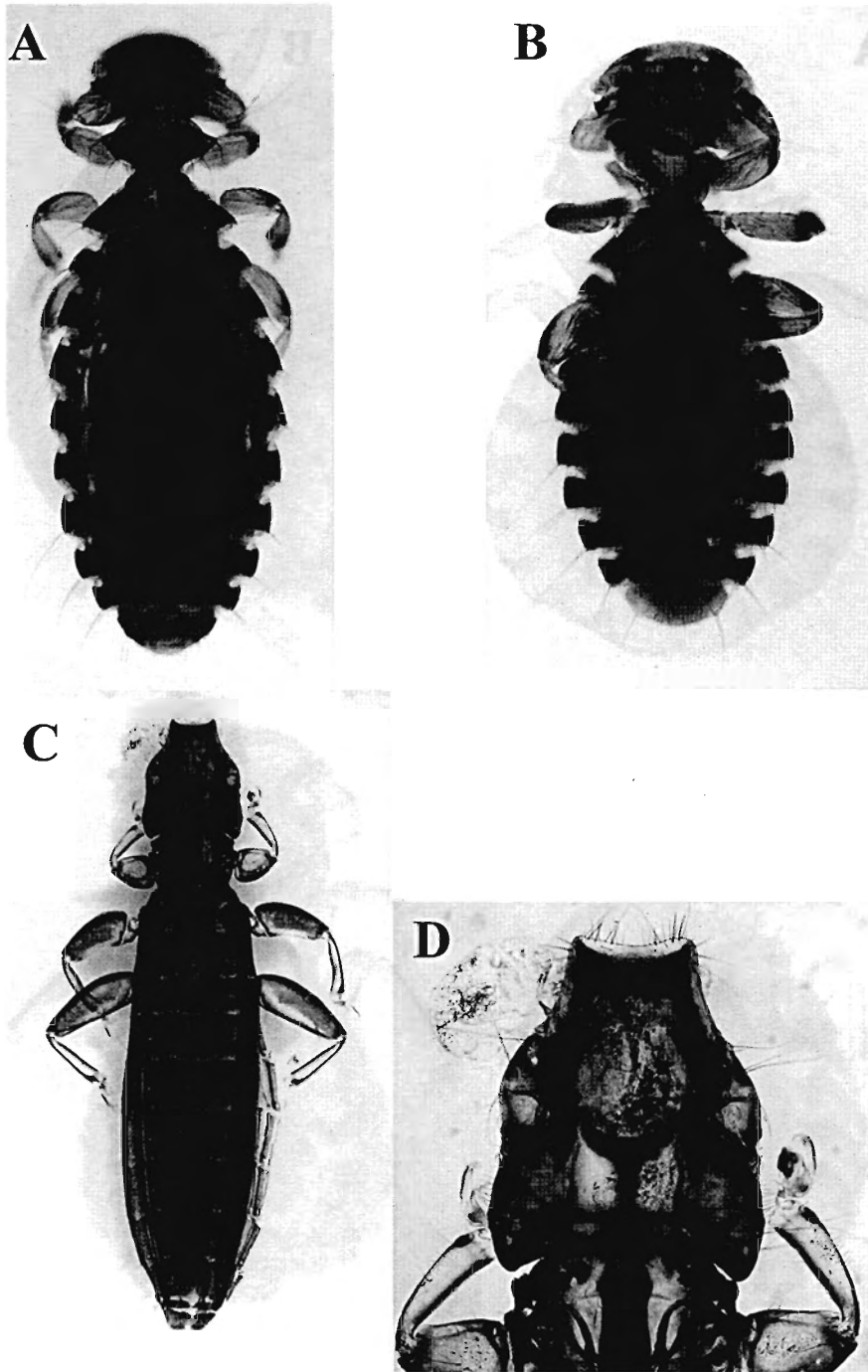


Fig. 10 – *Ciconiphilus quadripustulatus* (Burmeister, 1838) (from *Ciconia ciconia*): A, female; B, male; *Laemobothrion (Eulaemobothrion) atrum* (Nitzsch, 1818) (from *Fulica atra*): C, male; D, head of male.

