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## NEW DATA ON THE CHEWING LOUSE FAUNA (PHTHIRAPTERA: AMBLYCERA, ISCHNOCERA) FROM ROMANIA. PART II

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**Abstract.** We present the partial data of the study on the ectoparasitological material, collected from some bird species of the Romanian fauna, along an 8 years period (1996-2003); from the 12 identified chewing louse species, *Myrsidea quadrimaculata* (Carriker, 1902) and *Ricinus major* Fresca, 1924 are new records for the entomological fauna of Romania. We mention, for the second time, the presence of a species of the genus *Myrsidea* Waterston, 1915, on *Delichon urbica*, in this way confirming also the first mention made by Bechet (1961 a) and which was omitted in the recent checklist of the chewing lice (Price et al., 2003). Also, *Phlopterus cumulatus* (Złotorzycka, 1964), occurred by us on *Emberiza calandra*, was mentioned before in Romania, on the same host, by Vasiliu (1946), as *Docophorus subflavescens citrinellae* and by Bechet (1961 a), as *Phlopterus citrinellae*.

**Résumé.** On présente les résultats partiels de notre étude sur le matériel ectoparasitologique capturé sur des espèces d'oiseaux de la faune de Roumanie, au long de la période de 8 années (1996-2003); de 12 espèces de mallophages identifiés, les espèces *Myrsidea quadrimaculata* (Carriker, 1902) et *Ricinus major* Fresca, 1924 représentent des mentions nouvelles pour la faune entomologique de Roumanie. On mentione, pour la seconde fois la présence d'une espèce du genre *Myrsidea* Waterston, 1915 sur *Delichon urbica*, dans cette manière confirmant aussi la première mention fait par Bechet (1961 a) et qui a été omise dans la dernière check-list de mallophages (Price et al., 2003). De même, l'espèce *Phlopterus cumulatus* (Złotorzycka, 1964), mentionnée par nous ici sur *Emberiza calandra*, a été signalée en Roumanie auparavant, sur la même hôte, par Vasiliu (1946), sur le nom de *Docophorus subflavescens citrinellae* et par Bechet (1961 a), sur le nom de *Phlopterus citrinellae*.

**Key words:** Phthiraptera, chewing lice, birds, Romania, ectoparasites.

By this paper we continue the publishing of the results of the study on an ectoparasitological material, collected from different bird species from the Romanian fauna, during a long period of time (from 1996 till now). This is the second paper within a series began in 2004 (Adam & Sándor, 2004). Also here, we present only the data on the chewing lice identified in the material studied by us, but we mention the cases in which we haven't found any ectoparasite on some birds or we found ectoparasites which do not belong to the chewing louse group, as the acarians and dipterans.

This series of papers is the result of our work in continuing the research of the chewing louse fauna of Romania, began by our forerunners, Maria Iordan-Georgescu, Ion Bechet, Mihai Constantineanu, Ștefan Negru and Constantin Pisiță. Also, during the last 25 years of the 20th century, chewing louse fauna of Romania was studied by Hungarian scientist József Rékási, collaborating with the Romanian ornithologist János Botond Kiss. These two authors' studies mainly focused on the chewing lice from the birds occurred in the Danube Delta.

By the results of our study, together with the above mentioned scientists' results, we try to complete the faunistic list of the parasite chewing louse species on

the birds from Romania. For the time being we consider that this list includes at the most half of the number of the chewing louse species which might be present on the birds of the Romanian avifauna. These estimations support the idea of continuing the collecting and researching activity of the chewing lice from the Romanian fauna.

Also, in our papers we underline the cases of polyparasitism and the infestation level with chewing lice in different bird species, as well new data, observed by us along entire study, on the parasite-host relation for some chewing louse species.

#### MATERIAL AND METHOD

Our material was collected during the period 10th of March 1996 – 19th of July 2003. The studied birds originate in seven localities of Romania (Tab. 1), from five counties: Cluj (CJ), Constanța (CT), Hunedoara (HD), Mureș (MS) and Tulcea (TL). All examined birds belong to some wild species and they were caught using Japanese nets placed in their natural environment. After the identification of some data of the captured birds (the species, sex, age and weight), they were ringed and studied for the localization and collecting of the possible parasite arthropods. The examination was made by moving slightly the entomological clip through the bird plumage and collecting each observed parasite. The collected material was labeled and preserved in 80% alcohol. A total of 31 birds were examined (24 adults and 7 immatures), which belong to 11 species of 10 families and 4 orders (between brackets there is the number of the species to which the studied birds belong): Charadriiformes: Scolopacidae (1); Columbiformes: Columbidae (1); Coraciiformes: Meropidae (1); Passeriformes: Hirundinidae (2), Motacillidae (1), Cinclidae (1), Corvidae (1), Sturnidae (1), Fringillidae (1) and Emberizidae (1). From all studied birds, we found chewing lice on only 26 specimens (of 8 species). On the other 5 specimens we haven't found chewing lice but other ectoparasites, as follows: on the single specimen (an adult female) of *Merops apiaster*, caught and studied at Ostrov (CT), on 09.08.2001, we found only a specimen of *Carnus hemapterus* Nitzsch, 1818 (Diptera: Carnidae); also, on a single specimen (an adult female) of *Hirundo rustica*, caught and studied at Sovata (MS), on 06.07.2003, we found only an acarian specimen (Acari); and from the three specimens (two immatures and a male) of *Motacilla cinerea*, caught and studied at Gura Zlata (HD), on 15–16.05.2001 and 14.06.2001, we found an acarian specimen (Acari) on only one of the birds.

For the identification, a part of the collected material we mounted in Canada balsam, following the classical technics. The rest of the material is preserved in 80% alcohol.

The drawings were made by the senior author, using the "Olympus" microscope with a projection system of the images by superposition, with a 6.7X ocular and 4X, 10X, 20X and 40X objectives. Photos were also made with the same microscope, with a 8X and 15X oculars and 4X objective.

The identification of the species was made studying the specimens also at the „Olympus" microscope and using the papers written by Złotorzycka (1972, 1976 and 1977), Price et al. (2003), Séguy (1944) and Bechet (1962). The scientific names used in this paper, for the chewing lice, are according to the list published by Price et al. (op. cit.); the systematics of the host species is also according to the bird list published by Munteanu (2001).

Table 1 includes the list of the host species (in systematical order) on which the chewing lice were found, collecting dates, list of the identified chewing louse species and the number of the collected specimens.

Table 1

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

Hosts			Parasites				
Species	Number of specimens	Collecting data	Species	Number of specimens			
				♀♀	♂♂	Nymphs	Total
<i>Actitis hypoleucos</i>	1 adult (♂)	Gura Zlata (HD); 19.07.2003; Leg.: Attila D. Sándor	<i>Actornithophilus flumineus</i> Clay, 1962	1	-	1	2
<i>Streptopelia turtur</i>	1 adult	Canaraua-Fetii (CT); 12.07.2002; Leg.: Attila D. Sándor	<i>Columbicola bacillus</i> (Giebel, 1866)	-	1	-	1
<i>Delichon urbica</i>	1 adult (♂)	Sovata (MS); 19.07.2003; Leg.: Attila D. Sándor	<i>Philopterus excisus</i> Nitzsch, 1818	1	-	1	2
	1 adult		<i>Myrsidea</i> sp. Waterston, 1915	1	-	-	1
<i>Cinclus cinclus</i>	1 adult	Ilva Valley - Lunca Bradului (MS); 14.04.1997; Leg.: Attila D. Sándor	<i>Philopterus cincli</i> (Denny, 1842)	1	-	3	4
	1 adult (♀)			1	-	7	8
	1 adult (♂)			-	-	1 (+ 2 eggs)	1
	1 adult (♂)	Sovata (MS); 30.03.2002; Leg.: Attila D. Sándor		-	-	2	2
	1 adult (♂)	Sovata (MS); 18.04.2002; Leg.: Attila D. Sándor		-	2	2	4
	1 adult (♂)	Sovata (MS); 22.04.2002; Leg.: Attila D. Sándor		-	2	-	2
<i>Nucifraga caryocatactes</i>	1 adult	Sovata (MS); 01.11.1996; Leg.: Attila D. Sándor	<i>Philopterus crassipes</i> (Burmeister, 1838)	6	-	12	18
	1 immature	Ornithological camp from Gurghiu Mountains (close to Sovata) (MS); 11.08.1998; Leg.: Attila D. Sándor	<i>Philopterus crassipes</i> (Burmeister, 1838)	10	4	18 (+ 3 eggs)	32
	1 immature		<i>Myrsidea brunnea</i> (Nitzsch, 1866)	3	3	6	12
			<i>Philopterus crassipes</i> (Burmeister, 1838)	10	2	30	42

Table 1 (continuation)

