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Mallophaga parasitizing *Passeriformes* and *Pici*
 III. *Philopterinae**

Mallophaga pasożytujące na *Passeriformes* i *Pici*
 III. *Philopterinae*

Philopterinae Burmeister, 1838 together with *Brueeliinae* Wd. Eichler belong according to the system of Eichler 1963 to the family *Philopteridae* Burm.

List of species discussed:
 Subfamily *Philopterinae* (Burm.)
 Genus: *Cinloecus* Wd. Eichl.

x *cincli* (Denny)** — *Cinclus c. cinclus* (L.)

Genus: *Cypseloecus* Conci

excisus (Nitzsch) — *Delichon u. urbica* (L.)
 xx *hirundinis* (Piag.) — *Hirundo rustica* L.

Genus: *Docophorulus* Wd. Eichl.

xx *alexanderkoenigi* Wd. Eichl. — *Galerida c. cristata* (L.)
 xx *bischoffi* Wd. Eichl. — *Turdus pilaris* L.
 xx *capillatus* sp. n. — *Muscicapa h. hypoleuca* (Pall.)
 xx *chloridis* (Schr.) — *Chloris ch. chloris* (L.)
citrinellae (Schr.) — *Emberiza c. citrinella* L.
 xx *coarctatus coarctatus* (Scop.) — *Lanius collurio* L.
 xx *coarctatus fuscicollis* (Burm.) — *Lanius e. excubitor* L.

* Further parts of *Mallophaga* parasitizing *Passeriformes* and *Pici* will appear in this journal and bear the subtitles as follows:

IV. *Menacanthinae*, *Ricinidae*, *Degeeriellinae*;

V. Problems of linked evolution of parasites and hosts.

** Sign "xx" is used for species known from Poland on the basis of my collection. "x" is for species described on the basis of specimens obtained from Prof. Wd. Eichler, DDR. Species which bear no sign are known to me from literature only.

- xx *cumulatus* sp. n. — *Emberiza c. calandra* L.
 xx *curvirostrae* (Schr.) — *Loxia c. curvirostra* L.
 xx *desertus* sp. n. — *Muscicapa s. striata* (Pall.)
 xx *emiliae* (Balát) — *Prunella c. collaris* (Scop.)
 xx *fortunatus* sp. n. — *Fringilla c. coelebs* L.
 xx *fringillae* (Scop.) — *Passer d. domesticus* (L.)
 garrulae (Piag.) — *Bombycilla garrulus* (L.)
 x *hamatus* (Pack.) — *Plectrophenax nivalis* (L.)
 hanzaki (Balát) — *Anthus s. spinoletta* (L.)
 xx *linariae* (Piag.) — *Carduelis f. flammea* (L.)
 lineatus (Gieb.) — *Certhia b. brachyactyla* Brehm
 xx *merulae* (Denny) — *Turdus m. merula* L.
 xx *mirificus* sp. n. — *Acrocephalus palustris* (Bechst.)
 xx *modularis* (Denny) — *Prunella modularis occidentalis* (Hart.)
 xx *montani* n. nov. pro *Docophorus*
 fringillae Denny (nec Scop.) — *Passer montanus* (L.)
 xx *necopinatus* sp. n. — *Acrocephalus schoenobaenus* (L.)
 ornatus (Nitzsch) — *Oriolus o. oriolus* (L.)
 pallescens (Denny) — *Parus palustris dresseri* Stejn.
 "pallescens" (Denny) — *Parus major newtoni* Prazak
 xx *passerinus* (Denny) — *Motacilla alba* L.
 pavidus n. nov. pro *Docophorus*
 passerinus Denny (nec *passerinus*)
 Denny from *Motacilla alba* L.) — *Motacilla flava* L.
 xx *pyrrhulae* (Schr.) — *Pyrrhula pyrrhula europaea* Vieill.
 xx *vapax* sp. n. — *Fringilla montifringilla* L.
 xx *reguli* (Denny) — *Regulus regulus* (L.)
 xx *residuus* sp. n. — *Emberiza schoeniclus* (L.)
 rubeculae (Denny) — *Erethacus rubecula melophilus* Hart.
 xx *rutteri* (Kellogg) — *Parus atricapillus occidentalis* Baird.
 timmermanni sp. n. — *Turdus musicus coburni* Sharpe
 trigonophorus (Gieb.) — *Lanius senator* L.
 xx *turdi* (Denny) — *Turdus ericetorum philomelos* Br.
 xx *vernus* sp. n. — *Turdus v. viscivorus* L.
 x *vultuosus* sp. n. — *Anthus t. trivialis* (L.)

Genus: *Philopterus* Nitzsch

- xx *atratus* Nitzsch — *Corvus f. frugilegus* L.
 xx *corvi* (L.) — *Corvus c. corax* L.
 xx *crassipes* (Burm.) — *Nucifraga c. caryocatactes* (L.)
 xx *garruli* Bois. et Lac. — *Garrulus glandarius* (L.)
 xx *guttatus* (Denny) — *Coloeus monedula spermologus* Vieill.
 xx *ocellatus* (Scop.) — *Corvus corone sardonius* Klein.
 xx *picae* (Denny) — *Pica p. pica* (L.)
 thryptocephalus (Kell. et Paine) — *Pyrrhocorax graculus* (L.)

Subfamily *Philopterinae* (Burmeister, 1838)

Stocky in structure. Head large in proportion to the rest of body. Zygomatic clypeal signature and the pigment spots of characteristic structure. On the sides of head are always present the trabeculae. These are motile appendages, absent in *Brueeliinae*. Legs strong and different in size. The biggest, especially in females, are those of III pair. Abdomen stocky, with distinct tergo-pleural plates. Male genital apparatus similar in all genera, with a massive basal part and short, digitiform parameres, which are spread out widely. The female genital plate large, mushroom-like in form.

Genus *Philopterus* Nitzsch, 1818

Species typica: *Philopterus ocellatus* "Nitzsch" from *Corvus corone*.

Medium size, but bigger than *Docophorus* Wd. Eichler. Head large, always elongated. Clypeal signature bigger than in *Docophorus*, and its tongue-shaped ending is wider and elongated triangular. Abdomen oval, in male shorter than in female. Tergopleural plates of the segments i to vii dark, with colorless fenestrae on the stigmata. On the first three pairs of plates these fenestrae are rather big, on the next ones gradually diminishing in size.

Occurrence: *Corvidae*.

Philopterus atratus Nitzsch, 1818

Typical host: *Corvus frugilegus frugilegus* L.

A thorough description of male and female, especially as to the chaetotaxis of abdomen was given by Clay et Hopkins 1960 (Figs. 49, 50, 51, 52).

Material examined from *Corvus f. frugilegus* L.: Wrocław and the environments: 1 larva, 21.I.1951; 9 larvae, 26.XI.1951; 19 ♂♂, 53 ♀♀, 41 larvae, 15.I.1952; 8 larvae, 13.III.1953; 10 ♂♂, 10 ♀♀, 21 larvae, 20-21.II.1955; 8 ♂♂, 13 ♀♀, 12 larvae, 10-12.II.1956; 2 ♀♀, 1 larva, 4.II.1960; 2 ♂♂, 7 ♀♀, 4 larvae, 23.II.1961; 2 larvae, 10.III.1961; the whole material leg. Złotorzycka from birds shot or found dead. Szczecin: 5 ♂♂, 6.II.1961; 2 larvae, 1961; leg. Noskiewicz.

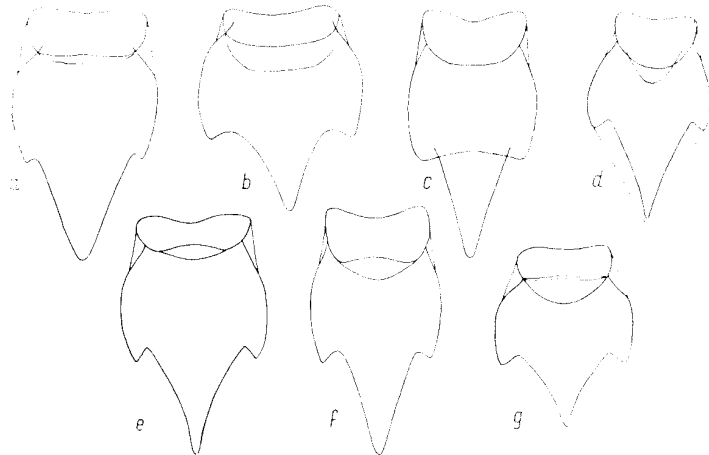


Fig. 1. Clypeal signature in *Philopterus* sp. sp.: a — *P. atratus* Nitzsch ♀ from *C. frugilegus* L., prep. 1/c/47-6; b — *P. corvi* (L.) ♀ from *C. c. corax* L., prep. 1/a/9; c — *P. crassipes* (Burm.) ♀ from *N. caryocatactes* (L.), prep. 1/H/1-2; d — *P. garruli* Bois et Lac. ♂ from *G. g. glandarius* (L.), prep. 1/f/1-1; e — *P. guttatus* (Denny) ♀ from *C. monedula* L., prep. 1/d/23-2; f — *P. ocellatus* (Scop.) ♀ from *C. c. cornix* L., prep. 1/b/1-4; g — *P. picae* (Denny) ♂ from *P. p. pica* (L.), prep. 1/e/3; × 135

The known features are complemented here by the drawing of clypeal signature (Fig. 1a).

Philopterus corvi (Linnaeus, 1758)

Syn.: *Nirmus adustus* Olfers, 1816 from *Corvus c. corax* L.; *Docophorus semisignatus* Denny, 1842 from *Corvus c. corax* L.; *Nirmus coracis* Denny, 1852, nom. nov. for *Docophorus semisignatus* Denny; *Docophorus distinctus* Kellogg, 1896 from *Corvus corax sinuatus* Wagl.

Typical host: *Corvus corax corax* L.

A new, concise description in Clay et Hopkins 1950. A description of "*Philopterus semisignatus* Denny" was given by Knechtel et Cătuneanu 1938. They gave *Corvus c. corax* L. as its host while for *Philopterus corvi* L. they gave as hosts *Corvus f. frugilegus* and *Coloëus monedula collaris*. Still, because from *Corvus frugilegus* there was already described *Ph. atratus* Nitzsch and from *Coloëus monedula*—*Ph. guttatus* (Denny), the description given by Knechtel et Cătuneanu, 1938 is worth less as far as identification of the species they had in mind is concerned. Anyway, I do not think that it was *Philopterus corvi* (L.).

Ph. corvi was first reported from Poland under the name *Docophorus semisignatus* Denny by Kéler 1939.

Material examined from *Corvus c. corax* L.: 10 ♂♂, 7 ♀♀, 2 larvae, Częstochowa, 23.I.1956, leg. Dąbrowski.

In complement of the characters already known I give here a drawing of the clypeal signature (Fig. 1b).

Philopterus crassipes (Burmeister, 1838)

Syn.: *Philopterus crassiceps* Harrison, 1916. Nom. nov. for *Ph. crassipes* (Burm.).

Typical host: *Nucifraga caryocatactes caryocatactes* (L.).