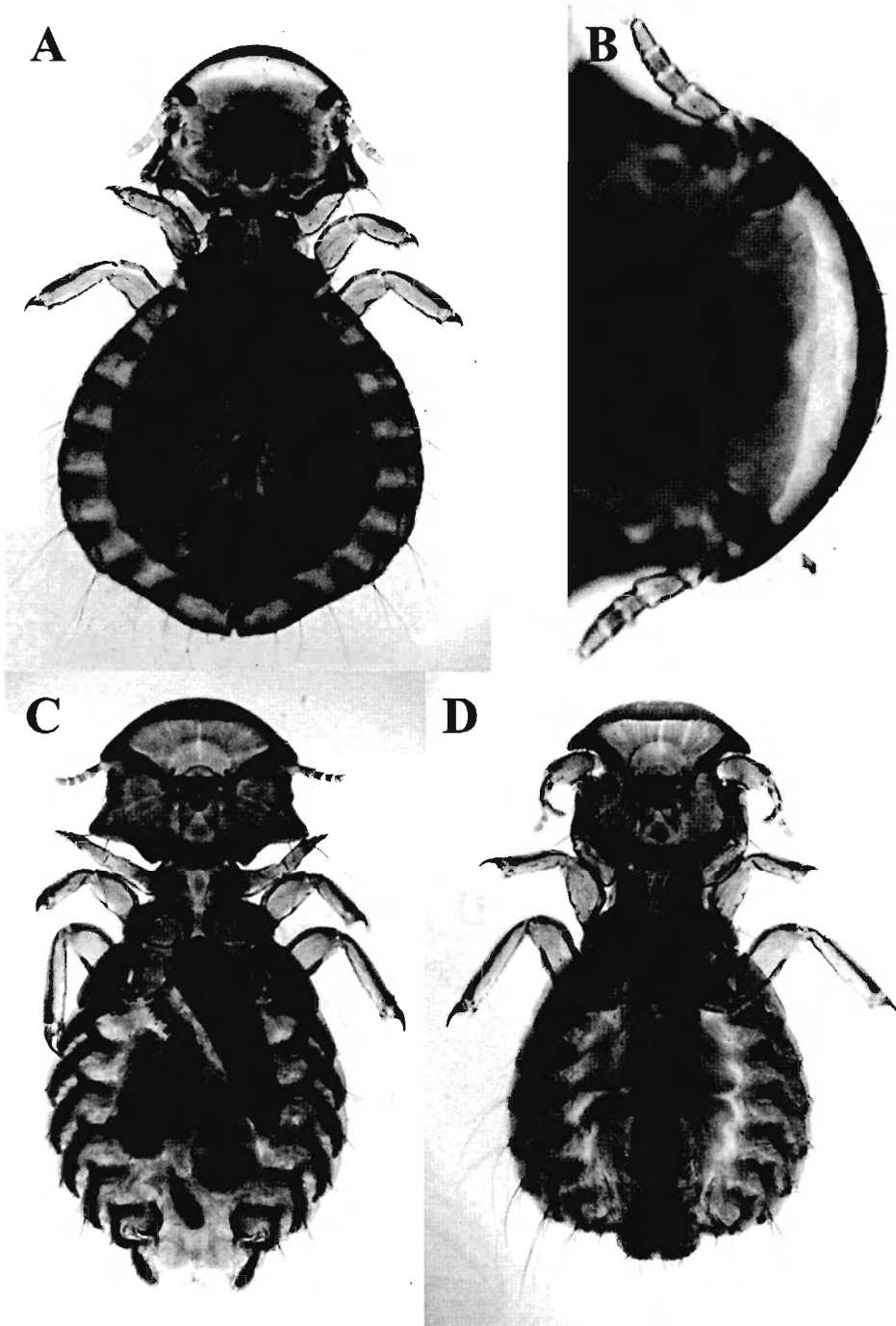


Fig. 11 – *Goniodes capitatus* (Kéler, 1939) (from *Phasianus colchicus*): A, nymph; B, anterior part of the nymph head; *Goniodes chrysolophi* Clay, 1940 (from *Chrysolophus amherstiae*): C, female; D, male.