Hosts			Parasites				
Species	Number of specimens	Collecting data	Species	Number of specimens			
				♀♀	♂♂	Nymphs	Total
<i>Sturnus roseus</i>	1 adult (♂)	Ceamurlia de Jos (TL); 28.05.1999; Leg.: Attila D. Sándor	<i>Sturnidoecus pastoris</i> (Denny, 1842)	1	1	2 (+ 2 eggs)	4
	1 adult	Ceamurlia de Jos (TL); 14.06.2003; Leg.: Attila D. Sándor		-	-	1	1
	1 adult (♀)			1	3	1	5
	1 adult (♂)			3	1	1	5
<i>Loxia curvirostra</i>	1 immature	Ornithological camp from Gurghiu Mountains (close to Sovata) (MS); 16.07.1996; Leg.: Attila D. Sándor	<i>Philopterus curvirostrae</i> (Schrank, 1776)	1	-	2	3
	1 immature		<i>Myrsidea quadrimaculata</i> (Carriker, 1902)	2	-	1	3
			<i>Philopterus curvirostrae</i> (Schrank, 1776)	2	-	5	7
	1 immature (♀)	Ornithological camp from Gurghiu Mountains (close to Sovata) (MS); 17.07.1996; Leg.: Attila D. Sándor	<i>Philopterus curvirostrae</i> (Schrank, 1776)	2	2	4 (+ 1 egg)	8
<i>Emberiza calandra</i>	1 adult (♂)	Baciu (CJ); 10.03.1996; Leg.: Attila D. Sándor	<i>Philopterus cumulatus</i> (Złotorzycka, 1964)	5	-	-	5
	1 adult (♂)			12	4	3	19
	1 adult (♂)			7	1	6	14
	1 adult (♂)			1	-	2	3
	1 adult (♂)	Baciu (CJ); 12.03.1996; Leg.: Attila D. Sándor	<i>Ricinus major</i> Fresca, 1924	1	-	-	1
			<i>Philopterus cumulatus</i> (Złotorzycka, 1964)	6	3	4 (+ 1 egg)	13
1 adult (♀)		<i>Philopterus cumulatus</i> (Złotorzycka, 1964)	1	2	10	13	

## RESULTS AND DISCUSSION

From the entire collected material, we identified 235 specimens of chewing lice. Later, these specimens were identified, they belonging to 6 genera and 12 species (Figs 12-16). From the 235 collected specimens, 79 are females (33.61%), 31 males (13.19%) and 125 nymphs (53.19%).

In the graphics of this paper we also included the birds with no chewing louse.

From the chewing lice collected by us, a few (8.09%) belong to the suborder Amblycera, the genus *Myrsidea* being the best represented (16 specimens), and the rest (91.91%) belong to the suborder Ischnocera; within this suborder, the genus *Philopterus* is the best represented (200 specimens). From the number of the species point of view, from the 12 identified chewing louse species, five (of 3 genera) belong to the suborder Amblycera, and seven (of 3 genera) belong to the suborder Ischnocera. It can be remarked that the Amblycera has a very close specific diversity to that of the Ischnocera, although the number of the specimens was much lower than that of the second suborder. This aspect is due to that on the studied hosts, the infestation degree with Ischnocera was higher than that with the Amblycera. Also, the genus *Philopterus* is prevalent in our material, both in the number of the individuals (85.10% of the total of the identified chewing lice), and in the number of the species (5 of the total of 12 identified species). This explains by the fact that 28 birds (90.32%), from the 31 studied ones, are passeriforms, and most of the species of the genus *Philopterus* use passeriform species as typical hosts.

If we analyse the number of the chewing louse species found by us, making a comparison between all families to which the studied hosts belong, we can observe that most of the species occur on the representatives of the families Hirundinidae (2), Corvidae (2), Fringillidae (2) and Emberizidae (2). But if we refer the number of the chewing louse species occurred in each bird family to the number of the species of the family to which the studied individuals belong, we observed that the largest diversity of the chewing louse species is in the species of the families Corvidae, Fringillidae and Emberizidae, where we found two chewing louse species on a single individual of the species *Nucifraga caryocatactes* (Corvidae), *Loxia curvirostra* (Fringillidae) and *Emberiza calandra* (Emberizidae) (Fig. 1).

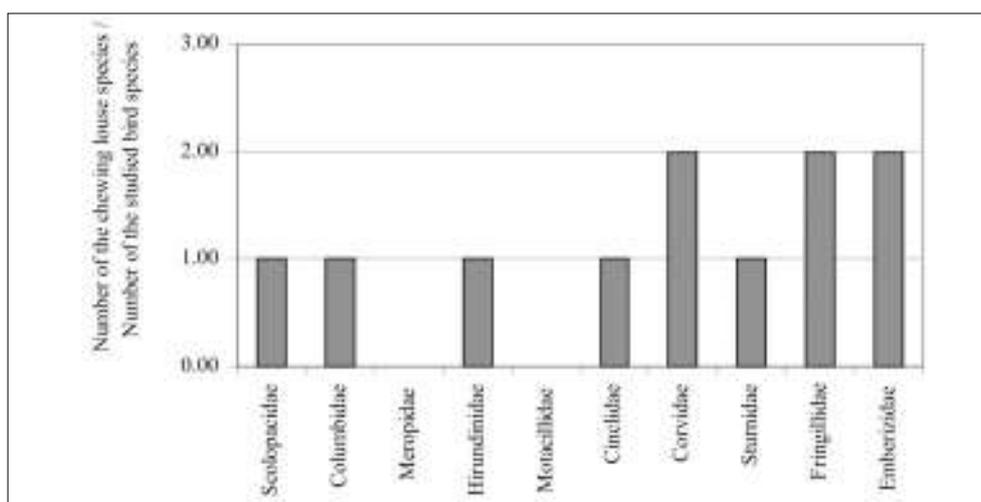


Fig. 1 – Comparative representation of the chewing louse species diversity identified for the 10 families to which the studied birds belong.

If we refer, further on, to the infestation degree with chewing lice, we can say that most of the studied birds were weakly infested. This is explained by that all studied host birds were healthy and vigorous, being caught in their natural living environment for being ringed and for collecting the ectoparasites.

From all studied birds, those belonging to the species *Nucifraga caryocatactes* (Corvidae) were the most infested with chewing lice by far. From only three adult specimens 104 chewing louse specimens were collected, their distribution being as follows: 18, 32 and, respectively, 54 (Tab. 1). As a matter of fact, along our research, we observed that the representatives of the family Corvidae (from all Passeriformes) are predisposed to massive infestations with chewing lice. Also, another bird highly infested was an adult male of *Emberiza calandra* from which we collected 19 chewing louse specimens. But also we cannot talk about a strong infestation in the case of these birds, the number of the collected chewing lice indicating a moderate infestation. This confirms us, once again, the idea from the very beginning of our study that these birds were healthy, so that they could make their daily toilet and control the dynamics of the chewing louse populations from their body.

If we deal again with the bird families from whose representatives the material was collected, and refer the number of collected chewing lice to the number of the birds from a certain family, we can observe that the representatives of the family Corvidae have the highest infestation degree, being followed, much further, by the representatives of the families Fringillidae and Emberizidae (Fig. 2). The representatives of the other 7 bird families had very low and close values of infestation, or even null for the representatives of some families (Meropidae and Motacillidae) (Fig. 2).

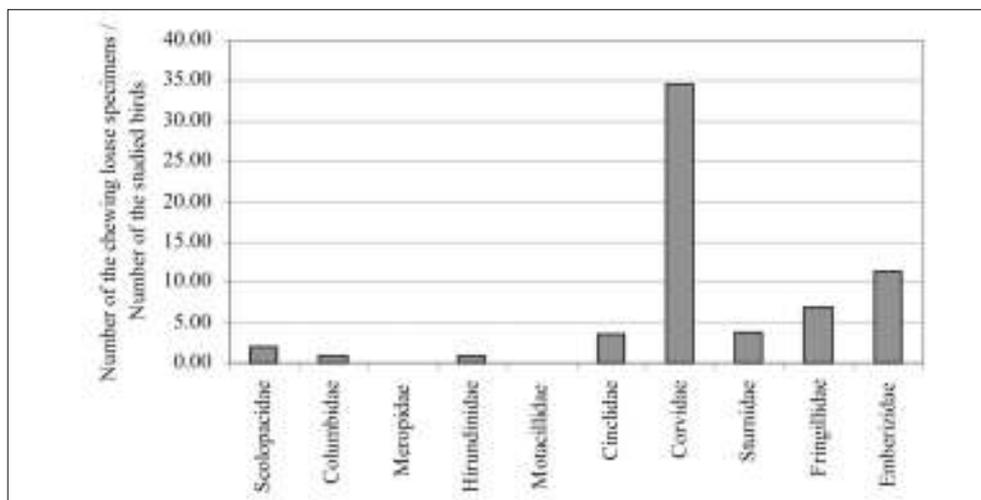


Fig. 2 – Comparative representation of the infestation level with chewing lice in the 10 families of the studied birds.

By the graphic representation, divided according to sex and age (females, males and nymphs), of the number of collected specimens of each 12 identified chewing louse species and by the comparative analyses of these plottings, we can observe that the nymphs were prevalent for most of the chewing louse species, being

followed immediately by the adult females (Fig. 3). The males were weakly represented, in most of the species, in the number of specimens. For some of the species (*Myrsidea quadrimaculata* (Figs 4, 5, 12 C), *Myrsidea* sp. (Figs 6, 7, 12 D), *Actornithophilus flumineus* (Fig. 13 A), *Ricinus major* (Figs 8, 9, 13 B) and *Philopterus excisus* (Fig. 16 B)) we did not collect a male specimen, but only females and/or nymphs. Only for *Columbicola bacillus* (Fig. 13 C) we collected a male specimen and no female or nymph. The prevalence of the nymphs and adult females in our material, especially in the species of the genus *Philopterus*, proves that their populations were in full development on the respective hosts (Fig. 3).