First reported from Poland by Kéler 1939.

Material examined from *Nucifraga caryocatactes* (L.): 1 ♂, 1 ♀, Śląsk (no exact data) from an old skin from the Zoological Museum, Wrocław University. Leg. Zlotorzyczna 1954.

<i>Philopterus crassipes</i> (Burm., 1838)	♂ 1/H/1-1			♀ 1/H/1-2		
	long.	lat.	index	long.	lat.	index
Cephalon	0.60	0.57	105	0.58	0.59	98
Prothorax	0.21	0.27		0.21	0.30	
Mesometathorax	0.18	0.42		0.22	0.47	
Abdomen	0.68	0.62		0.68	0.71	
Longitudo totalis	1.49			1.51		

Relatively small. Clypeal signature as in Fig. 1c. Forehead markedly narrowing anteriorly. Trabeculae rather small. Thorax deeply, triangularly cutting into the abdomen. Abdomen in both sexes stocky. Tergopleural plates with small fenestrae. The last segments arched anteriorly. Genital segment short.

Philopterus garruli Boisduval et Lacordaire, 1835

Syn.: *Docophorus fulvus* Burm., 1838 from *Garrulus g. glandarius* (L.); *Nirmus glandarii* Denny, 1852. Nom. nov. for *Docophorus fulvus* Burm.

Typical host: *Garrulus glandarius* (L.).

Material examined from *Garrulus g. glandarius* (L.): Opatowice near Wrocław: 2 ♂♂, 2 ♀♀, 9.II.1951, leg. Zlotorzyczna. Pomorze (lake Bukowo, district Slawno): 2 ♀♀, 3 larvae, 12.X.1961; (Zelistrzewo) 1 larva, 5.IX.1962, leg. Gromadzki.

<i>Philopterus garruli</i> Bois. et Lac., 1835	♂ 1/6/1-1			♀ 1/6/15		
	long.	lat.	index	long.	lat.	index
Cephalon	0.58	0.52	111	0.62	0.58	107
Prothorax	0.23	0.23		0.23	0.34	
Mesometathorax	0.24	0.46		0.23	0.51	
Abdomen	0.69	0.69		1.09	0.81	
Genitalia	0.27					
Longitudo totalis	1.49			2.01		

Head large and elongated. The preantennal part shorter than the postantennal one. Clypeal signature as in Fig. 1d. Trabeculae wide, bluntly ended. Temples rounded. Occiput convex. Male abdomen oval, that of a female more elongated. Tergopleural plates with medium sized fenestrae on the stigmata. Male genital apparatus with its basal part relatively long and slender.

Philopterus guttatus (Denny, 1842)

Syn.: *Philopterus serratus* Gerv., 1844 from *Coloëus m. spermologus* (Vieill.); *Nirmus monedulae* Denny, 1852, nom. nov. for *Docophorus guttatus* Denny.

Typical host: *Coloëus monedula spermologus* (Vieill.).

Material examined from *Coloëus monedula* (L.): Wrocław: 4 larvae, 6.II.1951: 1 ♂, 1 ♀, 6 larvae, 28.XI.1952; 1 ♀, 11.II.1956; 1 larva, 10.III.1961; leg. Zlotorzyczna.

<i>Philopterus guttatus</i> (Denny, 1842)	♂ 1/d/23-1			♀ 1/d/23-2		
	long.	lat.	index	long.	lat.	index
Cephalon	0.61	0.58	105	0.62	0.63	98
Prothorax	0.22	0.32		0.25	0.34	
Mesometathorax	0.18	0.46		0.23	0.53	
Abdomen	0.77	0.71		1.14	0.83	
Genitalia	0.29					
Longitudo totalis	1.64			2.04		

General coloring yellowish. Pigment spots dark brown. Head large with broad temporal region and markedly narrowed forehead, terminated with a high, semicircular, hyaline pellicle. Clypeal signature (Fig. 1e) big, similar as in *Philopterus picae*, but different in color. Inside of the signature is very light, while the edges and the tongue-shaped process are dark brown. Trabeculae long and slender. Male genital apparatus with its basal part massive and the parameres small and thin. Endomeres not much smaller than the parameres, dark brown. Female bigger and more slender than the male, with the fenestrae on the tergopleural plates of abdomen slightly greater.

Philopterus ocellatus (Scopoli, 1763)

Syn.: *Pediculus cornicis* J. C. Fabr., 1775. Nom. nov. for *Pediculus ocellatus* Scop.: *Docophorus rotundatus* Piag., 1880 (p. 47, nec p. 21) from *Corvus c. corone* L.

Typical host: *Corvus corone sardonius* Kleinsch.

Short, but illustrated description in Clay et Hopkins 1951 (Figs. 9, 11, 12). Besides, good drawing can be found in Neuffer 1954 and Blagoveshčenskij 1959.

Material examined (a) from *Corvus corone cornix* L.: Wrocław and the environment: 2 ♂♂, 4 ♀♀, 1.II.1952; 2 ♂♂, 4 ♀♀, 4 larvae, 29.VIII.1951; 8 ♂♂, 4 ♀♀, 9 larvae, 15.XII.1953. Ruda Sutovska near Milicz: 5 ♂♂, 13 larvae, 21.XI.1953, leg. Zlotorzyczka.

(b) from *Corvus corone corone* L.: 1 ♂, Germany, II.1951; 1 ♀, Merseburg, Germany, 15.IV.1949, leg. R. Piechocki, coll. Wd. Eichler.

In addition to the known characters I give here a drawing of the clypeal signature (Fig. 1f).

Philoater pica (Denny, 1842)

Syn.: *Docophorus subcrassipes* Nitzsch, 1866 from *Pica p. pica* (L.).

Typical host: *Pica pica pica* (L.).

Extensive description was given by Knechtel et Cătuneanu 1938.

Material examined from *Pica p. pica* (L.): Wrocław and the environment: 1 ♂, 9 ♀♀, 10 larvae, 5.III.1951; 24 ♂♂, 8 ♀♀, 23 larvae, 2.VI.1951; 13 ♂♂, 12 ♀♀, 15.VII.1952; 8 ♂♂, 7 ♀♀, 23 larvae, 31.III.1953. Syców near Oleśnica: 1 ♂, 1 ♀, 31.IV.1959, leg. Zlotorzyczka.

To the features already known I add here a drawing of the clypeal signature (Fig. 1g).

Philoater thryptocephalus (Kellogg et Paine, 1914)

Typical host: *Pyrrhocorax graculus* (L.).

As *Pyrrhocorax graculus* L. was accidentally noted in Poland, *Ph. thryptocephalus* may be counted into the Polish fauna.

Genus *Docophorus* Wd. Eichler, 1944

Species typica: *Docophorus communis passeris* Piag. from *Passer domesticus* (L.).

This genus is related to *Philoater* Nitzsch, but smaller. The clypeal signature finer, especially in the region of the hind tongue-shaped process, varying in structure in different species. The species from *Turdidae* have the clypeal signature ended flat in front, while all others, with the exception of *D. pyrthulae* (Schr.), have the signature more or less notched at the end. Smaller and more elongated signatures have the species known from *Muscicapidae*. Tergopleural plates with clearly visible, light postulae which are not enlarged into bigger fenestrae as it is in *Philoater* Nitzsch.

Occurrence: Oriolidae, Fringillidae, Alaudidae, Sylviidae, Certhiidae, Laniidae, Muscipidae, Paridae, Sittidae, Turdidae and Bombycillidae.

Docophorus alexanderkoenigi Wd. Eichler, 1953

Syn.: *Sturnidoecus chendoola* Ansari, 1958 from *Galerida cristata chendoola* Frank.

Typical host: *Galerida cristata cristata* (L.).

Eichler 1953 regarded this species as standing on the very borderline of the genus *Docophorus*. Ansari 1958 placed his "*S. chendoola* Ansari" incorrectly in the genus *Sturnidoecus*. The description given by Ansari, and in particular the part dealing with the male genital apparatus structure (Text-fig. 101 and 102) implied that this was *Docophorus*. It said that the basal part of the male genitalia was eight times as big as the parameres. The size

proportions in *Sturnidoecus* are entirely different. The parameres of *D. alexanderkoenigi* are characteristically pointed (Fig. 2a), while those of other species of *Docophorus* are always blunt and digitiform. As *S. chendoola* has also the parameres pointed and resembles the *D. alexanderkoenigi* in habitus, I regard it as synonymous with the latter. It is possible, though, that it is a separate subspecies of *D. alexanderkoenigi*.

<i>Docophorus alexanderkoenigi</i> Wd. Eichl., 1953	♂ WEC 7568c			WEC 7568b		
	long.	lat.	index	long.	lat.	index
Cephalon	0.52	0.52	100	0.55	0.55	100
Prothorax	0.23	0.29		0.23	0.32	
Mesometathorax	0.19	0.46		0.21	0.51	
Abdomen	0.81	0.67		0.97	0.75	
Genitalia	0.23					
Longitudo totals	1.66			1.84		

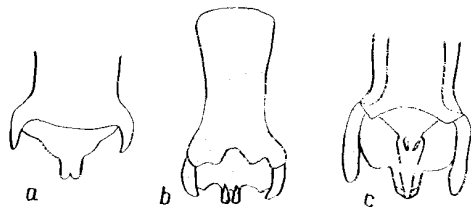


Fig. 2. Male genital apparatus in *Docophorus* sp. sp.: a — *D. alexanderkoenigi* Wd. Eichl. from *G. cristata* (L.), prep. WEC 7568; b — *D. capillatus* sp. n. (Holotype) from *M. h. hypoleuca* (Pall.), prep. 16/b/4; c — *D. coarctatus fuscicollis* (Burm.) from *L. e. excubitor* L., prep. 15/d/1-3; × 250

Material examined from *Galerida cristata* (L.): 1 ♂, 1 ♀, leg. Kummerlove, coll. Wd. Eichler; 1 ♀, Wolin near Szczecin, 31.VII.1961, leg. E. Wolk.

Forehead slightly narrowing anteriorly, ended with a slightly concave hyaline pellicle. Clypeal signature large. Trabeculae well developed. Abdomen oval elongated. Male genital apparatus as in Fig. 2a.

Docophorus bischoffi Wd. Eichler, 1951

Typical host: *Turdus pilaris* L.

Described as "*D. merulae bischoffi*" on one female coming from Białowieża, Poland, leg. H. Bischoff 1917/1918. I regard it as a species as in my opinion it does visibly differ from *D. merulae* from *Turdus merula* L.

Material examined from *Turdus pilaris* L.: 1 ♀, Opatowice near Wrocław, 27.XI.1951, leg. Zlotorzyczka from a shot bird.

Female of medium size, fairly slender. Head with the preantennal part somewhat longer than the postantennal one. Clypeal signature (Fig. 3a) more elongated than in *D. merulae* (Denny). Trabeculae medium sized, broad, blunt

at the end. Prothorax relatively narrow. Mesometathorax with the lateral margins convex, deeply cutting into the abdomen. Abdomen broad, oval, the last segment in female very small.