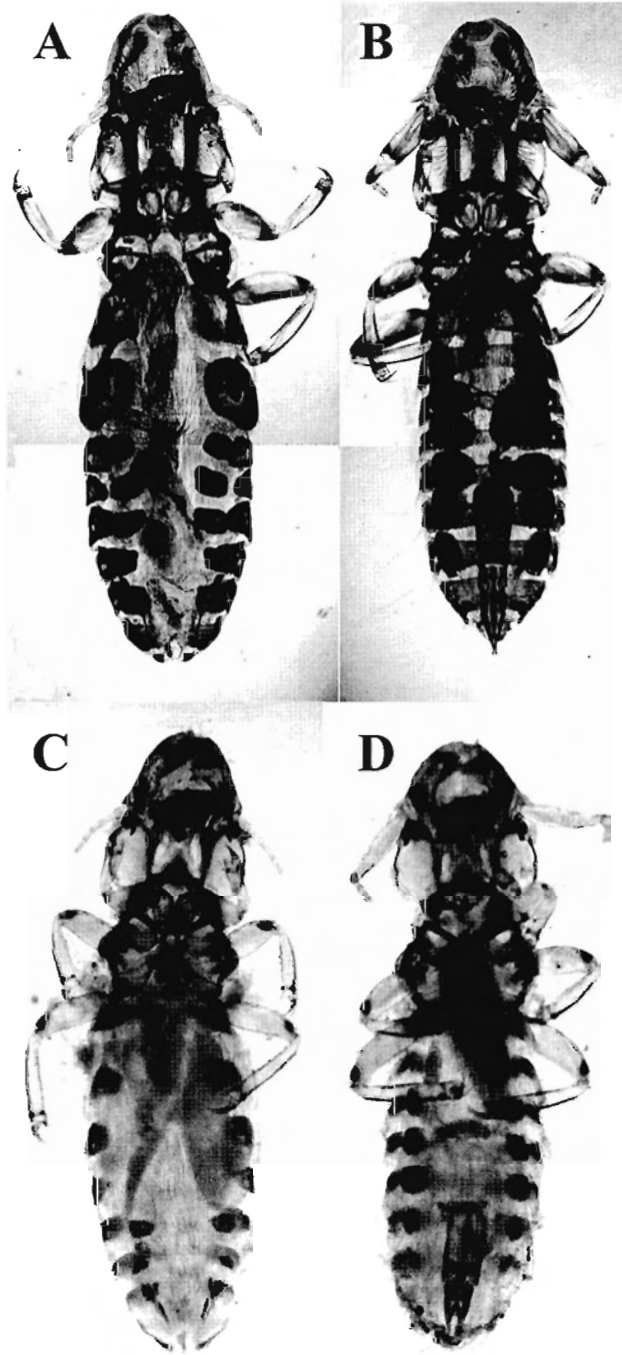


Fig. 12 – *Struthiolipeurus nandu* Eichler, 1950 (from *Rhea americana*): A, female; B, male; *Struthiolipeurus stresemanni* Kéler, 1960 (from *Rhea americana*): C, female; D, male.

