

Department of General Parasitology, University of Wrocław
Head: Prof. Dr. Janina Janiszewska

Jadwiga ZŁOTORZYCKA

Mallophaga parasitizing *Passeriformes* and *Pici*
IV. *Menacanthinae, Ricinidae, Degeeriellinae*

Mallophaga pasożytujące na *Passeriformes* i *Pici*
IV. *Menacanthinae, Ricinidae, Degeeriellinae**

Menacanthinae Wd. Eichler, 1940 of the family *Menoponidae* Mjöberg, 1910 are taxonomically distant from *Ricinidae* Neumann, 1906, though they belong to the suborder *Amblycera* too. *Menacanthinae* and *Ricinidae* occur, as a rule, on their hosts rather rarely and in very small numbers. Most often the females are found and males occur exceptionally. Therefore they are rather inadequately known.

Degeeriellinae Wd. Eichler, 1941 belong to the family *Degeeriellidae* Leach, 1815 and do not occur on *Passeriformes*. Here I describe only the Central-european representatives of the genus *Picicola* from *Picidae*.

List of species described

Subfamily *Menacanthinae* Wd. Eichl.Genus *Lanicanthus* g. n.xx *aqualis* sp. n.— *Lanius c. collurio* L.Genus *Menacanthus* Neum.

<i>alaskensis</i> (Kell. et Champ.)	— <i>Cinclus mexicanus unicolor</i> Bon.
" <i>alaskensis</i> " (Kell. et Champ.)	— <i>Pinicola enucleator flammea</i> Hom.
<i>x alaudae</i> (Schr.)	— <i>Alauda a. arvensis</i> L.
<i>x annulatus</i> (Gieb.)	— <i>Passer d. domesticus</i> (L.)
<i>brevidentatus</i> Blag.	— <i>Lanius minor</i> Gm.
xx <i>bussei</i> sp. n.	— <i>Parus a. ater</i> L.
<i>camelinus</i> (Nitzsch)	— <i>Lanius e. excubitor</i> L.
<i>carduelis</i> (Denny)	— <i>Carduelis carduelis britannicus</i> (Hart.)
<i>citrinellae</i> (Denny)	— <i>Emberiza c. citrinella</i> L.
<i>cornicis</i> Blag.	— <i>Corvus corone sharpi</i> Oates

* The remaining part of *Mallophaga* parasitizing *Passeriformes* and *Pici* will appear in this journal bearing the subtitle: V. Problems of linked evolution of parasites and hosts.

- curuccae* (Schr.)
xx *eurysternum* (Burm.)
exilis (Nitzsch)
xx *festivus* Wd. Eichl. et Złot.
gonophaeus (Burm.)
gulabimaina Ansari
? *inaequalis* (Piag.)
inscitus nom. n. from
Pediculus pyrrhulae Panz.
(nec Schr.)
xx *laticeps* Blag.
meniscus (Piag.)
x *merisuoi* Wd. Eichl.
minusculus Blag.
monedulae Blag.
xx *monochromateus* (Kell. et Paine)
„*monochromateus*” (Kell. et
Paine)
xx *mutabilis* Blag.
orioli Blag.
perforatus (Piag.)
phylloscopi Blag.
xx *pius* Wd. Eichl. et Złot.
xx *polonicus* Wd. Eichl. et Złot.
pusillus (Nitzsch)
remizae Blag.
schildmacheri Wd. Eichl.
setosus (Piag.)
xx *sinuatus* (Burm.)
xx *sittae* (Gieb.)
xx *subhorridus* sp. n.
subsimilis Blag.
tenuifrons Blag.
xx *verecundus* sp. n.
xx *vistulanus* Wd. Eichl. et Złot.
x *wegelini* Wd. Eichl.
xx *wipszyckii* Wd. Eichl. et Złot.
- *Sylvia c. curruca* (L.)
— *Pica p. pica* (L.)
— *Oenanthe o. oenanthe* (L.)
— *Fringilla c. coelebs* L.
— *Corvus c. corax* L.
— *Sturnus roseus* (L.)
— *Lanius c. collurio* L.
— *Pyrrhula p. pyrrhula* (L.)
— *Corvus f. frugilegus* L.
— *Calcarius lapponicus* (L.)
— *Nucifraga caryocatactes macrorhynchus* Brehm
— *Turdus ph. philomelos* Brehm
— *Coloeus m. monedula* (L.)
— *Garrulus glandarius lanceolatus* Vig.
— *Pyrrhocorax graculus* (L.)
— *Sturnus v. vulgaris* L.
— *Oriolus oriolus kundoo* Sykes
— *Eremophila alpestris chrysolaema* (Wagl.)
— *Phylloscopus collybita tristis* Blyth.
— *Turdus m. merula* L.
— *Turdus pilaris* L.
— *Motacilla a. alba* L.
— *Remiz p. pendulinus* (L.)
— *Prunella m. modularis* (L.)
— *Coccothraustes c. coccothraustes* (L.)
— *Parus m. major* L.
— *Sitta europaea caesia* Wolf
— *Parus palustris* L.
— *Parus coerulescens saturnini* Sar.
— *T. troglodytes hyrcanus* Zar. et Loud.
— *Sylvia a. atricapilla* (L.)
— *Sylvia borin* (Bodd.)
— *Acrocephalus paludicola* (Vieill.)
— *Chloris chloris* (L.)

Genus *Picacanthus* Wd. Eichl.

- x** *dryobates* Wd. Eichl.
pici (Denny)
picicola (Pack.)
“*picicola*” (Pack.)
x *picorum* Wd. Eichl.