<i>Docophorus bischoffi</i> Wd. Eichl., 1951	♀ 14/d/1		
	long.	lat.	index
Cephalon	0.53	0.45	118
Prothorax	0.19	0.28	
Mesometathorax	0.24	0.43	
Abdomen	0.86	0.70	
Longitudo totalis	1.63		

Docophorus capillatus sp. n.

Typical host: *Muscicapa hypoleuca hypoleuca* (Pall.).

Material examined: 1 ♂ (holotype, coll. mea) from preparation 16/b/4, Skowronki (Mierzeja Wiśłana), 8.IX.1962, leg. Zlotorzycska from a shot bird. Paratypes: 1 ♀ from the same bird as holotype, 1 ♂ (damaged), Hel, 30.IX.1962; 1 ♂, 1 ♀, Hel, 5.V.1963, leg. Busse from live birds; 1 ♂, 1 ♀ (without the locality given) coll. Wd. Eichler.

Other materials: 1 larva, Skowronki (Mierzeja Wiśłana) near Gdańsk, leg. Zlotorzycska; 2 larvae, Hel, 5.V.1963, leg. Busse.

<i>Docophorus capillatus</i> sp. n.	♂ holotypus			♀ paratypus 16/b/2		
	long.	lat.	index	long.	lat.	index
Cephalon	0.41	0.38	108	0.47	0.42	112
Prothorax	0.15	0.22		0.18	0.26	
Mesometathorax	0.13	0.33		0.15	0.38	
Abdomen	0.61	0.50		0.92	0.61	
Genitalia	0.17					
Longitudo totalis	1.18			1.60		

Habitus as in Phot. 1, 2. General coloring dull yellow. Preantennal part of head shorter than the postantennal. Clypeal signature as in Fig. 3b. Trabeculae relatively narrow, sharply pointed. Abdomen elliptic. The triangular tergo-pleural plates of the first three segments big and regularly overlapping one another. The plates of segments iv to vii smaller and set at a distance from each other. Male genital apparatus as in Fig. 2b. Male abdomen with longer hair than that of a female.

Docophorus chloridis (Schrank, 1776)

Typical host: *Chloris chloris chloris* (L.).

Material examined from *Chloris ch. chloris* (L.): 3 larvae, Wrocław, III.1953, leg. Zlotorzycska.

The length of a larva 1.5 mm. Forehead somewhat elongated. Clypeal signature large. Thorax fairly broad. Third pair of legs very big in proportion to the other ones.

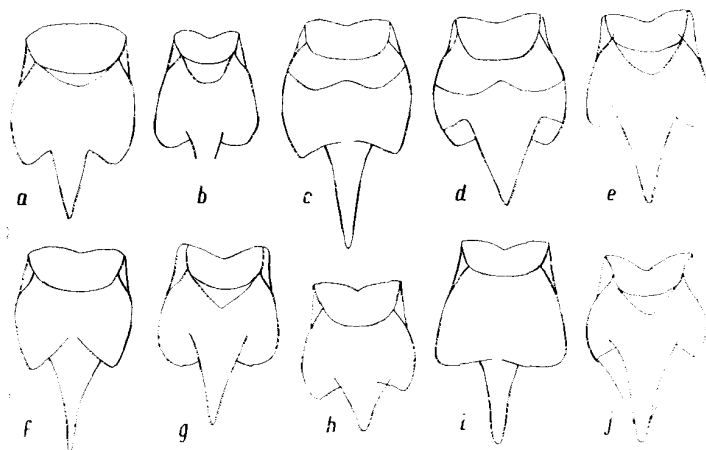


Fig. 3. Clypeal signature in *Docophorus* sp. sp.: a — *D. bischoffi* Wd. Eichl. ♀ from *T. pilaris* L., prep. 14/d/1; b — *D. capillatus* sp. n. ♀ (Paratype) from *M. h. hypoleuca* (Pall.), prep. 16/b/2; c — *D. coarctatus* (Scop.) ♀ from *L. c. collurio* L., prep. 15/a/15; d — *D. coarctatus fuscicollis* (Burm.) ♀ from *L. c. excubitor* L., prep. 15/d/1-5; e — *D. cumulata* sp. n. ♀ (Paratype) from *E. c. culandra* L., prep. 4/y/2-5; f — *D. curvirostrae* (Schr.) ♀ from *L. c. curvirostra* L., prep. 4/a/1; g — *D. fortunata* sp. n. ♀ (Paratype) from *F. c. coelebs* L., prep. 4/p/6-5; h — *D. fringillae* (Scop.) ♂ from *P. d. domesticus* (L.), prep. 4/s/1; i — *D. hamatus* (Pack.) ♂ from *P. n. nivalis* (L.), prep. WEC 3032; j — *D. hvariae* (Piag.) ♀ from *C. f. flamma* (L.), prep. 4/m/2; × 135

Docophorus citrinellae (Schrank, 1776)

Syn.: *Ricinus emberizae* De Geer, 1778 from *Emberiza c. citrinella* L.

Typical host: *Emberiza citrinella citrinella* L.

According to Clay et Hopkins 1954 this species has an elongated forehead, and a relatively big clypeal signature of characteristic shape. Male genital apparatus with short sacciform parameres.

Docophorus coarctatus coarctatus (Scopoli, 1763)

Syn.: *Pediculus lanii* J. C. Fabricius, 1798 from *Lanius collurio* L.; *Pediculus collurionis* Schrank, 1803 from *Lanius collurio* L.

Typical host: *Lanius collurio* L.

Clay et Hopkins 1951 reported that the "neoholotype" and "neoalecto-type", kept in the British Museum, came from Yugoslavia, and some of the

"neoparatypoids" from Poland. These authors gave an extensive description of this species provided with numerous drawings (Fig. 3-7), and placed it near *D. fringillae* from *Passer domesticus*. Another description, detailed but devoid of illustrations, was given by Eichler 1953.

Material examined from *Lanius c. collurio* L.: Zawiercie: 2 ♂♂, 4 ♀♀, 20 larvae, 31.VII.1953, leg. Dąbrowski; Ruda Sulowska near Milicz: 1 ♂, 22.VI.1952; Górki Wschodnie near Gdańsk: 40 ♂♂, 17 ♀♀, 31 larvae, 19.VII.—18.VIII.1961; leg. Zlotorzyczka; 18 ♂♂, 16 ♀♀, 9 larvae, 7.VII.1962, leg. Zajac. Skowronki, Mierzeja Wiślana: 3 ♀♀, 4 larvae, 14.IX.1962, leg. Witkowski. Międzyzdroje near Szczecin: 2 ♂♂, 5 ♀♀, 12.VI.1961, leg. E. Wolk.

In addition to the characters already known I give a drawing of the clypeal signature (Fig. 3c).

Docophorus coarctatus fuscicollis (Burmeister, 1838)

Typical host: *Lanius excubitor excubitor* L.

A brief description, together with designation of neotype was given by Eichler 1953.

<i>Docophorus coarctatus fuscicollis</i> (Burm., 1838)	♂ 15/d/1—3			♀ 15/d/1—5		
	long.	lat.	index	long.	lat.	index
Cephalon	0.46	0.47	98	0.50	0.54	93
Prothorax	0.21	0.28		0.24	0.31	
Mesometathorax	0.16	0.41		0.20	0.46	
Abdomen	0.73	0.54		0.90	0.71	
Genitalia	0.23					
Longitudo totalis	1.39			1.65		

Material examined from *Lanius c. excubitor* L.: Wrocław and the environment: 3 ♂♂, 3 ♀♀, 2 larvae, 11.III.1954; 6 ♂♂, 10 ♀♀, 8 larvae, 23.II.1956, leg. Zlotorzyczka. Kołczewo (Pomorze): 1 ♀, 1 larva, 6.XI.1962, leg. E. Wolk.

Preantennal part of head relatively wide and shorter than the postantennal one. Clypeal signature (Fig. 3d) resembling that of the nominal form. Trabeaculæ thick and slightly longer than in the nominal form. Third pair of legs in both sexes not much bigger than the pairs I and II. Male genital apparatus (Fig. 2c) of medium size. Parameres longer than in *D. c. coarctatus*.

Docophorus cumulatus sp. n.

Typical host: *Emberiza calandra calandra* L.

Material examined: 1 ♂ (holotype, coll. mea) from the preparation 4/y/2-1, Jordanów near Bolesławiec, 8.IV.1951, leg. Zlotorzyczka. Paratypes: 6 ♂♂, 19 ♀♀, from same bird as holotype; Wrocław: 1 ♀, 19.II.1955; 5 ♂♂, 14 ♀♀, 5.III.1961; 1 ♂, 20.III.1961; leg. Zlotorzyczka. Other materials: 44 larvae, Jordanów near Bolesławiec, 8.IV.1951; Wrocław: 3 larvae, 19.II.1955; 24 larvae, 5.III.1961; 4 larvae, 20.III.1961; leg. Zlotorzyczka.

Habitus as in Phot. 3, 4. Coloring chestnut-brown. Forehead distinctly narrowing anteriorly, with the lateral margins slightly concave. Head ended in front by a wide, colorless pellicle, a little concave as it is in *D. citrinellae*. Clypeal signature as in Fig. 3e. Trabeaculæ broad, of medium length. Temples usually semicircular, brown. Prothorax slightly flattened. Mesometathorax with rounded angles. Abdomen with its tergopleural plates relatively narrow. Male genital apparatus similar to that of *D. citrinellae*, but the parameres somewhat longer.

<i>Docophorus cumulatus</i> sp. n.	♂ holotypus			♀ paratypus 4/y/2—5		
	long.	lat.	index	long.	lat.	index
Cephalon	0.51	0.49	104	0.55	0.52	106
Prothorax	0.19	0.26		0.19	0.27	
Mesometathorax	0.20	0.43		0.20	0.45	
Abdomen	0.82	0.57		1.00	0.74	
Genitalia	0.24					
Longitudo totalis	1.56			1.78		

Docophorus curvirostrae (Schrank, 1776)

Syn.: *Docophorus compar* Paget, 1880 from *Loxia curvirostra* L.

Typical host: *Loxia curvirostra curvirostra* L.

Material examined from *Loxia c. curvirostra* L.: Żelistrzewo (Pomorze): 1 ♀, 13 larvae, 17.IX.1962; 3 larvae, 12-15.IX.1962; leg. Gromadzki. Hel: 4 ♂♂, 1 larva, 9.IX.1962, leg. Busse. All materials from live birds.

<i>Docophorus curvirostrae</i> (Schrank, 1776)	♂ 4/a/25			♀ 4/a/1		
	long.	lat.	index	long.	lat.	index
Cephalon	0.49	0.45	109	0.50	0.49	102
Prothorax	0.18	0.25		0.18	0.25	
Mesometathorax	0.18	0.42		0.20	0.45	
Abdomen	0.67	0.50		0.78	0.66	
Genitalia	0.23					
Longitudo totalis	1.30			1.49		

Both male and female small, with a relatively big head and stocky abdomen. Forehead markedly narrowing anteriorly, lateral margins a little concave. Head ended in front by a short hyaline pellicle. Clypeal signature as in Fig. 3f. Trabeaculæ big. Temples broad, semicircular. Abdomen in both sexes remarkably widening at about half its length. Genital segments in both sexes narrow. The last segment in male semicircular, slightly elongated; in female short, and usually twofold. General coloring brown.