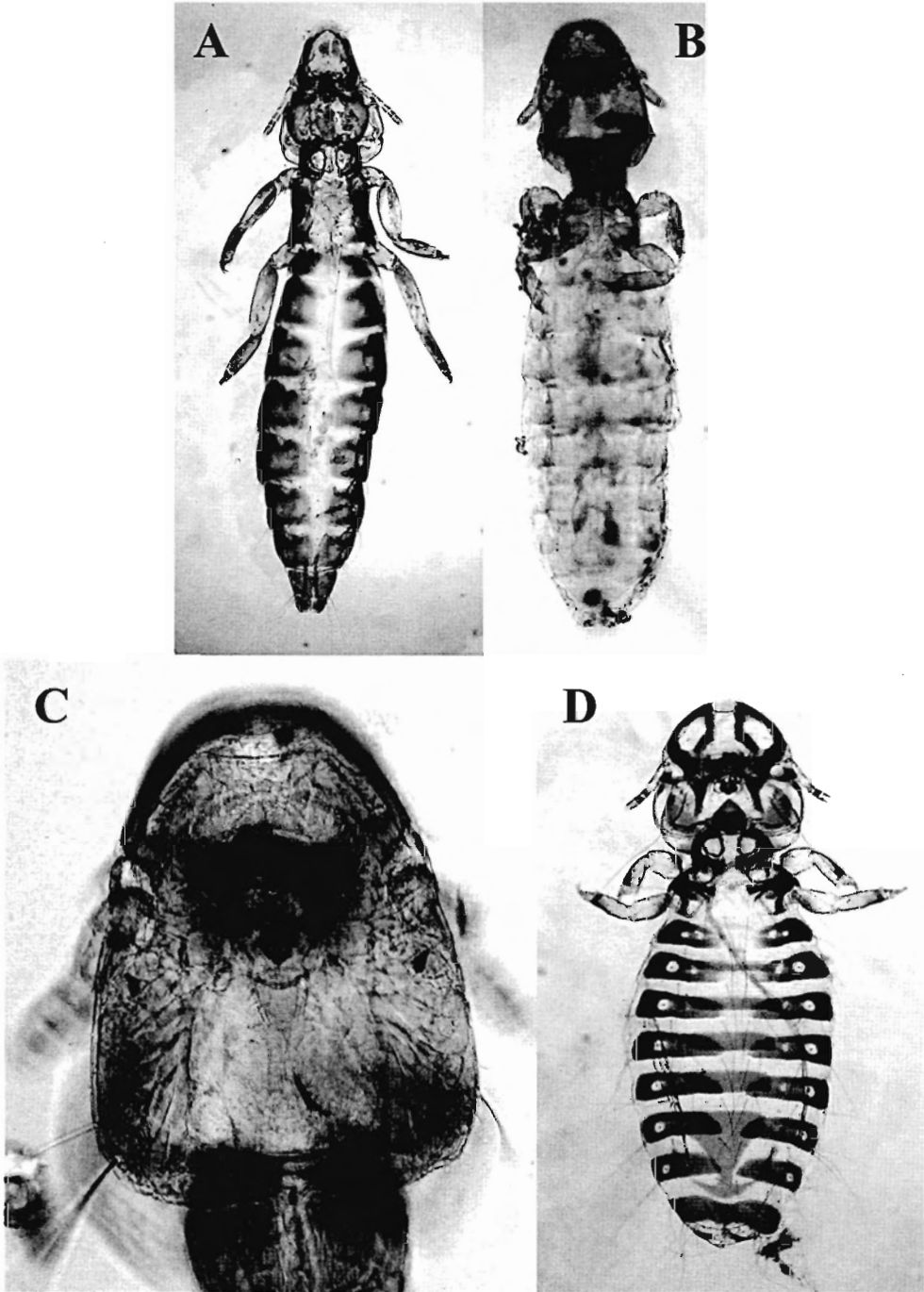


Fig. 13 – *Anaticola beieri* Eichler, 1954 (from *Branta ruficollis*): A, female; *Lunaceps limosella* Timmermann, 1954 (from *Limosa limosa*): B, nymph; C, head of nymph; *Brueelia argula* (Burmeister 1838) (from *Corvus corax*): D, female.