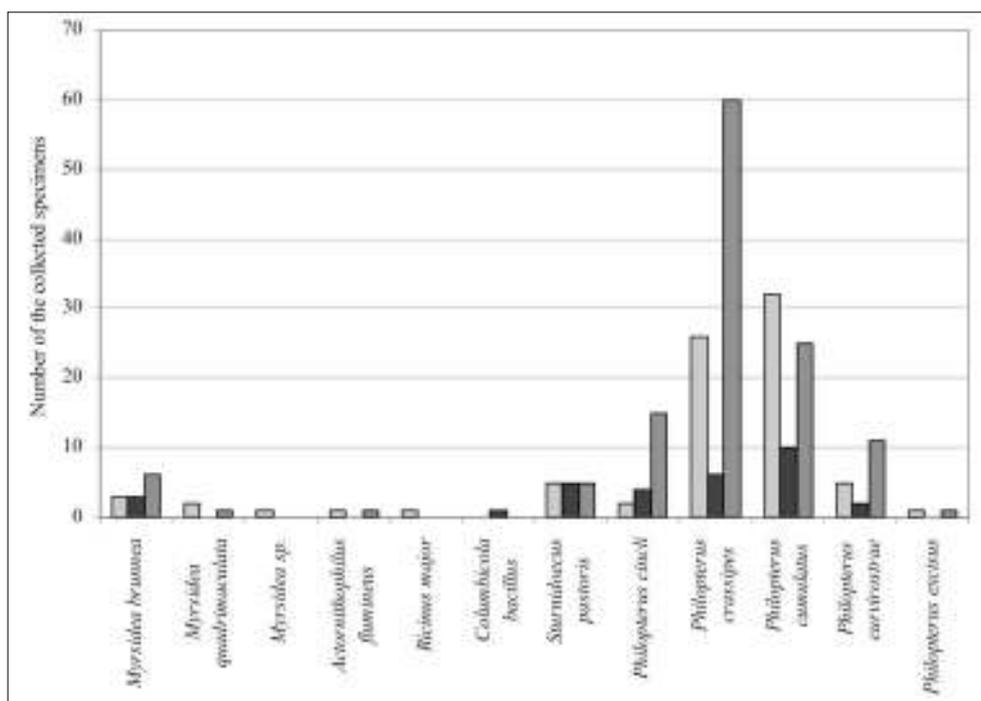


Fig. 3 – The comparative representation of the number of collected specimens, divided according to sex and age (females, males and larvae), for each of the 12 identified chewing louse species: ■ - number of female specimens; ■ - number of male specimens; ■ - number of nymphs.

In some studied birds we found also other ectoparasites, beside chewing lice, as: on an adult male of *Cinclus cinclus*, caught in Ilva Valley – Lunca Bradului (MS), on 14.04.1997, we collected a specimen of *Liposcelis* sp. (Psocoptera: Liposcelidae), beside a chewing louse specimen of *Philopterus cincli* (Fig. 14 B, C); from another male of *Cinclus cinclus*, caught at Sovata (MS), on 18.04.2002, we collected two insect larvae whose species was not identified, but definitely they were insects which belonged to another group than Phthiraptera, beside four chewing louse specimens of the species *Ph. cincli*; also, from an immature specimen of *Loxia curvirostra*, caught in the Ornithological Camp from the Gurghiu Mountains (close to Sovata) (MS), on 16.07.1996, we collected two acarian specimens (Acari), unidentified, yet, beside three chewing louse specimens of *Ph. curvirostrae* (Figs 15 D, 16 A).

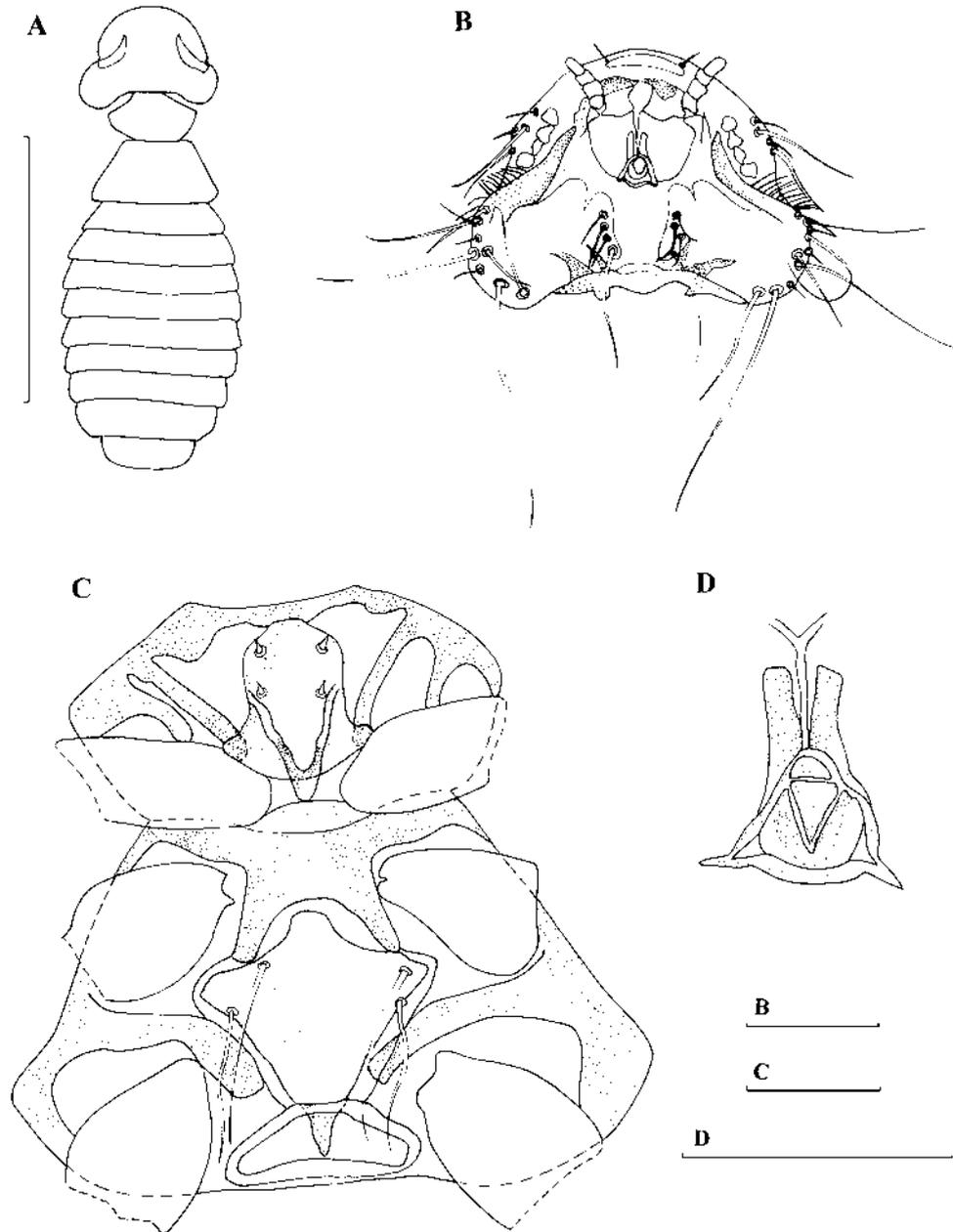


Fig. 4 – *Myrsidea quadrimaculata* (Carriker, 1902) (from *Loxia curvirostra*). Female: A, general habitus of the body (dorsal view); B, head (ventral view); C, thorax (ventral view); D, sitophore sclerite. Scale bars (in mm): A, 1; B, 0.2; C, 0.1; D, 0.1.