Docophorus desertus sp. n.

Typical host: *Muscicapa striata striata* (Pall.).

Material examined: 1 ♀ (holotype, coll. mea) from the preparation 16/a/3, Skowronki (Mierzeja Wiślana) near Gdańsk, 10.IX.1962, leg. Zlotorzycza from a live bird. 1 ♀ (paratype), Zawiercie, VIII.1958, leg. Dąbrowski; 2 larvae, Skowronki (Mierzeja Wiślana) near Gdańsk, 6.IX.1962; 1 larva from the same birds as holotype, leg. Zlotorzycza.

<i>Docophorus desertus</i> sp. n.	♀ holotypus		
	long.	lat.	index
Cephalon	0.51	0.49	104
Prothorax	0.17	0.29	
Mesometathorax	0.18	0.43	
Abdomen	1.00	0.72	
Longitudo totalis	1.76		

This species (Phot. 5) resembles *D. capillatus* sp. n. from *Muscicapa hypoleuca*. The preantennal part of head shorter than the postantennal one. Head ended in front by a hyaline pellicle somewhat bent inwards. Clypeal signature

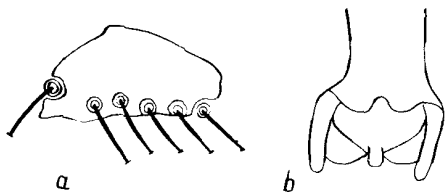


Fig. 4. a — 4th tergopleural plate (left) of *Docophorus desertus* sp. n. ♀ (Holotype) from *M. s. striata* (Pall.), prep. 16/a/3, × 180; b — male genital apparatus of *D. hamatus* (Pack.) from *P. n. nivalis* (L.), prep. WEC 3032, × 250

similar as in *D. capillatus*, but almost flat in front. Trabeculae medium sized, blunt. Abdomen elongated. Tergopleural plates of the first two segments large, regularly overlapping one another. In the next segments (iii—vii) the plates are small, obtusely ended (Fig. 4a).

Docophorus emiliae (Balát, 1955)

Typical host: *Prunella collaris collaris* (Scop.).

Original description comprised the male and female features, dimensions and a drawing of the clypeal signature. The author placed this species near

D. modularis (Denny) from *Prunella modularis*. Eichler 1953 expressed the opinion that there were no differences between the species of *Docophorus* living on *P. modularis* and *P. collaris* and simply included *D. emiliae* into *D. modularis*.

Docophorus fortunatus sp. n.

Typical host: *Fringilla coelebs coelebs* L.

Material examined: 1 ♂ (holotype, coll. mea) from the preparation 4/p/6-2, Kiełpino (Kartuzy) near Gdańsk, 18.V.1957. Paratypes: 6 ♀♀ from same bird as holotype. Wrocław and the environment: 4 ♀♀, 2.IV.1951; 8 ♀♀, 15.I.1953; leg. Zlotorzycza. Other materials: Wrocław and the environment: 4 larvae, 2.IV.1951; leg. Zlotorzycza. 17 larvae from same bird as the holotype.

<i>Docophorus fortunatus</i> sp. n.	♂ holotypus			♀ paratypus 4/p/6-5		
	long.	lat.	index	long.	lat.	index
Cephalon	0.45	0.41	110	0.50	0.48	104
Prothorax	0.17	0.24		0.21	0.29	
Mesometathorax	0.16	0.36		—	0.43	
Abdomen	0.61	0.54		0.94	0.68	
Longitudo totalis	1.30			1.69		

This species (Phot. 6, 7) resembles *D. residuus* sp. n. from *Emberiza schoenicus*. Clypeal signature (Fig. 3g) of medium size, brown. Trabeculae medium size. Occiput a little bent backwards. Thorax somewhat wider than the abdominal segment i. The third pair of legs of a male is about the same size as the pairs I and II, while that of a female is much bigger. Abdomen elliptic. The triangular tergopleural plates small, narrow, with large stigmata. Last segment in male transparent, semicircular, in female very small, with two triangular spots, usually twofold.

Docophorus fringillae (Scopoli, 1772)

Syn.: *Pediculus passeris* Fourc., 1785; *Docophorus passeris* Piaget, 1880 from *Passer domesticus* (L.).

Typical host: *Passer domesticus domesticus* (L.).

A brief description of this species in Clay et Hopkins 1951 (Figs. 43, 44).

<i>Docophorus fringillae</i> (Scop., 1772)	♂ 4/s/1			♀ 4/s/7		
	long.	lat.	index	long.	lat.	index
Cephalon	0.51	0.50	102	0.55	0.55	100
Prothorax	0.21	0.29		0.22	0.30	
Mesometathorax	0.18	0.44		0.17	0.46	
Abdomen	0.72	0.63		1.04	0.79	
Genitalia	0.29					
Longitudo totalis	1.44			1.84		

Material examined from *Passer d. domesticus* (L.): Wrocław: 2 ♂♂, 2 ♀♀, 1 larva, 30.V.1953; 1 ♂, 1 ♀, 13.IV.1959; 1 ♀, 25.V.1960; leg. Zlotorzycza. Międzyzdroje near Szczecin: 2 ♀♀, 6.XI.1962, leg. E. Wolk.

Forehead slightly concave at front. Clypeal signature as in Fig. 3h. Abdomen oval, somewhat narrowing posteriorly.

Docophorus garrulae (Piaget, 1880)

Typical host: *Bombycilla garrulus* (L.).

The description given by Piaget 1880 (p. 59, pl. 4, Fig. 7) informed that this species was stocky, with a relatively short and broad abdomen. Head in the temporal region broad, forehead markedly narrowing. Clypeal signature elongated.

Docophorus hamatus (Packard, 1870)

Syn.: *Philopterus fringillae* Timm., 1950 (nec Scop., 1772).

<i>Docophorus hamatus</i> (Pack., 1870)	♂ WEC 3032a			♀ WEC 3032f		
	long.	lat.	index	long.	lat.	index
Cephalon	0.53	0.50	107	0.59	0.56	105
Prothorax	0.20	0.31		0.24	0.34	
Mesometathorax	0.23	0.46		0.23	0.53	
Abdomen	0.81	0.74		1.12	0.83	
Genitalia	0.24					
Longitudo totalis	1.57			2.02		

Typical host: *Plectrophenax nivalis* (L.).

Timmermann 1950 gave a description of "fringillae" (Abb. 4a) from *Plectrophenax nivalis*, but from the drawing of a part of forehead it could be concluded that this was not *D. fringillae*. As *D. hamatus* was much earlier described from *Plectrophenax nivalis* I suppose that it was this species which Timmermann was referring to.

Material examined from *Plectrophenax nivalis nivalis* (L.): 1 ♂, 1 ♀, Hiddensee, Sandbank (Germany), 15.I.1953, leg. Baasch, coll. Wd. Eichler.

Male and female both larger than *D. fringillae*. Head large, elongated, of proportions similar in both sexes. Clypeal signature (Fig. 3i) at front bent inwards similarly as in *D. fringillae* but the remaining part much longer. Abdomen oval, relatively broad. The last segment in male flat, rounded. Male genital apparatus (Fig. 4b) with a characteristic paramerical part. The basal part narrow and long.

Docophorus hanzaki (Balát, 1955)

Typical host: *Anthus spinoletta spinoletta* (L.).

Original description comprised the male and female features, dimensions and a drawing of a much elongated clypeal signature. The author placed this species near to *D. fringillae* (Scop.).

Docophorus linariae (Piaget, 1885)

Typical host: *Carduelis flammea flammea* (L.).

Material examined from *Carduelis f. flammea* (L.): 1 ♂, 3 ♀♀, 2 larvae, Hel. 8.IV.1963, leg. Busse. 2 ♀♀, 3 larvae, Dziwnów (Pomorze), 22.XII.1961, leg. E. Wolk.

<i>Docophorus linariae</i> (Piaget, 1885)	♂ 4/m/1			♀ 4/m/2		
	long.	lat.	index	long.	lat.	index
Cephalon	0.48	0.41	117	0.51	0.49	104
Prothorax	0.18	0.24		0.20	0.28	
Mesometathorax	—	0.39		0.20	0.45	
Abdomen	0.65	0.57		0.91	0.66	
Genitalia	0.13					
Longitudo totalis	1.30			1.61		

Size medium. Clypeal signature as in Fig. 3j. Prothorax normal. Mesometathorax relatively short. Abdomen oval. Tergopleural plates of the first two segments large, those of the next ones much shorter and obtusely, almost semicircularly ended. Male genital apparatus tiny with thin, short parameres.

Docophorus lineatus (Giebel, 1874)

Typical host: *Certhia brachydactyla brachydactyla* Brehm.

According to the description of Giebel 1874 (S. 91) this species is close to *Docophorus citrinellae* (Schr.).

Docophorus merulae (Denny, 1842)

Syn.: (probably, according to Hopkins et Clay 1952): *Docophorus mandarinus* Gigl., 1864 from *Turdus merula mandarinus* (Bon.).

<i>Docophorus merulae</i> (Denny, 1842)	♂ 14/e/82			♀ 14/e/4		
	long.	lat.	index	long.	lat.	index
Cephalon	0.52	0.48	108	0.60	0.57	105
Prothorax	0.20	0.27		0.22	0.33	
Mesometathorax	0.18	0.42		0.25	0.51	
Abdomen	0.80	0.63		0.95	0.84	
Genitalia	0.25					
Longitudo totalis	1.54			1.79		

Typical host: *Turdus merula merula* L.

A brief description was given by Eichler 1951. He followed Timmermann 1950 in the opinion that this species lived also on *Turdus musicus coburni* and, moreover, he assigned here the species of *Docophorus* from *T. ericetorum philomelos* Brehm and from *T. v. viscivorus* L. He noticed, though, that the lice parasitizing different species of thrushes were not identical and supposed the possibility of their future separation into subspecies of *D. merulae*. In my opinion these are separate species distinctly differing from each other. I do therefore describe *Docophorus timmermanni* sp. n. from *Turdus musicus* and *D. vernus* sp. n. from *T. v. viscivorus*. Thus, for *Turdus ericetorum* is left *D. turdi* (Denny) while *Turdus merula* harbours *D. merulae* (Denny).

Material examined from *Turdus m. merula* L.: Wrocław: 2 ♀♀, 10 larvae, 26.VI.1952; 3 larvae, 5.IV.1954; leg. Zlotorzyczka. Hel: 1 ♀, 8.X.1962; 3 ♀♀, 25 larvae, 4.V.-15.IV.1963, leg. Busse from live birds. Międzyzdroje near Szczecin: 2 larvae, 10.XI.1961, leg. E. Wolk.