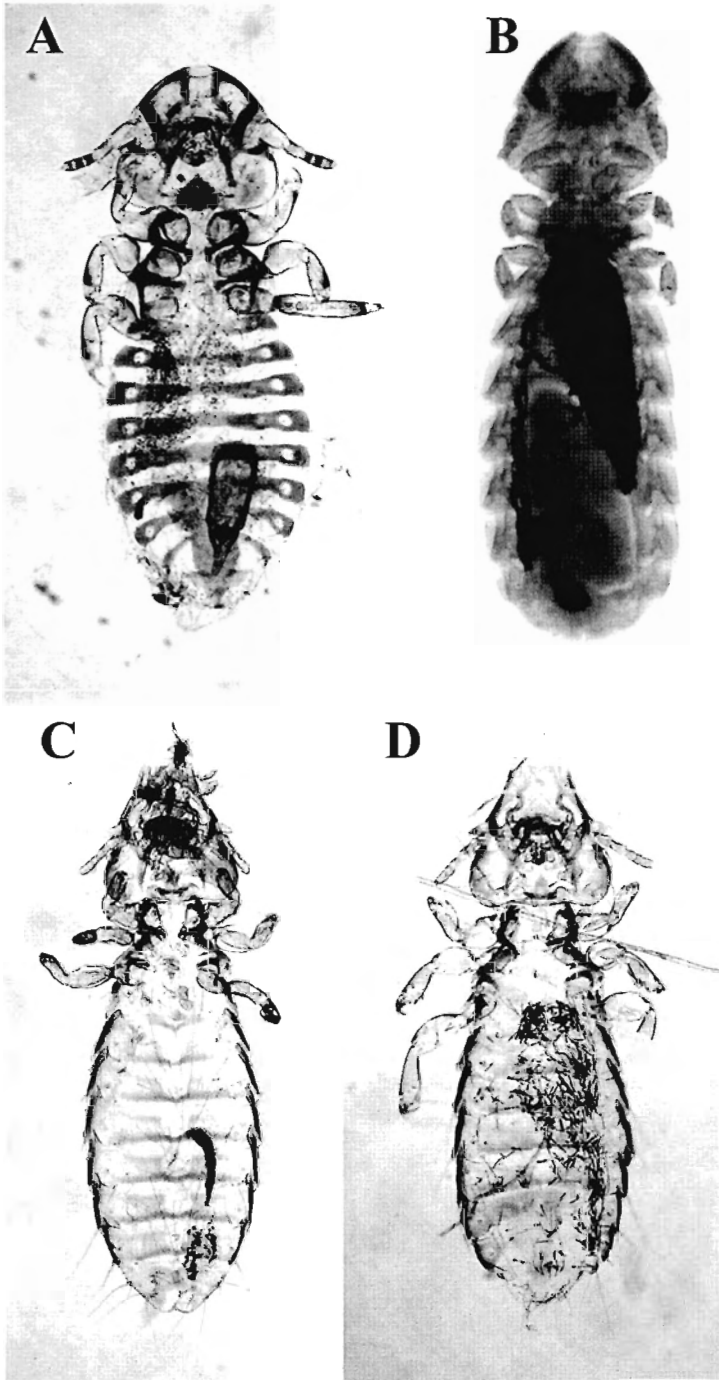


Fig. 14 – *Brueelia argula* (Burmeister 1838) (from *Corvus corax*): A, male; *Brueelia turdinulae* Ansari, 1956 (from *Turdus philomelos*): B, female; *Penenirmus affectator* (Złotorzycka, 1976) (from *Sylvia borin*): C, female; D, male.