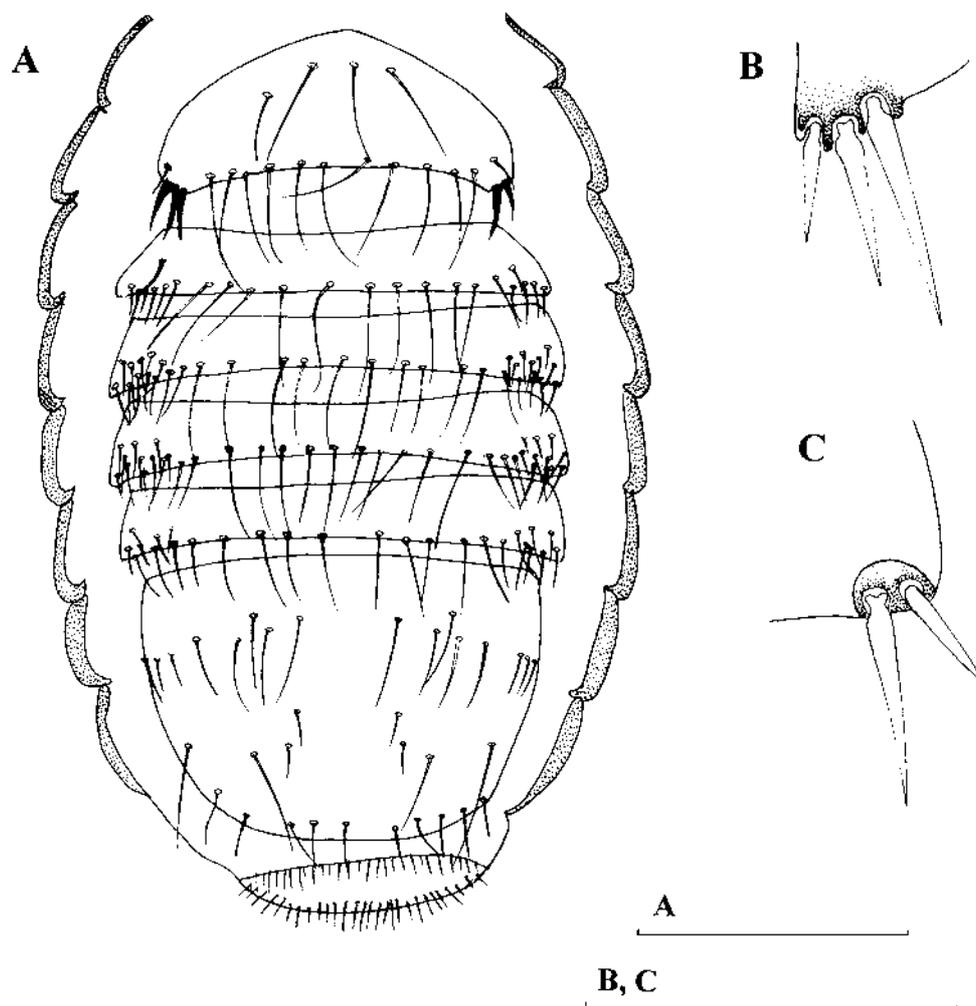


Fig. 5 – *Myrsidea quadrimaculata* (Carriker, 1902) (from *Loxia curvirostra*). Female: A, abdomen (ventral view); B and C, spiniform setae on abdominal sternite II (B, left side angle; C, right side angle). Scale bars (in mm): A, 0.3; B, C, 0.1.

Consulting the specialized papers published throughout time and which deal with the chewing louse fauna from the wild birds of Romania (Adam, 2003; Adam & Sándor, 2004; Bechet, 1961 a, 1961 b, 1962; Constantineanu & Pisiică, 1959; Constantineanu et al., 1961; Jordan-Georgescu, 1941; Negru, 1958, 1959, 1960 a, 1960 b, 1961, 1963 a, 1963 b, 1965; Pisiică & Andriescu, 1972; Rékási & Kiss, 1977, 1980, 1994, 1997, 1999; Vasiliu, 1946) and making a comparison between the data from these papers with those got by us, we could do an analysis of the identified species from the faunistic point of view. Thus, we can assert that from the 12 identified chewing louse species of our material, *Myrsidea quadrimaculata* (Carriker, 1902) (Amblycera: Menoponidae) (Figs 4, 5, 12 C) and *Ricinus major*

Fresca, 1924 (Amblycera: Ricinidae) (Figs 8, 9, 13 B) are recorded for the first time on some birds of the Romanian avifauna (Tab. 1). These two chewing louse species were found on their typical hosts, according to the last checklist (Price et al., 2003), i. e.: *Loxia curvirostra* and, respectively, *Emberiza calandra* (Tab. 1).

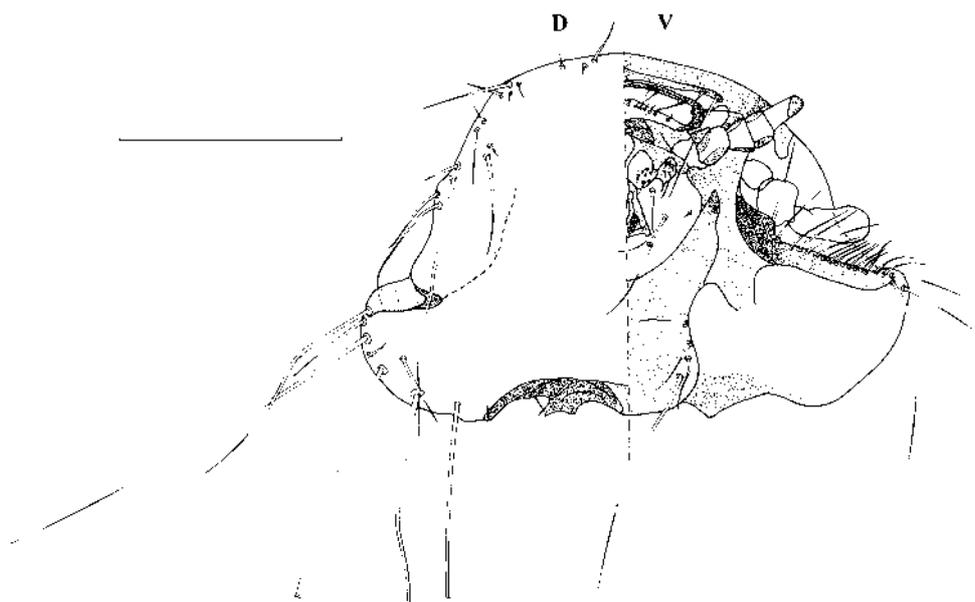


Fig. 6 – *Myrsidea* sp. Waterston, 1915 (from *Delichon urbica*). Female: head (D, dorsal view; V, ventral view). Scale bar (in mm): 0.2.

From an adult specimen of *Delichon urbica*, caught at Sovata (MS), on 19.07.2003, we collected an adult female belonging to the genus *Myrsidea* (Tab. 1; Figs 6, 7, 12 D). In the last checklist of the chewing lice (Price et al., op. cit.) there is no species of the genus *Myrsidea* found on *Delichon urbica*, but for most of the Hirundinidae species, typical parasites of the genus *Myrsidea* are mentioned. In spite of this, Bechet (1961 a) mentioned the presence of *Myrsidea rustica* (Giebel, 1874) on *Delichon urbica*, since 1961. Price et al. (op. cit.) cited for *M. rustica* only three host species, i. e. *Hirundo rustica*, *H. spilodera* and *H. tahitica neoxena*. We consider that the specimen collected by us does not belong to *M. rustica*, because it distinguishes from it by some features (relatively large dimension of the body, darker colour, prothorax shape, the form of the gular plate and of the thoracic sternites), but also, we couldn't include it in another species of the genus *Myrsidea*. By its morphological features, our specimen resembles more with *M. rustica*, but having not a male specimen at our disposal (we collected only a female) for making a comparison between the structure of its genitalia and that of a male of *M. rustica*, we considered we have insufficient data for giving it the statute of a subspecies of *M. rustica* or of a species. But it is sure that a single species of the genus *Myrsidea*, at least, parasitizes on *Delichon urbica*. We mention this aspect for the second time, thus confirming the first mention made by Bechet (1961 a) and which was skipped over in the last chewing louse checklist (Price et al., op. cit.).

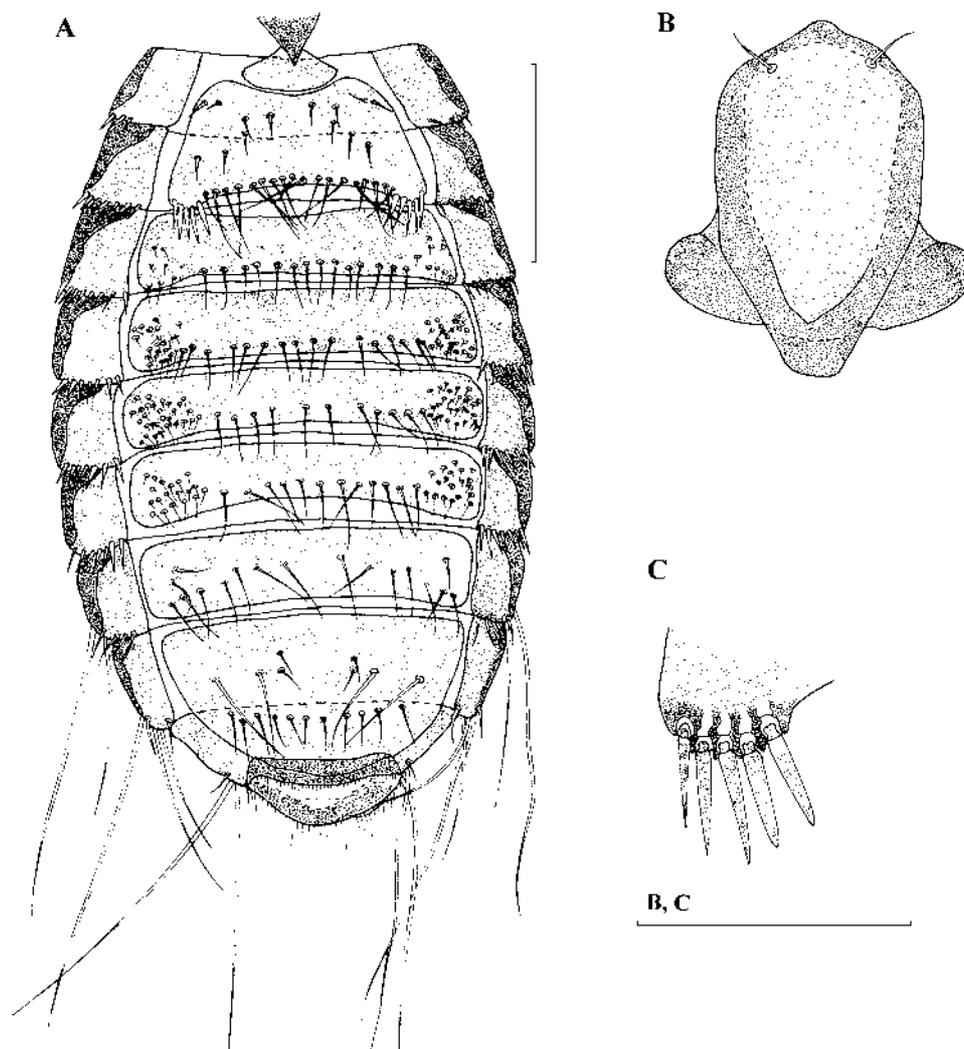


Fig. 7 – *Myrsidea* sp. Waterston, 1915 (from *Delichon urbica*). Female: A, abdomen (ventral view); B, thoracic prosternal plate; C, spiniform setae on abdominal sternite II (left side angle). Scale bars (in mm): A, 0.3; B, C, 0.1.