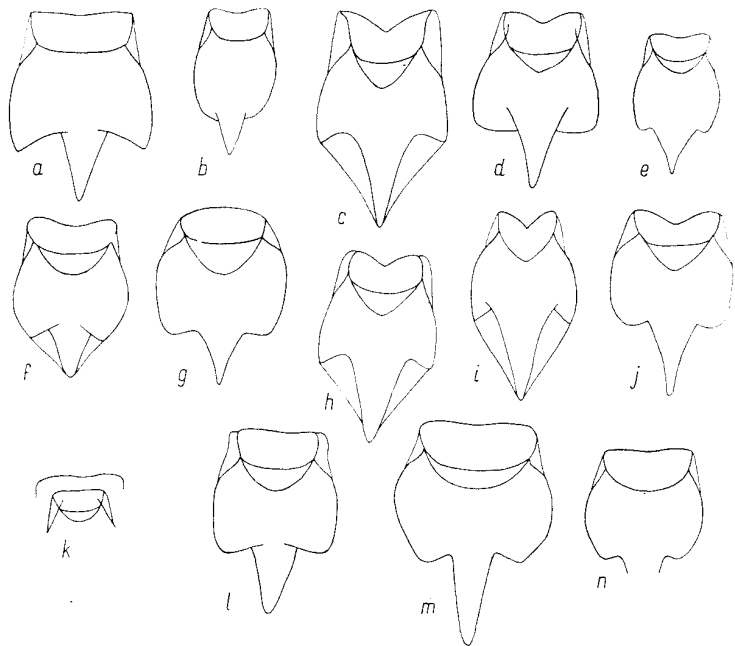


Fig. 5. Clypeal signature in *Docophorus* sp. sp.: a — *D. merulae* (Denny) ♀ from *T. m. merula* L., prep. 14/e/4; b — *D. mirificus* sp. n. ♂ (Holotype) from *A. palustris* (Bechst.), prep. 8/i/1; c — *D. modularis* (Denny) ♀ from *P. m. modularis* (L.), prep. 7/a/21; d — *D. montani* nom. nov. ♀ from *P. m. montanus* (L.), prep. 4/t/3; e — *D. necopinatus* sp. n. ♂ (Holotype) from *A. schoenobaenus* (L.), prep. 8/j/1; f — *D. passerinus* (Denny) ♀ from *M. alba* L., prep. 6/f/1-2; g — *D. pyrrhulae* (Schr.) ♀ from *P. p. pyrrhula* (L.), prep. 1/e/1; h — *D. rapax* sp. n. ♀ (Paratype) from *F. montifringilla* L., prep. 4/q/4; i — *D. reguli* (Denny) ♀ from *R. r. regulus* (L.), prep. 9/a/7; j — *D. residuus* sp. n. ♀ (Holotype) from *E. sch. schoeniclus* (L.), prep. 4/z/1; k — *D. timmermanni* sp. n. ♀ (Paratype) from *T. m. coburni* Sharpe, after Timmermann, 1950, Abb. 4b; l — *D. turdi* (Denny) ♀ from *T. e. philomelos* Brehm, prep. 14/a/6; m — *D. vernus* sp. n. ♀ (Paratype) from *T. v. viscivorus* L., prep. 14/c/14; n — *D. vultuosus* sp. n. ♂ (Holotype) from *A. t. trivialis* (L.), prep. WEC 2228b; × 135

Head relatively big, at front ended by a convex hyaline pellicle. Clypeal signature as in Fig. 5a. Trabeculae rather wide. Thorax normal. Abdomen broad, oval. Tergopleural plates relatively short. Female genital plate as in Fig. 6a.

Docophorus mirificus sp. n.

Typical host: *Acrocephalus palustris* (Bechst.).

Material examined: 1 ♂ (holotype, coll. mea) from the preparation 8/i/1, district Ostrow Mazowiecki, 7.VII.1954, leg. Jurczyk.

<i>Docophorus mirificus</i> sp. n.	♂ holotypus		
	long.	lat.	index
Cephalon	0.40	0.40	100
Prothorax	0.16	0.23	
Mesometathorax	—	0.28	
Abdomen	0.54	0.41	
Genitalia	0.15		
Longitudo totalis	1.10		

Male (Phot. 8) very small, olive-brown, which is not found in other species of *Docophorus*. Preantennal part of head shorter than the postantennal one. Forehead relatively broad, flat ended at front. Clypeal signature (Fig. 5b) narrow, with the tongue-shaped stripe relatively short. Trabeculae narrow and short. Tergopleural plates of abdomen dark brown. Male genital apparatus similar to that of other species of *Docophorus*.

Docophorus modularis (Denny, 1842)

Typical host: *Prunella modularis occidentalis* (Hart.).

A brief description was given by B a l á t 1955.

Material examined: from *Prunella m. modularis* (L.): Hel: 5 ♂♂, 9 ♀♀, 13 larvae, 15-20.IV.1963; leg. Busse from live birds.

<i>Docophorus modularis</i> (Denny, 1842)	♂ 7/a/17			♀ 7/a/15		
	long.	lat.	index	long.	lat.	index
Cephalon	0.49	0.42	117	0.56	0.51	110
Prothorax	0.15	0.25		0.20	0.30	
Mesometathorax	0.17	0.38		0.18	0.44	
Abdomen	0.69	0.55		0.86	0.56	
Longitudo totalis	1.36			1.61		

General coloring chestnut. Head of characteristic slender shape, with a rather wide end of forehead. Clypeal signature as in Fig. 5c. Occiput slightly bent backwards. Temples somewhat elongated. Trabeculae large. Triangular tergopleural plates of abdomen relatively big and in the first four segments regularly overlapping one another. Male genital apparatus small. Parameres short and wide.

Docophorus montani nom. nov.

for *Docophorus fringillae* Denny, 1842 (nec *Pediculus fringillae* Scopoli, 1772).

Typical host: *Passer montanus montanus* (L.).

<i>Docophorus montani</i> nom. nov.	♀ 4/t/3		
	long.	lat.	index
Cephalon	0.48	0.50	96
Prothorax	0.18	0.26	
Mesometathorax	—	0.39	
Abdomen	0.79	0.54	
Longitudo totalis	1.51		

It results from the description given by Denny (1842, P. 79 Pl. III, Fig. 2) that *D. fringillae* (Scopoli) from *Passer domesticus* is a different species than "*D. fringillae*" (Denny) from *Passer montanus*. According to Hopkins et Clay 1952 the type specimens of "*D. fringillae*" (Denny) are still existing. I propose hereby for this species the nomen novum *montani* which shall denote the above mentioned type specimens.

Material examined from *Passer m. montanus* (L.): 1 ♀ from the preparation 4/t/3, Kartuzy, 24.IX.1957.

Female (Phot. 9) relatively small. Head with the temporal region broad, and the forehead narrowing gently forwards, where it ends in a slightly concave hyaline pellicle. Trabeculae fairly large, wide. Clypeal signature as in Fig. 5d. Abdomen distinctly elongated. Triangular tergopleural plates biggest in the segment i, on the next ones down to vii gradually decreasing in size. Last abdominal segment of a female very little, fair, with barely noticeable, paired spots. General coloring intensely brown with the light central part of abdomen excepted.

Docophorus necopinatus sp. n.

Typical host: *Acrocephalus schoenobaenus* (L.).

Material examined: 1 ♂ (holotype, coll. mea) from the preparation 8/j/1, Skoronki (Mierzeja Wiślana) near Gdańsk, 15.IX.1962, leg. Witkowski.

<i>Docophorus necopinatus</i> sp. n.	♂ holotypus		
	long.	lat.	index
Cephalon	0.41	0.39	105
Prothorax	0.14	0.23	
Mesometathorax	—	0.36	
Abdomen	0.55	0.50	
Genitalia	0.17		
Longitudo totalis	1.12		

Male (Phot. 10) small, golden brownish. Head large in proportion to the rest of body. The preantennal and postantennal parts equal in length. Forehead considerably narrowing anteriorly, with concave lateral margins. Head ended at front by a prominent, somewhat convex hyaline pellicle. Clypeal signature (Fig. 5e) similar as in *D. mirificus* sp. n. Trabeculae broad, medium sized. The legs III not much bigger than the I and II. Abdomen oval, broad. Tergopleural plates large and in segments i to vii regularly overlapping one another. Male genital apparatus (Fig. 6b) small, parameres spread wide.

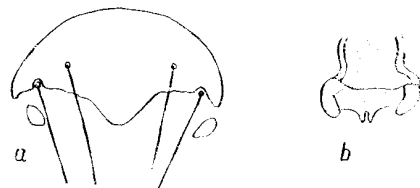


Fig. 6: a — female genital plate in *D. merulae* (Denny) from *T. m. merula* L., prep. 14/e/106, × 85; b — male genital apparatus in *D. necopinatus* sp. n. (Holotype) from *A. schoenobaenus* (L.), prep. 8/j/1, × 250

Docophorus ornatus (Nitzsch, 1866)

Typical host: *Oriolus oriolus oriolus* (L.).

According to Giebel 1874 this species is similar to *Docophorus communis*, which is, to the best of our present knowledge, corresponding to the general concept of the genus *Docophorus*. Hence the information given by Giebel enables the assignment of *ornatus* to the latter genus.

Docophorus pallescens (Denny, 1842)

Typical host: *Parus palustris dresseri* Stejn.

This species had no typical host determined and in Hopkins et Clay 1952 it was noted with two hosts, viz.: *Parus palustris dresseri* Stejn and *Parus major newtoni* Prazak. I therefore do fix *Parus palustris dresseri* Stejn as typical host of *Docophorus pallescens* (Denny), while on *Parus major newtoni* Prazak was found most probably some other not yet described species of *Docophorus*.

In the original description of *D. pallescens* (Denny, 1842, P. 82, Pl. I, Fig. 8) the following characters are presented: long forehead, with very much concave lateral margins. Thus it is possible that *D. pallescens* differs from other species of *Docophorus* living on other families of *Passeriformes*.

Docophorus passerinus (Denny, 1842)

Typical host: *Motacilla alba* L.

<i>Docophorus passerinus</i> (Denny, 1842)	♂ 6/f/1—1			♀ 6/f/1—2		
	long.	lat.	index	long.	lat.	index
Cephalon	0.45	0.44	102	0.46	0.44	105
Prothorax	0.18	0.25		0.16	0.25	
Mesometathorax	0.17	0.41		0.17	0.40	
Abdomen	0.89	0.61		0.87	0.54	
Longitudo totalis	1.54			1.53		

No typical host was designated for this species and in Hopkins et Clay 1952 there were given two hosts: *Motacilla alba* L. and *Motacilla flava* L. So I do establish *Motacilla alba* L. as typical host of *Docophorus passerinus* (Denny). Basing on the data of Eichler 1953 I describe simultaneously *Docophorus pavidus* nom. nov. from *Motacilla flava* L.

Material examined from *Motacilla alba* L.: 2 ♀♀, Wrocław, 2.IV.1951, leg. Zlotorzycska; 3 larvae, Mikoszewo (Pomorze), 22.VII.1963, leg. Zajac.

General coloring very dark. Preantennal part of head longer than the post-antennal one. Forehead ended at front by a hyaline pellicle, bent inward a little. Clypeal signature (Fig. 5f) relatively big. Trabeculae of medium size (less than 0.1 mm), bluntly ended. Abdomen rather elongated with dark brown tergopleural spots. Lateral margins of pleurites blackish. In female the last segment very narrow, short, usually twofold.