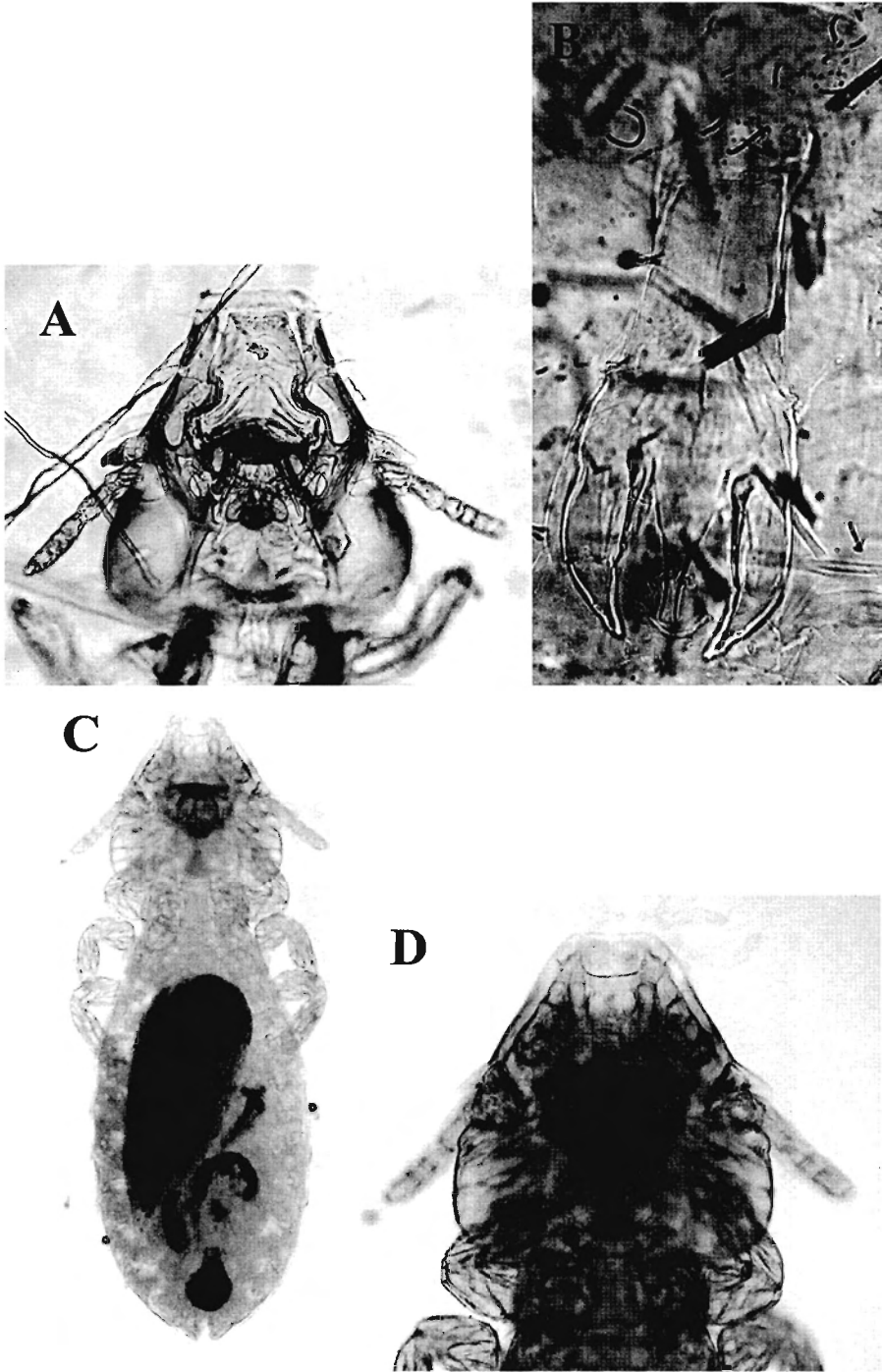


Fig. 15 – *Penenirmus affectator* (Złotorzycka, 1976) (from *Sylvia borin*): A, head of male; B, male genitalia; *Sturnidoecus radui* Bechet, 1965 (from *Oriolus oriolus*): C, nymph; D, head of nymph.

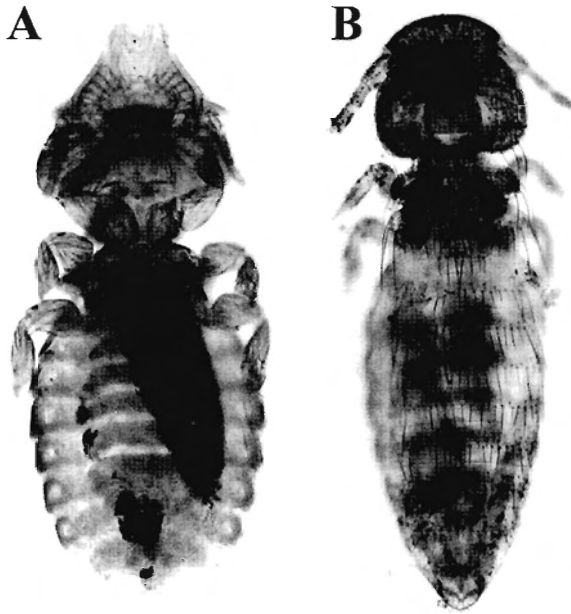


Fig. 16 – *Sturnidoecus refractariolus* (Ziotorzycka, 1964) (from *Passer domesticus*): A, female; *Bovicola (Bovicola) ovis* (Schrank, 1781) (from ?*Phasianus colchicus*): B, male.

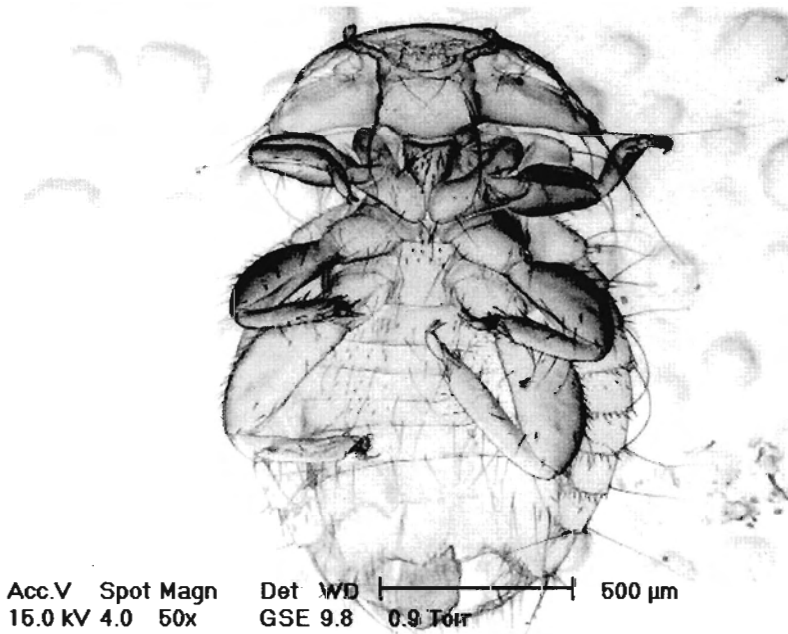
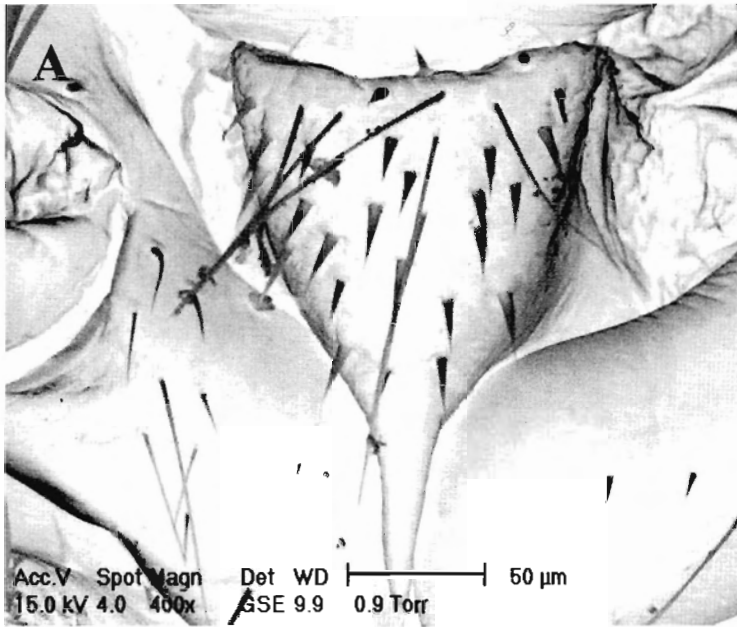