We also want to discuss on the species *Philopterus cumulatus* (Złotorzycka, 1964) (Ischnocera: Philopteridae) (Figs 10, 11, 15 B, C) which we found on several specimens of *Emberiza calandra* (Tab. 1). In the last checklist of the chewing lice (Price et al., op. cit.) this species is mentioned as a parasite on a single bird species, i. e. *E. calandra*, the same species on which we had found it. As a matter of fact, according to the same checklist, this is the single species of the genus *Philopterus*, which parasitizes *E. calandra*. In 1946, Vasiliu recorded the presence in Romania of *Docophorus subflavescens citrinellae* on *E. calandra*, and in 1961, Bechet (1961 a) recorded the presence in Romania of *Philopterus citrinellae*, also on *E. calandra*. In

the last checklist (Price et al., op. cit.) the species *P. citrinellae* is cited as a parasite of *Emberiza citrinella*, *Carduelis chloris* and *Pyrrhula pyrrhula*. As a matter of fact, *P. citrinellae* and *P. cumulatus* have a very similar morphology. Taking into consideration all these aspects, it is possible that the two above mentions from Romania to refer to the same species *P. cumulatus*, especially that this species was described as a new one by Złotorzycka lately, in 1964. We record the presence of the *P. cumulatus* on *E. calandra* for the first time in Romania under this name.

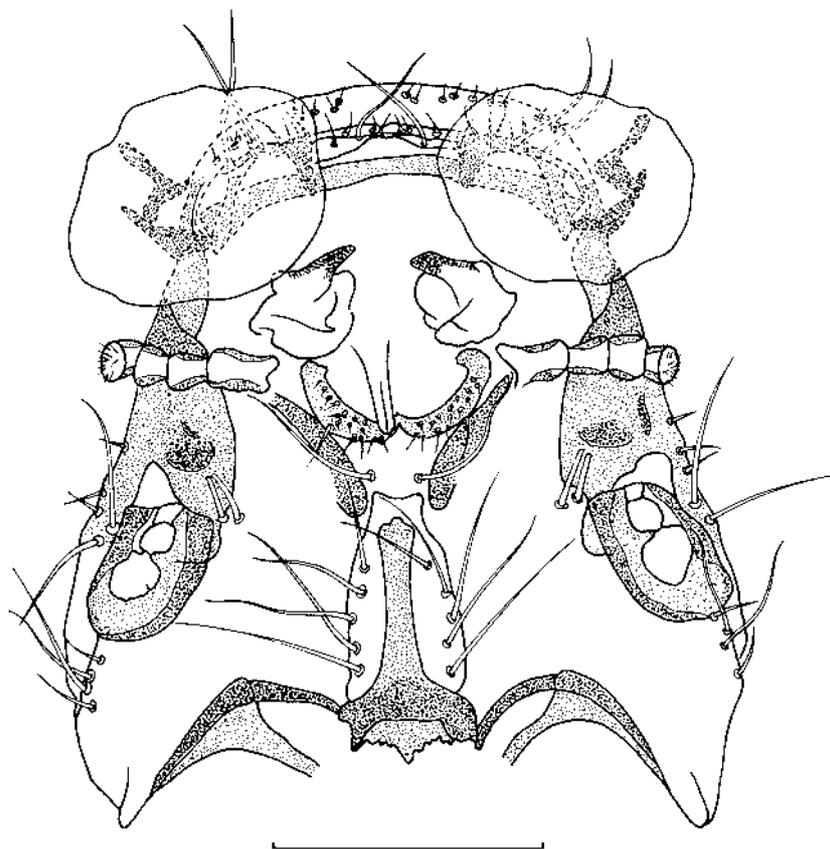


Fig. 8 – *Ricinus major* Fresca, 1924 (from *Emberiza calandra*). Female: head (ventral view). Scale bar (in mm): 0.3.

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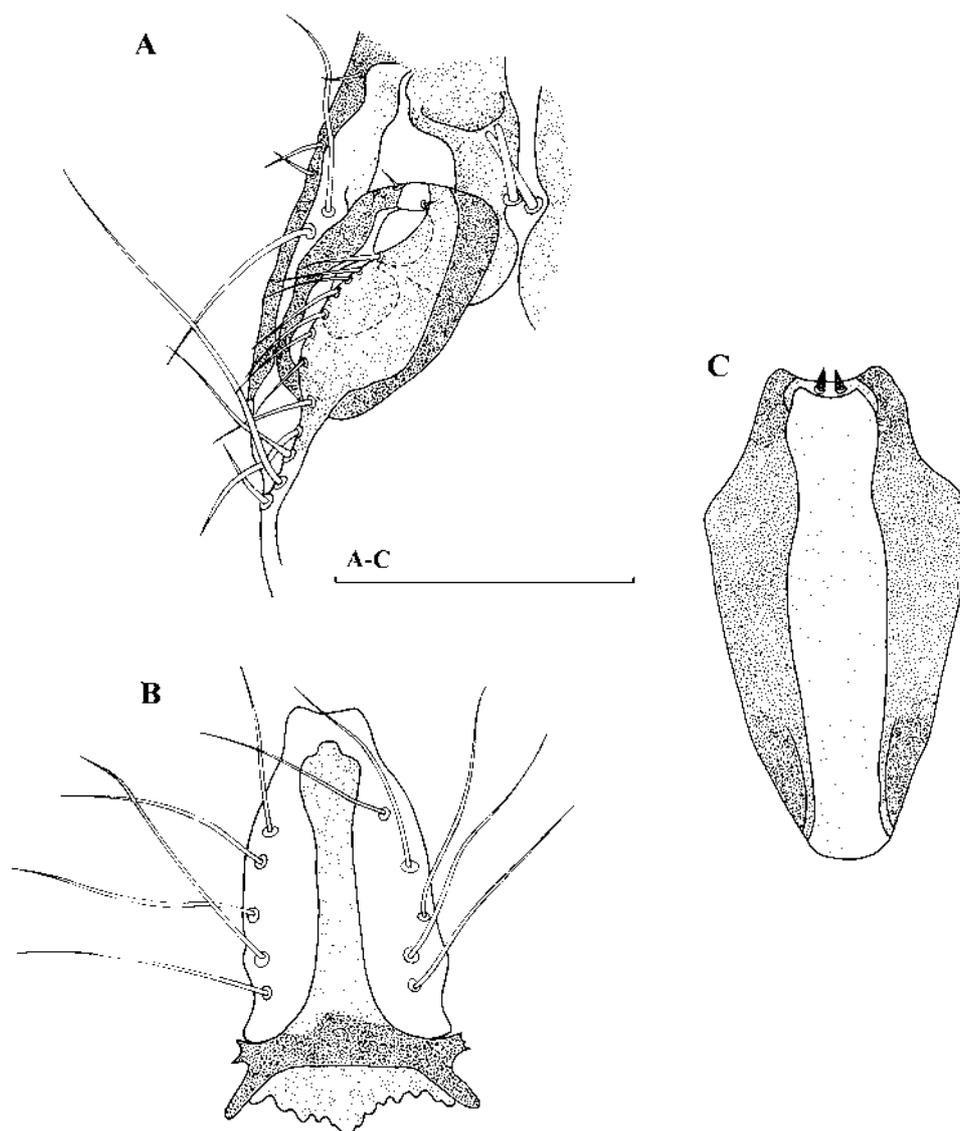


Fig. 9 – *Ricinus major* Fresca, 1924 (from *Emberiza calandra*). Female: A, antennal fossa; B, gular plate; C, thoracic prosternal plate. Scale bar: A-C, 0.2.