Docophorus pavidus nom. nov.

for *Docophorus passerinus* Denny, 1842 (nec *passerinus* Denny from *Motacilla alba* L.).

Syn.: *Docophorus passerinus* Wd. Eichler, 1953 from *Motacilla flava* L. (nec *D. passerinus* Denny from *Motacilla alba* L.).

Typical host: *Motacilla flava* L.

The description of "*Docophorus passerinus* Denny" from *Motacilla flava* L. in Eichler 1953 gave the following dimensions of female head: length 0.54 mm, width 0.50 mm. So the head index was 108. The female examined by Eichler had its head much more elongated than the females of *D. passerinus* from *Motacilla alba* L. (see respective table of dimensions) and therefore I separate this form as *Docophorus pavidus* nom. nov. distinct from *Docophorus passerinus* (Denny).

Docophorus pyrhhulae (Schränk, 1776)

Syn.: *Docophorus pyrhhulae* Piaget, 1880 from *Pyrhhula pyrhhula* (L.).

Typical host: *Pyrhhula pyrhhula europaea* Vieill.

Material examined from *Pyrhhula pyrhhula pyrhhula* (L.): Wrocław: 3 ♀♀, 5 larvae, 15.I.1953, leg. Zlotorzycska; the region of lake Bukowo, district Slawno, Pomorze: 2 larvae, 13.X.1961, leg. Gromadzki. Międzyzdroje (Pomorze): 1 ♂, 1 ♀, 29.X.1961; 1 ♂, 13.I.1962; leg. E. Wotk.

<i>Docophorus pyrhhulae</i> (Schr., 1776)	♂ 4/e/15			♀ 4/e/1		
	long.	lat.	index	long.	lat.	index
Cephalon	0.47	0.46	102	0.53	0.56	95
Prothorax	0.18	0.23		0.22	0.31	
Mesometathorax	0.19	0.39		0.21	0.47	
Abdomen	0.68	0.51		0.81	0.66	
Genitalia	0.20					
Longitudo totalis	1.37			1.59		

Forehead markedly narrowing anteriorly and flat ended. Clypeal signature (Fig. 5g) characteristically rounded with a short, tongue-shaped process. Abdomen oval, elongated. Tergopleural plates broad a little overlapping one another. Male genital apparatus with digitiform parameres, slightly narrowed near their basis.

Docophorus rapax sp. n.

Typical host: *Fringilla montifringilla* L.

Material examined: 1 ♂ (holotype, coll. mea) from (the preparation 4/q/1, Hel. 1.V.1963, leg. Busse from a live bird. Paratypes: Hel: 1 ♂, 2 ♀♀, 2 larvae, 15.IV.1963, leg. Busse from a live bird. Other materials: 1 larva from same specimen as holotype; 2 larvae.

<i>Docophorus rapax</i> sp. n.	♂ holotypus			♀ paratypus 4/d/4		
	long.	lat.	index	long.	lat.	index
Cephalon	0.44	0.40	110	0.50	0.45	111
Prothorax	0.16	0.22		0.19	0.27	
Mesometathorax	0.16	0.35		—	0.43	
Abdomen	0.62	0.49		0.64	0.57	
Longitudo totalis	1.22			1.35		

Habitus as in Phot. 11, 12. Forehead ended by a notched hyaline pellicle. Clypeal signature as in Fig. 5h. Occiput a little bent backwards. Trabeculae big and wide. Prothorax rectangular. Mesometathorax broad, bell-shaped, with its lateral margins rounded. Abdomen stocky, oval. Tergopleural plates of the first two segments large, those of the next three segments shorter, and the last ones longer but more narrow. Male genital apparatus with its parameres rather long, digitiform. In female the last abdominal segment short, with a deep genital notch.

Docophorus reguli (Denny, 1842)

Typical host: *Regulus regulus* (L.).

Material examined from *Regulus r. regulus* (L.): Hel: 1 larva, 10.IX.1962; 1 larva, 22.IX.1962; 1 ♂, 1 larva, 26.IV.1963; 1 ♀, 7 larvae, 14.IV.1963; leg. Busse. Skowronki (Mierzeja Wiślana) near Gdańsk: 2 larvae, 9.IX.1962, leg. Zlotorzycska. All materials from live birds.

<i>Docophorus reguli</i> (Denny, 1842)	♂ 9/a/5			♀ 9/a/7		
	long.	lat.	index	long.	lat.	index
Cephalon	0.44	0.40	110	0.52	0.50	104
Prothorax	0.17	0.25		0.22	0.27	
Mesometathorax	—	0.38		0.23	0.46	
Abdomen	0.69	0.61		1.06	0.72	
Longitudo totalis	1.29			1.80		

Head with broad, semicircular temples, considerably narrowing anteriorly. Preantennal part shorter than the postantennal one. Lateral margins of forehead slightly concave. Clypeal signature (Fig. 5i) relatively narrow, its front part cordate. Occiput flexed backwards. Abdomen oval. Triangular tergopleural plates broad, regularly overlapping one another.

Docophorus residuus sp. n.

Typical host: *Emberiza schoeniclus schoeniclus* (L.).

Material examined: 1 ♀ (holotype, coll. mea) from the preparation 4/z/1, Nowa Pasłęka, district Braniewo in Pomerze, 10.X.1961, and 1 larva from the same bird. Leg. Busse from a live bird.

<i>Docophorus residuus</i> sp. n.	♀ holotypus		
	long.	lat.	index
Cephalon	0.52	0.50	104
Prothorax	0.19	0.30	
Mesometathorax	0.18	0.45	
Abdomen	0.88	0.50	
Longitudo totalis	1.63		

Female (Phot. 13) stocky, chestnut in color. Proportions of head as in *D. cumulatus* sp. n. from *Emberiza calandra*, but the forehead a little wider and shorter, similarly ended by a notched, transparent pellicle. Clypeal signature as in Fig. 5j. Abdominal tergopleural plates broad, dark colored, provided with large stigmata in their central parts. The examined larva was 1.45 mm long and was in the last developmental stage, with the specific features already visible.

Docophorus rubeculae (Denny, 1842)

Syn.: *Nirmus coelebitis* Denny, 1852, nom. nov. for *Docophorus rubeculae* Denny. Typical host: *Erithacus rubecula melophilus* Hart.

From the description given by Denny 1842 and Giebel 1874 I conclude that this species is elongated in shape and intensely chestnut in color.

Docophorus rutteri (Kellogg, 1899)

Typical host: *Parus atricapillus occidentalis* Baird.

Kellogg 1899 (Pl. I, Fig. 3) gave a description of a female and a drawing giving the general outlines of the animal.

Material examined from *Parus atricapillus salicarius* Brehm: 1 larva, Anin near Warszawa, 1961, leg. Szulc.

The examined larva, 1.05 mm long, was golden-brownish like the majority of adult specimens of the genus *Docophorus*. Since the larvae are as a rule much lighter from adult lice the conclusion is that *D. rutteri* is very dark in color. This character was already stressed by Kellogg.

Docophorus timmermanni sp. n.*

Syn.: *Philopterus fringillae* Timm., 1950 from *Turdus musicus coburni* (nec Scop. 1772 from *Passer d. domesticus*); *Docophorus merulae* Wd. Eichl., 1951 from *Turdus musicus coburni* (nec Denny, 1842 from *Turdus m. merula* L.).

Typical host: *Turdus musicus coburni* Sharpe.

* The name *timmermanni* is established here in honour of the outstanding student of *Mallophaga*, Dr. G. Timmermann.

Holotype: specimen which served Timmermann 1950 (Abb. 4b) as model for the drawing of a part of forehead (coll. G. Timmermann).

Till now no species of *Docophorus* was described as specific for *Turdus musicus coburni*. From the descriptions of Timmermann 1950 (Abb. 4b) and Eichler 1951 (Abb. 3, 6) it can be concluded that they had dealt with one species of the genus *Docophorus* which was different from other species of this genus.

Description: Average dimensions in millimeters of ♂♂ and ♀♀ *Docophorus timmermanni* sp. n. (holotype and paratypes) from *Turdus musicus coburni* according to the data of Timmermann 1950:

	Head width	Head length	Head index	Total length
♂♂	0.50	0.53	107	1.42
♀♀	0.51—0.55	0.53—0.61	104—111	1.59—1.94

These measurements show that males, in spite of having heads of similar size, are much smaller than females. Head in both sexes a little more narrow than in *D. fringillae* and *D. merulae* (see head indices in respective tables in text). Clypeal signature (Figs. 5k, 7a) ended flat in front as it is in all species

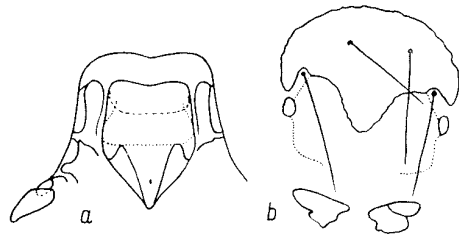


Fig. 7. *Docophorus timmermanni* sp. n. from *T. m. coburni* Sharpe: a — forehead, b — female genital plate — after Wd. Eichler 1951 (Abb. 6)

of *Docophorus* from *Turdus*. Female genital plate (Fig. 7b) differing from that in *D. merulae* (compare Fig. 6a) in that it is more elongated backwards and the two small plates on its sides are different in shape.

Docophorus trigonophorus (Giebel, 1874)

Typical host: *Lanius senator* L.

The original description was, unfortunately, lacking any illustration. It said that the species in question was similar to *Docophorus communis* which was by now split into several species. Thus the conclusions have to be restricted to that this species belongs to *Docophorus*.

Docophorus turdi (Denny, 1842)

Typical host: *Turdus ericetorum philomelos* Brehm.

Material examined from *Turdus ericetorum philomelos* Brehm: Nowa Pasłęka, district Braniewo, Pomerze: 1 ♂, 1 ♀, 2 larvae, 19.IX.1961, leg. Gromadzki. Hel: 2 ♂♂, 7 ♀♀, 28.IX.-4.X.1962; 7.IV.1963; leg. Busse from live birds. Międzyzdroje (Pomerze): 1 ♂, 1 ♀, 1 larva, 21.IX.1961, leg. E. Wolk.

<i>Docophorus turdi</i> (Denny, 1842)	♂ 14/a/4			♀ 14/a/6		
	long.	lat.	index	long.	lat.	index
Cephalon	0.46	0.46	100	0.52	0.52	100
Prothorax	0.19	0.27		0.21	0.30	
Mesometathorax	0.17	0.39		0.22	0.45	
Abdomen	0.64	0.55		0.88	0.67	
Genitalia	0.27					
Longitudo totalis	1.28			1.64		

Small size. Clypeal signature as in Fig. 5l. Trabeculae long, but more narrow than in *D. merulae*. Thorax normal. Abdomen stocky. Triangular tergopleural plates longer than those of *D. merulae*. Male genital apparatus (Fig. 8a) with its parameric part much smaller.

Docophorus vernus sp. n.