Fig. 17 – *Machaerilaemus clayae* (Balát, 1966) (from *Riparia riparia*). Female (ventral view).



**B**

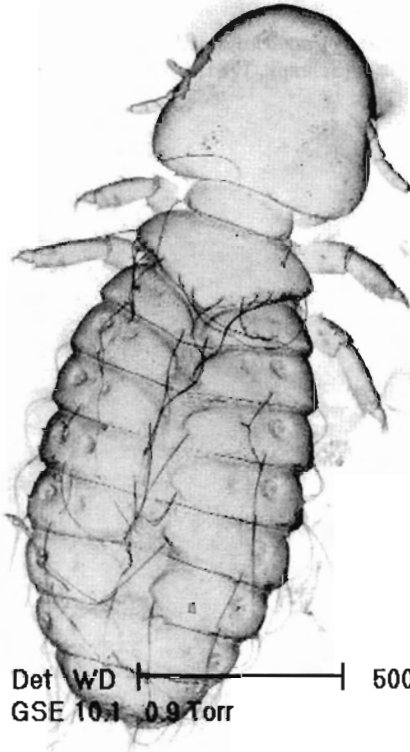


Fig. 18 – *Machaerilaemus clayae* (Balát, 1966) (from *Riparia riparia*): A, prosternal plate of female; *Brueelia argula* (Burmeister 1838) (from *Corvus corax*): B, female (dorsal view).