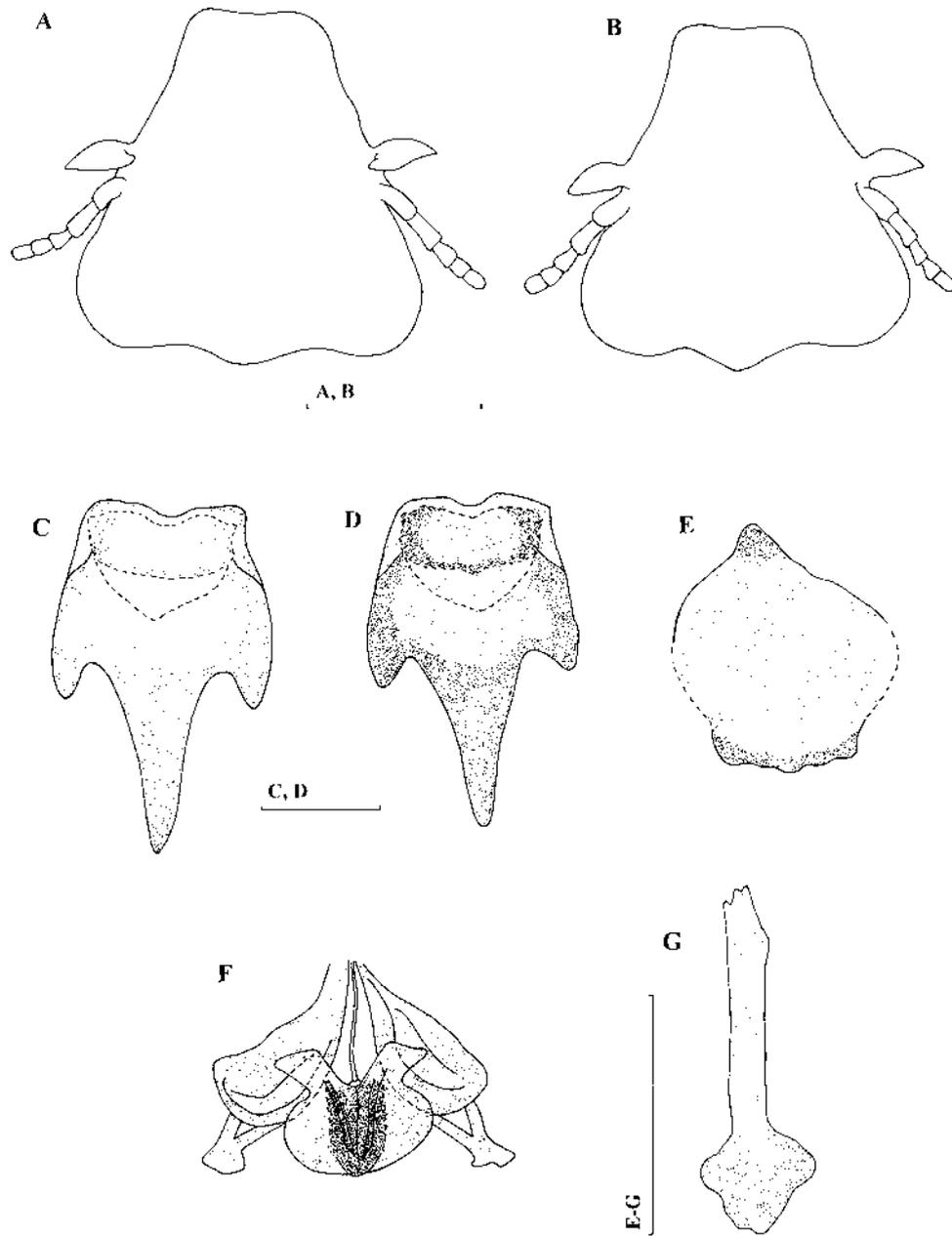


Fig. 10 – *Philopterus cumulatus* (Złotorzycka, 1964) (from *Emberiza calandra*). A, shape of the head in female (dorsal view); B, shape of the head in male (dorsal view); C, dorsal anterior cephalic plate in female; D, dorsal anterior cephalic plate in male; E, gular plate in male; F, sitophore sclerite in female; G, thoracic prosternal plate in male. Scale bars (in mm): A, B, 0.3; C, D, 0.1; E-G, 0.1.

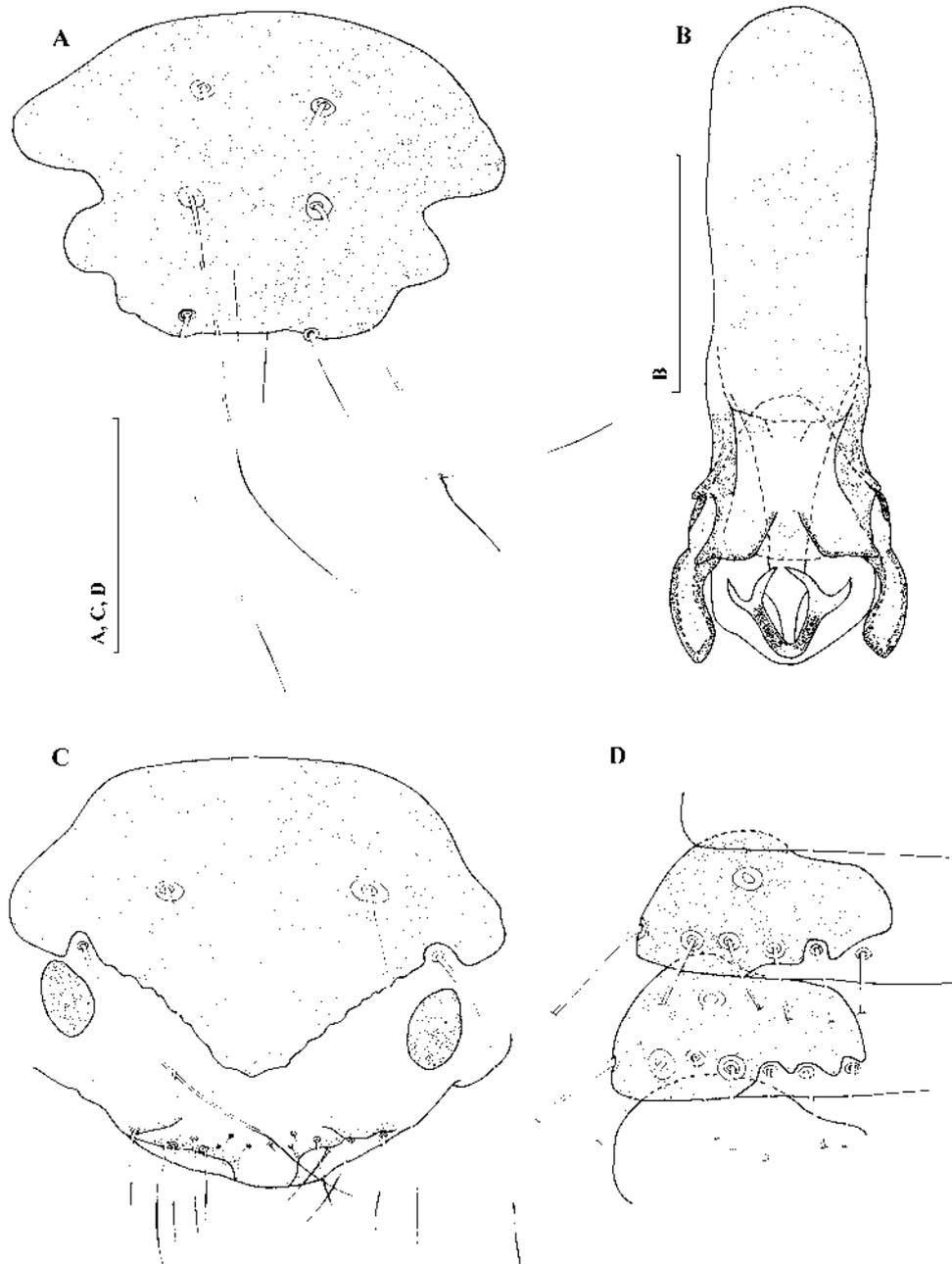


Fig. 11 – *Philopterus cumulatus* (Złotorzycka, 1964) (from *Emberiza calandra*). A, subgenital plate in male; B, copulatory organ; C, subgenital plate and genital opening in female; D, abdominal tergopleural plate (IV-V) in female. Scale bars (in mm): A, C, D, 0.2; B, 0.1.