Syn.: *Docophorus merulae* Wd. Eichler, 1951 from *Turdus viscivorus* (nec *Docophorus merulae* Denny from *Turdus merula*).

Typical host: *Turdus viscivorus viscivorus* L.

Material examined: 1 ♂ (holotype, coll. mea) from the preparation 14/c/13, Opawice near Wrocław, 19.III.1954, leg. Zlotorzyczka. Paratypes: Wrocław and the environments: 1 ♀ from the same bird as the holotype; 3 ♂♂, 15 ♀♀, 1.II.1952; 2 ♂♂, 4 ♀♀, 13.III.1954; leg. Zlotorzyczka. Other materials: Wrocław and the environments: 16 larvae, 1.II.1952; 4 larvae, 9.II.1953; 2 larvae, 13.IV.1954; leg. Zlotorzyczka.

<i>Docophorus vernus</i> sp. n.	♂, holotypus			♀ paratypus 14/c/14		
	long.	lat.	index	long.	lat.	index
Cephalon	0.54	0.50	108	0.61	0.59	102
Prothorax	0.20	0.27		0.21	0.34	
Mesometathorax	0.19	0.44		0.23	0.54	
Abdomen	0.72	0.56		1.14	0.72	
Genitalia	0.28					
Longitudo totalis	1.48			2.02		

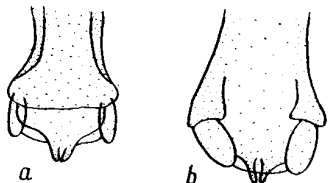


Fig. 8. Male genital apparatus of: a — *Docophorus turdi* (Denny) from *T. e. philomelos* Brehm, prep. 14/a/4; b — *D. vernus* sp. n. (Holotype) from *T. v. viscivorus* L., prep. 14/c/13; × 250

Habitus as in Phot. 14. Head large, ended in front by a prominent hyaline pellicle with its edge rounded. Clypeal signature as in Fig. 5m. Prothorax barrel-shaped. Mesometathorax relatively short with its hind margin slightly bent. Abdomen oval. Male genital apparatus (Fig. 8b) with oval parameres and the basal part in the form of an elongated figure 8.

Note: Eichler 1951 reported *Docophorus merulae* from *Turdus v. viscivorus* L. coming from Białowieża, Poland. Still, he supposed that it might be a different subspecies of this species though he did not precise his opinion as to this point. As *Docophorus merulae* from *Turdus merula* differs from *D. vernus* sp. n. parasitizing *Turdus viscivorus*, I presume that the specimens examined by Eichler belonged to the latter, new species.

Docophorus vultuosus sp. n.

Typical host: *Anthus trivialis trivialis* (L.).

Material examined: 1 ♂ (holotype, coll. Zool. Mus. Berlin) from the preparation WEC 2228b, Białowieża, 1917/18, leg. Bischoff.

<i>Docophorus vultuosus</i> sp. n.	♂ holotypus		
	long.	lat.	index
Cephalon	0.51	0.45	113
Prothorax	0.19	0.27	
Mesometathorax	—	0.37	
Abdomen	0.70		
Genitalia	0.23		
Longitudo totalis	1.43		

Male (Phot. 16) of medium size. Forehead with highly concave lateral margins, ended semicircularly by a prominent hyaline pellicle. Clypeal signature as in Fig. 5n. Trabeculae middle-sized, blunt. Thorax fairly broad, legs of the III pair not much bigger than those of pairs I and II. Abdomen elongated. Tergopleural plates large. Male genital apparatus slender and relatively long. Parameres thin, digitiform.

Docophorus sp. I from *Lullula arborea arborea* (L.)

Material examined: 1 larva from the preparation WEC 2229a, Białowieża, 1917/18, leg. Bischoff, coll. Zool. Mus. Berlin.

This larva belongs probably to some unknown species of *Docophorus*. Up to now no species of this genus were reported either from *Lullula arborea arborea* L. from the Centraleuropean *Alaudidae* in general.

Docophorus sp. II from *Sylvia atricapilla atricapilla* (L.)

Material examined: 5 larvae from the preparation 8/1/2-7, Zelistrzewo, Pomorze, 5.IX.1962, leg. Gromadzki from a live bird.

All these larvae are about 1 mm long and are distinguished by their foreheads with relatively narrow ending and by a broad clypeal signature. They belong probably to some unknown species. Till now no species of *Docophorus* were reported from the genus *Sylvia*.

Docophorus sp. III from *Sitta europaea* L.

Material examined: 1 larva from the preparation WEC 1350d, Barnsdorf (Germany), 10.III.1935, leg. R. Roesler, coll. Wd. Eichler.

The examined specimen has large, sharply pointed trabeculae. Forehead triangular, slightly rounded in front. The outlines of head seem to be different from those of other species of *Docophorus*. This larva belongs probably to some species not yet described. So far no species of *Docophorus* is known to be specific for *Sitta europaea* L.

Docophorus sp. IV from *Turdus torquatus torquatus* L.

Material examined: 2 larvae from the preparation 14/f/1-2, Wapnica (Pomorze), 11.X.1962, leg. E. Wolk.

Length of larvae 1.09 mm and 0.88 mm. Head as long as it is wide. Clypeal signature large. Trabeculae broad, pointed. These larvae belong probably to a species not known by now. As yet no species of *Docophorus* was reported to be specific for *Turdus torquatus* L.

Genus *Cincloecus* Wd. Eichler, 1951

Species typica: *Docophorus cincli* Denny, 1842 from *Cinclus cinclus gularis* (Lath.).

Hopkins et Clay 1953 regarded *Cincloecus* Wd. Eichl. as nomen nudum. Their opinion was that the description of this genus as given by Eichler was insufficient; moreover, they regarded as objectionable the separation of this genus out of *Philopterus* Nitzsch, to which they assigned *Docophorus* Wd. Eichler too.

The description of this genus (Eichler 1951) reads as follows: "*Cincloecus* nov. gen. pro *Cincloecus* (olim *Docophorus*) *cincli* Den. sensu A. Koenig 1884 (Diss. phil. Marburg) ab *Cinclus cinclus gularis* Lath. ist eine *Docophorus* nahe verwandte, aber offenbar durch den Bau des Clypeus und sonstige Merkmale der Kennart genügend unterschiedene Gattung. Vermutlich handelt es sich um einen für *Cinclidae* bezeichnenden Typ, dem ohne Zweifel auch noch *macrodocus* anzuschliessen wäre". This description is brief, indeed, but it implies that the generic characters are contained in A. Koenig's description of *Docophorus cincli* which is the species typica of *Cincloecus*. Thus, the generalization of Hopkins et Clay 1953 that *Cincloecus* "it is not stated what these differences are" — seems to be going too far.

I consider *Cincloecus* Wd. Eichler to be a good genus, visibly differing from other *Philopterinae*. This is already evident after a careful study of the description of *Docophorus cincli* given by Denny 1842 (P. 85, Pl. V, Fig. 8). Moreover, basing on the material examined, I do amplify the description given by Eichler for the genus *Cincloecus*.

Description: Clypeal signature characteristic in shape (Fig. 9a). Its front part cordate, the tongue-shaped process broad, wedge-like. The signature as a whole long, but not too wide. Abdomen with dark pleural slats in segments I to VII. Tergopleural plates of these segments much elongated medially. Segments with transverse light-brown bands. Male genital apparatus with pointed parameres (Fig. 9b).

These features distinguish adequately *Cincloecus* from *Docophorus* and *Philopterus*. Besides it should be stressed that *Cincloecus* is known only from *Cinclidae*.

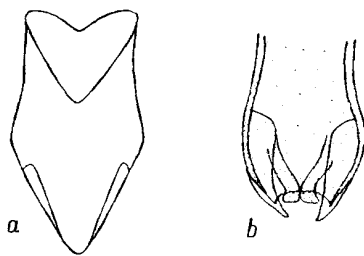


Fig. 9. *Cincloecus cincli* (Denny) from *C. cinclus* L.: a — clypeal signature in ♀, prep. WEC 7380b, × 180; b — male genital apparatus, prep. WEC 7380a, × 240

Cincloecus cincli (Denny, 1842)

Syn.: *Docophorus laticeps* Gieb., 1874 from *Cinclus c. cinclus* (L.).

Typical host: *Cinclus cinclus gularis* (Lath.).

Material examined: from *Cinclus cinclus* (L.): 1 ♂, 1 ♀, Trenč. Teplice (Czechoslovakia), 11.VI.1950, coll. Wd. Eichler.

<i>Cincloecus cincli</i> (Denny, 1842)	♂ WEC 7380a			WEC 7380b		
	long.	lat.	index	long.	lat.	index
Cephalon	0.47	0.41	115	0.54	0.47	115
Prothorax	0.21	0.27		0.25	0.31	
Mesometathorax	0.18	0.36		0.22	0.42	
Abdomen	0.76	0.60		0.97	0.64	
Genitalia	0.23					
Longitudo totalis	1.46			1.79		

Head elongated, of same proportions in both sexes. Forehead with its lateral margins almost straight, in front ended by a slightly undulating hyaline pellicle. Clypeal signature as in Fig. 9a. Trabeculae well developed, pointed. Antennae in both sexes with the first joint the broadest. Prothorax with rounded lateral margins, somewhat narrowing anteriorly. Mesometathorax bell-shaped. Abdomen of docophoroid type, characteristically pigmented. Male genital apparatus (Fig. 9b) with a strong basal part, and light, pointed parameres. The last segment of male abdomen sacciform elongated, uniformly dark pigmented, that of a female short, twofold with two small spots.

Genus *Cypseloecus* Conci, 1941

Species typica: *Philopterus excisus* sensu Conci, from *Hirundo rustica* L. (this is a synonym of *Cypseloecus hirundinis* (Piag.) from *Hirundo rustica* L.).

Here belong small, docophoroid species, relatively slender in habitus. Clypeal signature with a characteristic deep notch at front, in general outlook

similar to that of *Sturnidoecus* (*Brueeliinae*). Male genital apparatus as in *Docophorus*.

Occurrence: *Hirundinidae*.

Cypseloecus excisus (Nitzsch, 1818)

nom. nov. for *Pediculus hirundinis* Schrank, 1803 (nec Linn., 1761).

Syn.: *Docophorus hirundinis* Piag., 1871 from *Delichon urbica* (nec *Docophorus hirundinis* Piag., 1871 from *Hirundo rustica*).

Typical host: *Delichon urbica urbica* (L.).

Extensive description in Clay et Hopkins 1960 (Fig. 55-58). It results from the description that *C. excisus* is bigger and has the female genital plate different in structure from that of *C. hirundinis* from my collection.

Cypseloecus hirundinis (Piaget, 1871)

nec *hirundinis* from *Delichon urbica* (*Docophorus*, nec *Pediculus* Schrank, 1803).

Typical host: *Hirundo rustica* L.

Material examined from *Hirundo r. rustica* L.: 5 ♂♂, 1 ♀, Wrocław, ZOO, 6.V. 1955, leg. Zlotorzyczka from a live bird.