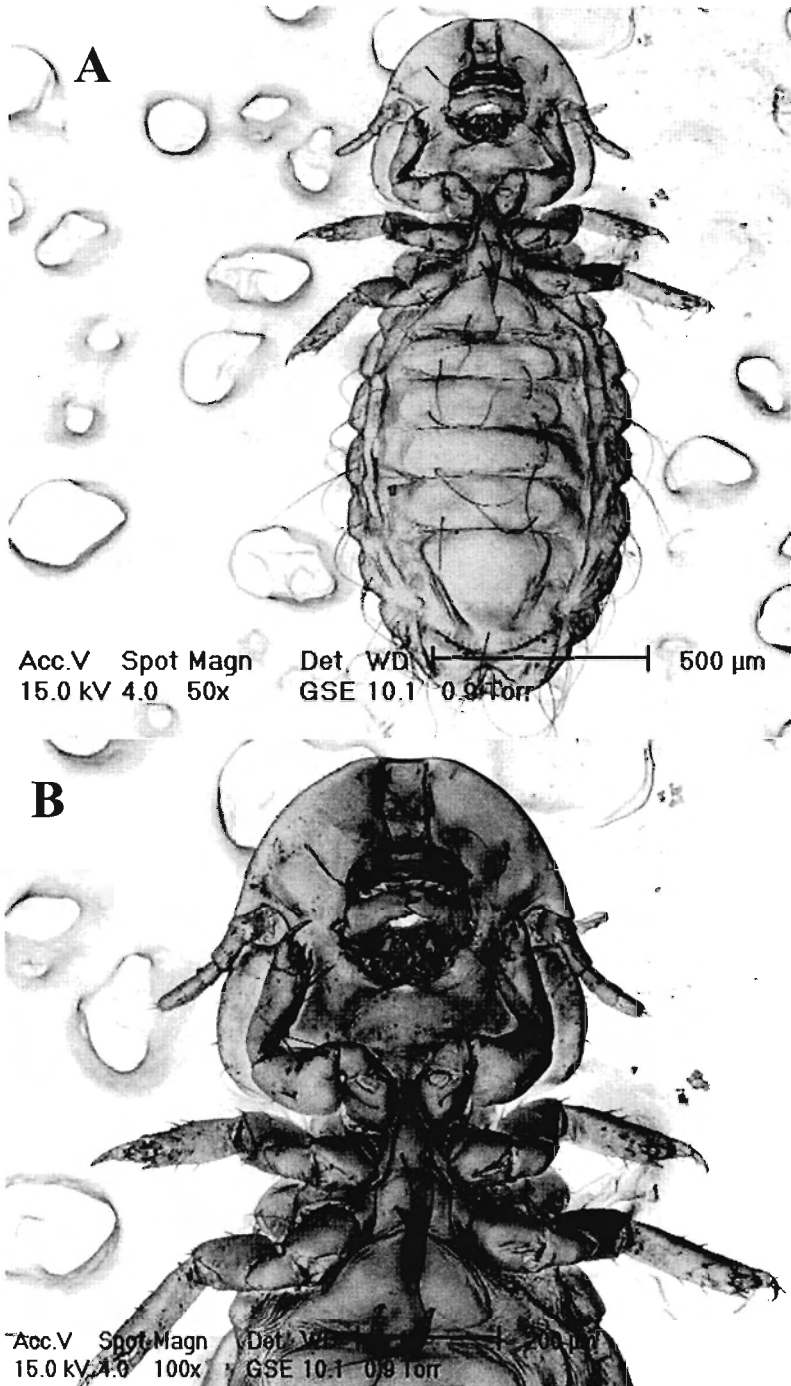
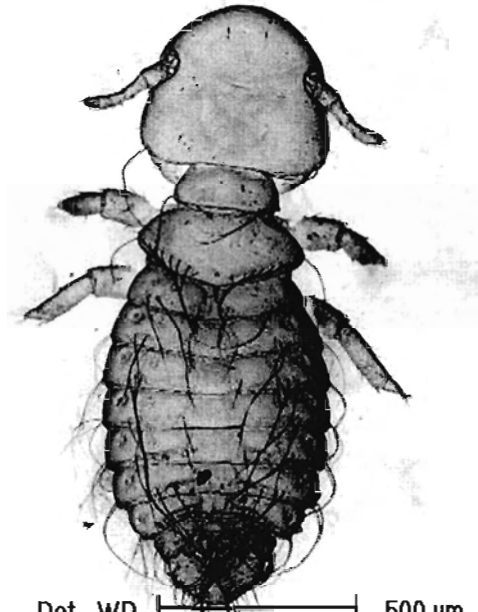


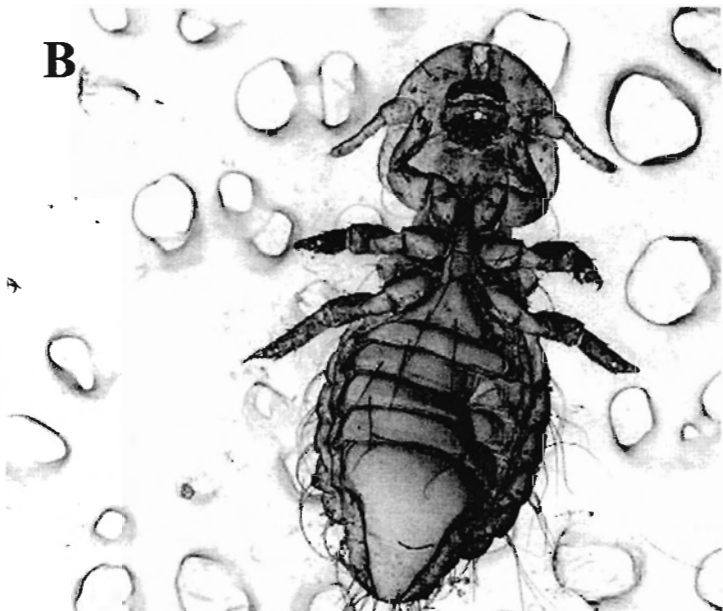
Fig. 19 – *Brueelia argula* (Burmeister 1838) (from *Corvus corax*): A, female (ventral view); B, head of female (ventral view).

**A**



Acc.V Spot Magn Det WD | 500 µm  
15.0 kV 4.0 50x GSE 10.1 0.9 Torr

**B**



Acc.V Spot Magn Det WD | 500 µm  
15.0 kV 4.0 50x GSE 10.1 0.9 Torr

Fig. 20 – *Brueelia argula* (Burmeister 1838) (from *Corvus corax*): A, male (dorsal view); B, male (ventral view).