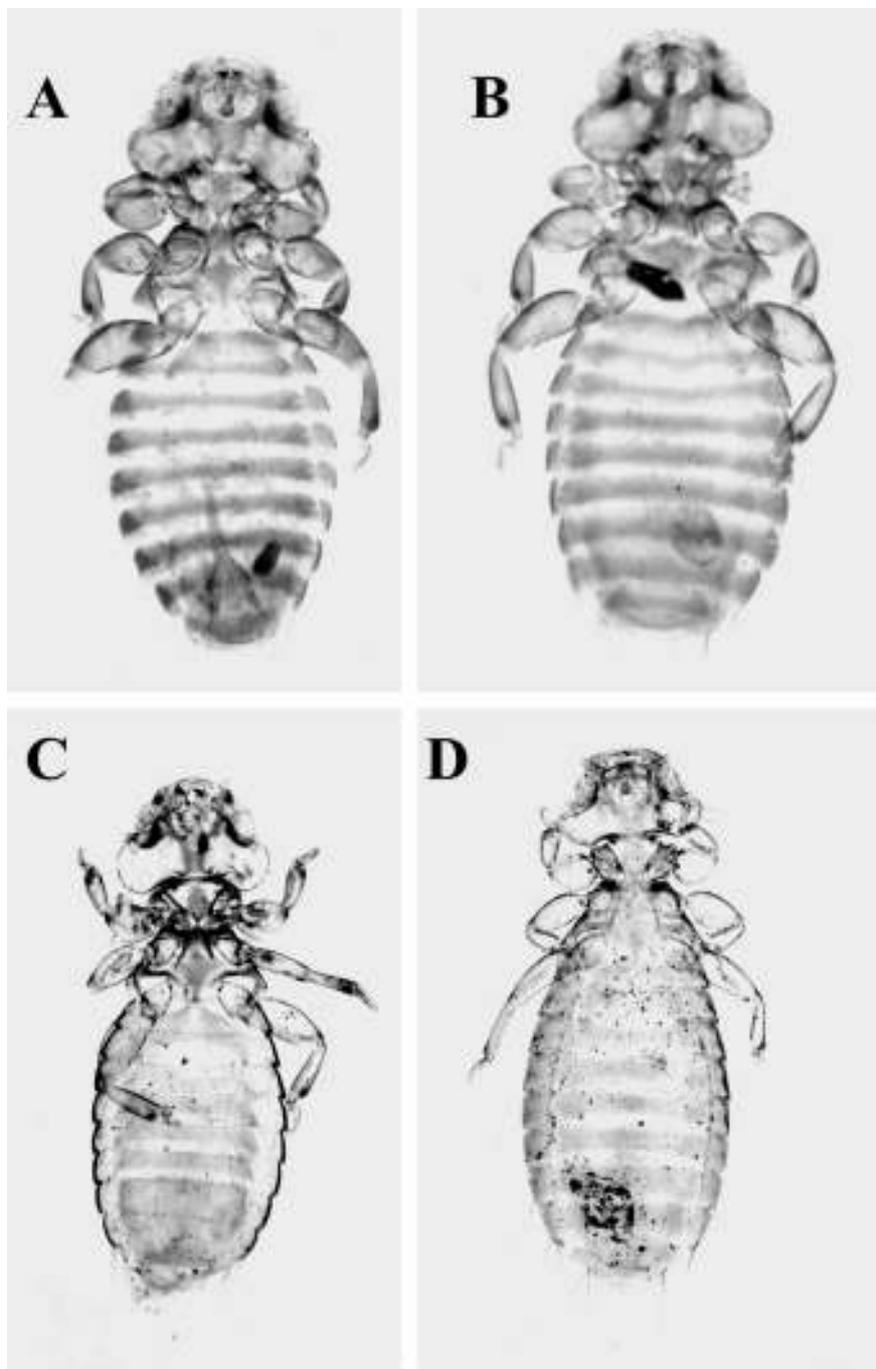


Fig. 12 – *Myrsidea brunnea* (Nitzsch, 1866) (from *Nucifraga caryocatactes*): A, male; B, female; *Myrsidea quadrimaculata* (Carriker, 1902) (from *Loxia curvirostris*): C, female; *Myrsidea* sp. (from *Delichon urbica*): D, female.

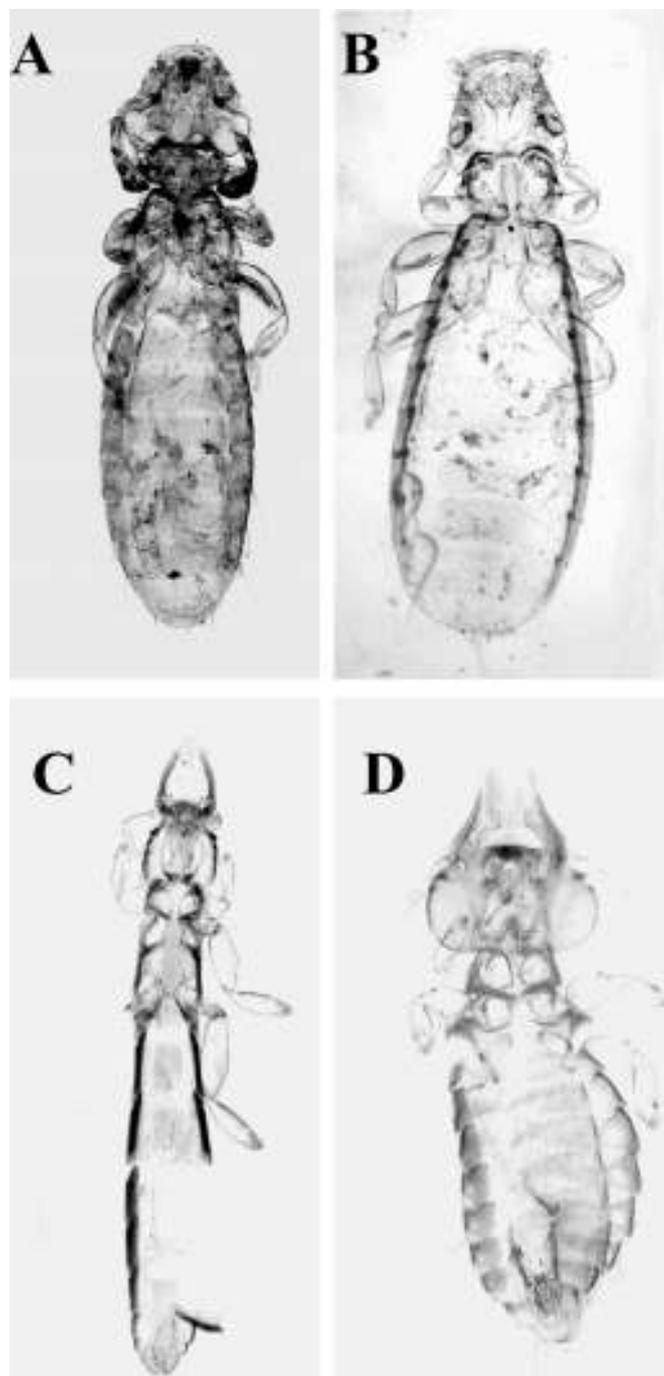


Fig. 13 – *Actornithophilus flumineus* Clay, 1962 (from *Actitis hypoleucos*): A, female; *Ricinus major* Fresca, 1924 (from *Emberiza calandra*): B, female; *Columbicola bacillus* (Giebel, 1866) (from *Streptopelia turtur*): C, male; *Sturnidoecus pastoris* (Denny, 1842) (from *Sturnus roseus*): D, male.

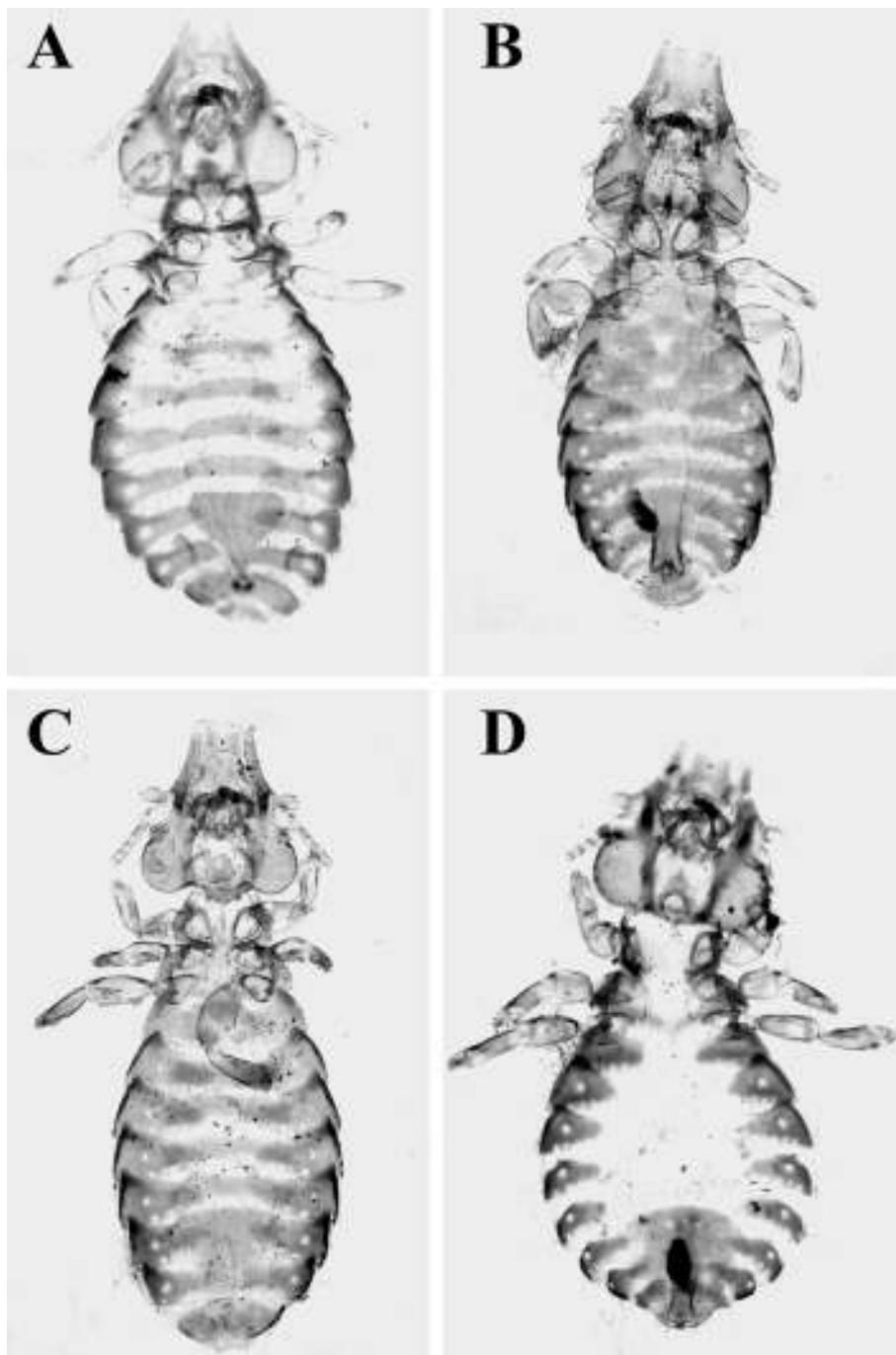


Fig. 14 – *Sturnidoecus pastoris* (Denny, 1842) (from *Sturnus roseus*): A, female; *Philopterus cincli* (Denny, 1842) (from *Cinclus cinclus*): B, male; C, female; *Philopterus crassipes* (Burmeister, 1838) (from *Nucifraga caryocatactes*): D, male.