<i>Cypseloecus hirundinis</i> (Piaget, 1871)	♂ 18/a/1-5			♀ 18/a/1-6		
	long.	lat.	index	long.	lat.	index
Cephalon	0.39	0.35	111	0.41	0.38	108
Prothorax	0.14	0.22		0.17	0.24	
Mesometathorax	0.16	0.32		0.21	0.34	
Abdomen	0.58	0.41		0.70	0.49	
Genitalia	0.23					
Longitudo totalis	1.17			1.29		

Both male and female tiny, golden-reddish. Head markedly elongated, especially in male. Trabeculae wide, blunt. Forehead strongly narrowing anteriorly, with lateral margins convex. Clypeus ended with a deeply notched hyaline pellicle. Clypeal signature small, elongated (Fig. 10a). Abdomen wide

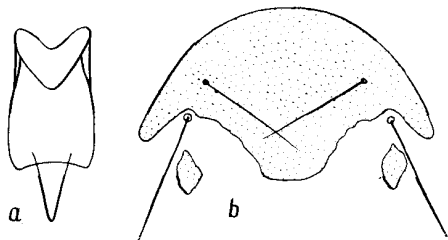


Fig. 10. *Cypseloecus hirundinis* (Piag.) from *H. r. rustica* L.: a — clypeal signature in ♂, prep. 18/a/1-5; b — female genital plate, prep. 18/a/1-6; X 165

fusiform, with pleural slats dark and narrow. Triangular tergopleural plates short with large stigmata. Male genital apparatus similar to that of *C. excisus*. Female genital plate (Fig. 10b) different (comp. Clay et Hopkins 1960, Fig. 58). In *C. hirundinis* this genital plate has the side processes longer, while the little paired plates in the rear are smaller and different in shape.

Summary

Basing on the materials from Poland and some Centralearopean countries, the following new species are described and nomina nova introduced:

Docophorus capillatus sp. n. from *Muscicapa h. hypoleuca* (Pall.), *D. cumulatus* sp. n. from *Emberiza c. calandra* L., *D. desertus* sp. n. from *Muscicapa s. striata* (Pall.), *D. fortunatus* sp. n. from *Fringilla c. coelebs* L., *D. mirificus* sp. n. from *Acrocephalus palustris* (Bechst.), *D. necopinatus* sp. n. from *Acrocephalus schoenobaenus* (L.), *D. rapax* from *Fringilla montifringilla* L., *D. residuus* sp. n. from *Emberiza schoeniclus* (L.), *D. timmermanni* sp. n. from *Turdus musicus coburni* Sharpe, *D. vernus* sp. n. from *Turdus v. viscivorus* L., *D. vultuosus* sp. n. from *Anthus t. trivialis* (L.); *Docophorus montani* nom. nov. for *Docophorus fringillae* Denny (nec Scop.) from *Passer montanus* (L.), and *D. pavidus* nom. nov. for *Docophorus passerinus* Denny (nec Denny from *Motacilla alba* L.) from *Motacilla flava* L.

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LITERATURE

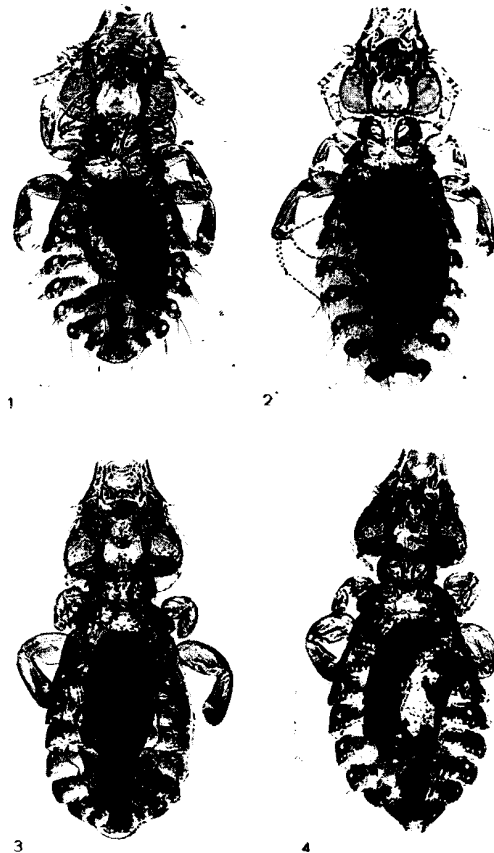
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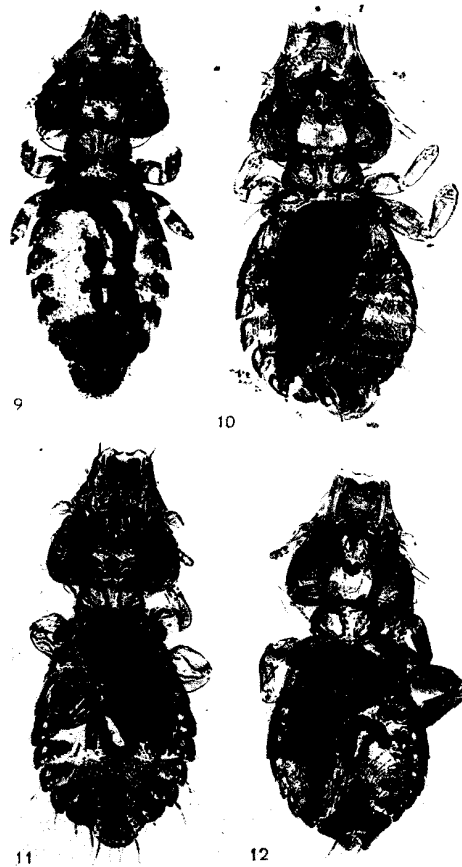
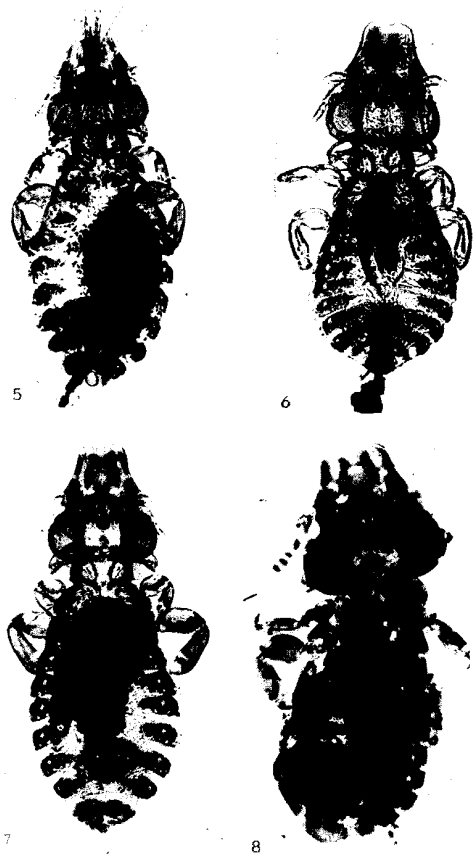
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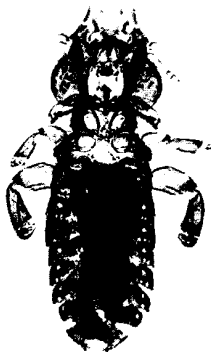
STRESZCZENIE

Na podstawie materiałów z Polski i niektórych krajów środkowo-europejskich autorka opisuje następujące nowe gatunki i wprowadza nomina nova.

Docophorus capillatus sp. n. z *Muscicapa h. hypoleuca* (Pall.), *D. cumulatus* sp. n. z *Emberiza c. calandra* L., *D. desertus* sp. n. z *Muscicapa s. striata* (Pall.), *D. fortunatus* sp. n. z *Fringilla c. coelebs* L., *D. mirificus* sp. n. z *Acrocephalus palustris* (Bechst.), *D. necopinatus* sp. n. z *Acrocephalus schoenobaenus* (L.), *D. rapax* sp. n. z *Fringilla montifringilla* L., *D. residuus* sp. n. z *Emberiza schoeniclus* (L.), *D. timmermanni* sp. n. z *Turdus musicus coburni* Sharpe, *D. vernus* sp. n. z *Turdus v. viscivorus* L., *D. vultuosus* sp. n. z *Anthus t. trivialis* (L.); *Docophorus montani* nom. nov. od *Docophorus fringillae* Denny (nec Scop.) z *Passer montanus* (L.) i *D. pavidus* nom. nov. od *Docophorus passerinus* Denny (nec Denny) z *Motacilla alba* L.) z *Motacilla flava* L.







13



14



15



16

EXPLANATION OF PLATES I-IV

- Phot. 1. *Docophorulus capillatus* sp. n. ♂ (Holotype) from *M. h. hypoleuca* (Pall.), prep. 16/b/4, × 60.
 Phot. 2. *Docophorulus capillatus* sp. n. ♀ (Paratype) from *M. h. hypoleuca* (Pall.), prep. 16/b/2, × 48.
 Phot. 3. *Docophorulus cumulatus* sp. n., ♂ (Holotype) from *E. c. calandra* L., prep. 4/y/2-1, × 43.
 Phot. 4. *Docophorulus cumulatus* sp. n. ♀ (Paratype) from *E. c. calandra* L., prep. 4/y/2-5, × 43.
 Phot. 5. *Docophorulus desertus* sp. n. ♀ (Holotype) from *M. s. striata* (Pall.), prep. 16/a/3, × 42.
 Phot. 6. *Docophorulus fortunatus* sp. n. ♂ (Holotype) from *F. c. coelebs* L., prep. 4/p/6-2, × 52.
 Phot. 7. *Docophorulus fortunatus* sp. n. ♀ (Paratype) from *F. c. coelebs* L., prep. 4/p/6-5, × 45.
 Phot. 8. *Docophorulus mirificus* sp. n. ♂ (Holotype) from *A. palustris* (Bechst.), prep. 8/i/1, × 72.
 Phot. 9. *Docophorulus montani* nom. nov. ♀ from *P. m. montanus* (L.), prep. 4/t/3, × 48.
 Phot. 10. *Docophorulus necopinatus* sp. n. ♂ (Holotype) from *A. schoenobaenus* (L.) prep. 8/j/1, × 72.
 Phot. 11. *Docophorulus rapax* sp. n. ♂ (Holotype) from *F. montifringilla* L., prep. 4/q/1, × 65.
 Phot. 12. *Docophorulus rapax* sp. n. ♀ (Paratype) from *F. montifringilla* L., prep. 4/q/4, × 56.
 Phot. 13. *Docophorulus residuus* sp. n. ♀ (Holotype) from *E. sch. schoeniclus* (L.), prep. 4/z/1, × 42.
 Phot. 14. *Docophorulus vernus* sp. n. ♂ (Holotype) from *T. v. viscivorus* L., prep. 13/c/13, × 52.
 Phot. 15. *Docophorulus vernus* sp. n. ♀ (Paratype) from *T. v. viscivorus* L., prep. 14/c/14, × 42.
 Phot. 16. *Docophorulus vultuosus* sp. n. ♂ (Holotype) from *A. t. trivialis* (L.), prep. WEC 2228b, × 52.