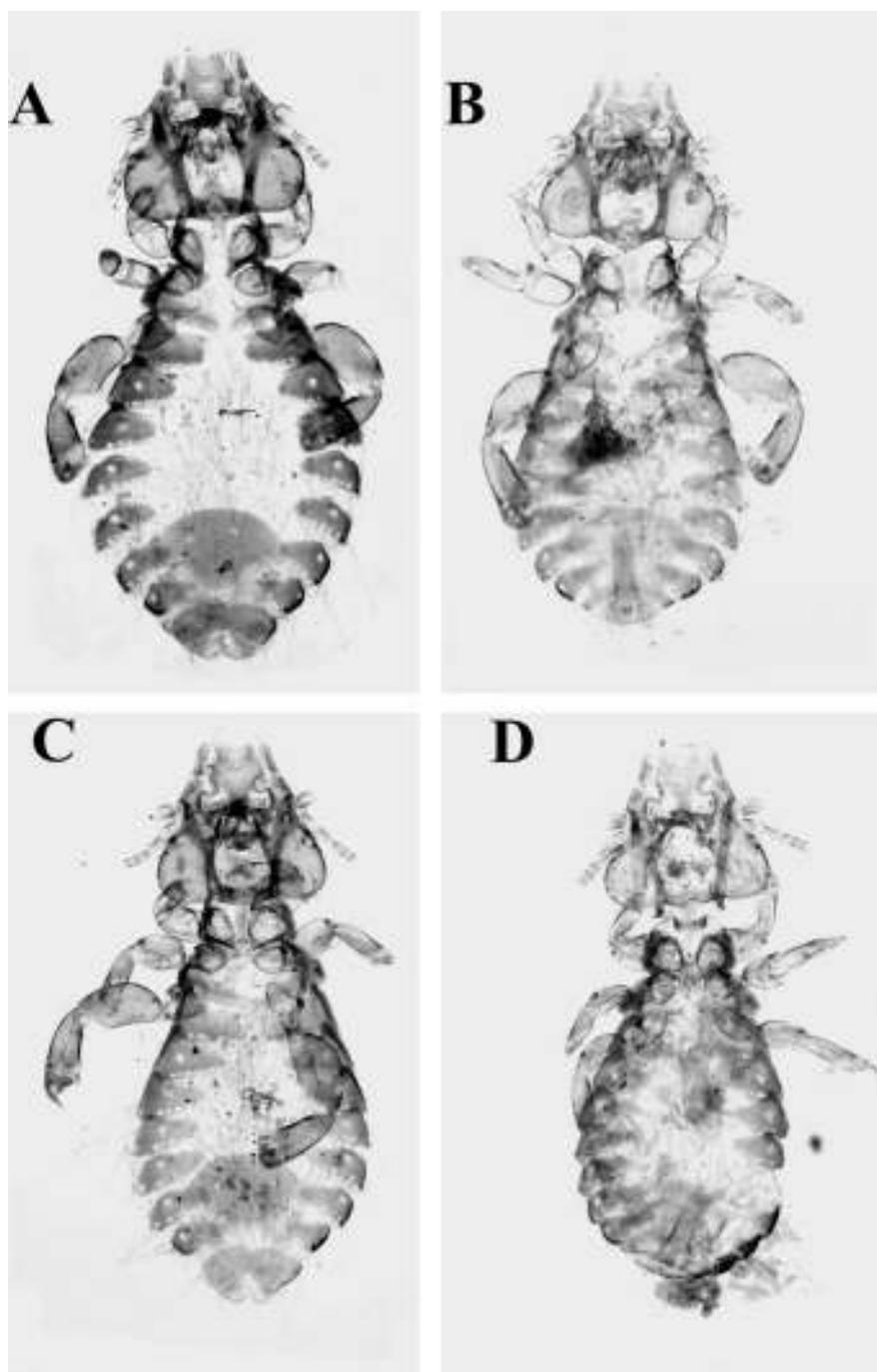


Fig. 15 – *Philopterus crassipes* (Burmeister, 1838) (from *Nucifraga caryocatactes*): A, female; *Philopterus cumulatus* (Zatorzycka, 1964) (from *Emberiza calandra*): B, male; C, female; *Philopterus curvirostrae* (Schrank, 1776) (from *Loxia curvirostra*): D, male.

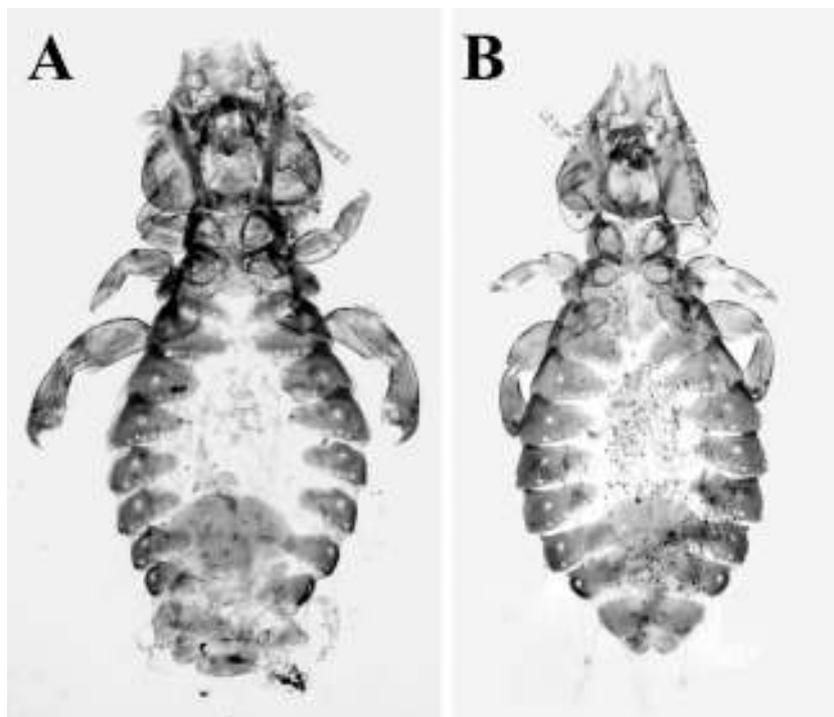


Fig. 16 – *Philopterus curvirostrae* (Schrank, 1776) (from *Loxia curvirostra*): A, female; *Philopterus excisus* Nitzsch, 1818 (from *Delichon urbica*): B, female.

#### DATE NOI PRIVIND FAUNA DE MALOFAGE (PHTHIRAPTERA: AMBLYCERA, ISCHNOCERA) DIN ROMÂNIA. PARTEA II

##### REZUMAT

În perioada 10.03.1996 – 19.07.2003 am colectat malofage (Phthiraptera: Amblycera, Ischnocera) din mai multe puncte de pe teritoriul României. Din cele 31 de păsări examinate (aparținând la 11 specii din cadrul a 10 familii), am găsit malofage doar pe 26 de exemplare (aparținând la 8 specii din cadrul a 8 familii). Am colectat un număr total de 235 exemplare de malofage, pe care le-am determinat ulterior ca aparținând la 12 specii și 6 genuri. Comparând rezultatele noastre cu datele din literatura de specialitate avută la dispoziție, am constatat că speciile *Myrsidea quadrimaculata* (Carriker, 1902) (Figs 4, 5, 12 C) și *Ricinus major* Fresca, 1924 (Figs 8, 9, 13 B) reprezintă semnalări noi pentru fauna entomologică a României. De asemenea, semnalăm pentru a doua oară prezența unei specii a genului *Myrsidea* Waterston, 1915 (Figs 6, 7, 12 D) pe *Delichon urbica*, confirmând în felul acesta și prima semnalare care a fost făcută de Bechet (1961 a) și care a fost omisă la întocmirea ultimei liste a speciilor de malofage (Price et al., 2003). De asemenea, specia *Philopterus cumulatus* (Złotorzycka, 1964) (Figs 10, 11, 15 B, C) semnalată de noi acum pe *Emberiza calandra*, a mai fost semnalată în România, pe aceeași gazdă, de Vasiliu (1946) sub numele de *Docophorus subflavescens citrinellae* și de Bechet (1961 a) sub numele de *Philopterus citrinellae*.

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