- *Dryobates m. major* L.
— *Picus viridis pluvius* Hart.
— *Picoides arcticus* Swains.
— *Picoides tridactylus dorsalis* Baird.
— *Picus c. canus* Gm.

Family Ricinidae De Geer

Genus *Ricinus* De Geer

- accentor* Wd. Eichl.
xx *bombycillae* (Denny)
dolichocephalus (Scop.)
elongatus (Olf.)
xx *ernstlangi* Wd. Eichl.
x *frenatus* (Burm.)
x *fringillae* De Geer
xx *irascens* (Burm.)
japonicus (Uchida)
maculatus (Piag.)
magnus Uchida

- *Prunella c. collaris* (Scop.)
— *Bombycilla g. garrulus* (L.)
— *Oriolus o. oriolus* (L.)
— *Turdus v. viscivorus* L.
— *Turdus merula* L.
— *Troglodytes t. troglodytes* (L.)
or *Regulus r. regulus* (L.)
— *Emberiza citrinella* L.
— *Fringilla c. coelebs* L.
— *Anthus spinolella japonica* Tem. et Schleg.
— *Picoides tridactylus crissoleucus* (Reich.);
Error?
— *Alauda arvensis intermedia* Swinh.

xx <i>major</i> Fresca	— <i>Emberiza calandra</i> (L.)
<i>medius</i> Uchida	— <i>Parus ater insularis</i> Hell.
" <i>medius</i> " Uchida	— <i>Parus atricapillus restrictus</i> Holm.
<i>merulae</i> (Durr.)	— <i>Turdus migratorius propinquus</i> Ridg.
<i>mystax</i> (Burm.)	— <i>Turdus pilaris</i> L.
xx <i>rubeculae</i> (Schr.)	— <i>Erythacus r. rubecula</i> (L.)
<i>serratus</i> (Durr.)	— <i>Eremophila alpestris hoyti</i> (Bisch.)
x <i>similis</i> (Gieb.)	— <i>Luscinia svecica</i> (L.)
x <i>thoracicus</i> (Pack.)	— <i>Plectrophenax n. nivalis</i> (L.)

Subfamily *Degeeriellinae* Wd. Eichl.Genus *Picicola* Clay et Meinertz.

x <i>candidus</i> (Nitzsch)	— <i>Picus c. canus</i> Gm.
xx <i>contiguus</i> sp. n.	— <i>Picus v. viridis</i> L.
x <i>dissors</i> sp. n.	— <i>Dryobates major</i> L.

Subfamily *Menacanthinae* Wd. Eichler

This group includes rather small forms with flat, semicircularly ended head and egg-shaped abdomen. Male genital apparatus similar to that of *Dennyninae*, but more delicate in structure. Parameres narrow, not much set apart from one another, hooked sideways at their ends. Most species have head appendages in the form of paired facial hooks and rows of setae or hair on the back margins of pleurites and tergites of abdomen.

I divide *Menacanthinae* from Centraleuropean *Passeriformes* and *Pici* into two groups of genera.

Group I is characterized by the presence of facial hooks. This group includes two genera: *Menacanthus* Neum. and *Picacanthus* Wd. Eichl. These genera are distinguished from one another by the shape of facial hooks and by the chaetotaxis of abdomen.

Group II is represented by the single genus *Lanicanthus* g.n. which refers in habitus and in structure of male genital apparatus to the first group, but is distinguished by the strongly reduced facial hooks.

Genus *Menacanthus* Neumann, 1912

Species typica: *Menopon robustum* Kellogg from *Psaltriparus minimus* (Town.).

Characteristic is the presence of more or less elongated facial hooks and the chaetotaxis of abdomen, in particular the pattern of bristles and pleural hair. Well visible rows of spines on back margins of abdominal pleurites in the species occurring on *Sturnidae*, *Oriolidae*, *Fringillidae*, *Alaudidae*, *Motacillidae*, *Paridae* and *Turdidae*. The composition of these spines may be less regular or the spines may be reduced in the species parasitizing *Corvidae* and *Laniidae*. In such case the facial hooks are shorter and more pointed and body dimensions are bigger than those in species which have distinct rows of abdominal setae. These characters do vary, especially in *Menacanthus* from *Corvidae*. Some species resemble the genus *Picacanthus* while other resemble *Menacanthus* from other families of birds. The genus *Menacanthus* comprises species differing in structure, but I find no ground for splitting it, as no groups of species of fixed and definable characters can be distinguished.

Menacanthus alaskensis (Kellogg et Chapman, 1902)

Typical host: *Cinclus mexicanus unicolor* Bonap.

The typical host has not been established till now, and according to Hopkins et Clay 1952, it had two hosts, *Cinclus mexicanus unicolor* Bonap. and *Pinicola enucleator flammea* Hom. So I designate *Cinclus mexicanus unicolor* as typical host for *M. alaskensis* and presume that on *Pinicola enucleator flammea* occurs some still undetermined species from the genus *Menacanthus*.

Menacanthus alaudae (Schrink, 1776)

Syn.: *Menopon parviceps* Piaget, 1880 from *Alauda arvensis* L.

Typical host: *Alauda arvensis arvensis* L.

Body dimensions and drawings of general appearance and details of male and female are found in Clay et Hopkins 1954.

Material examined from *Alauda arvensis* L.: 1 ♀ from the collection of Institut für Parasitenkunde, Berlin (date and place of the catch not known), coll. Wd. Eichler.

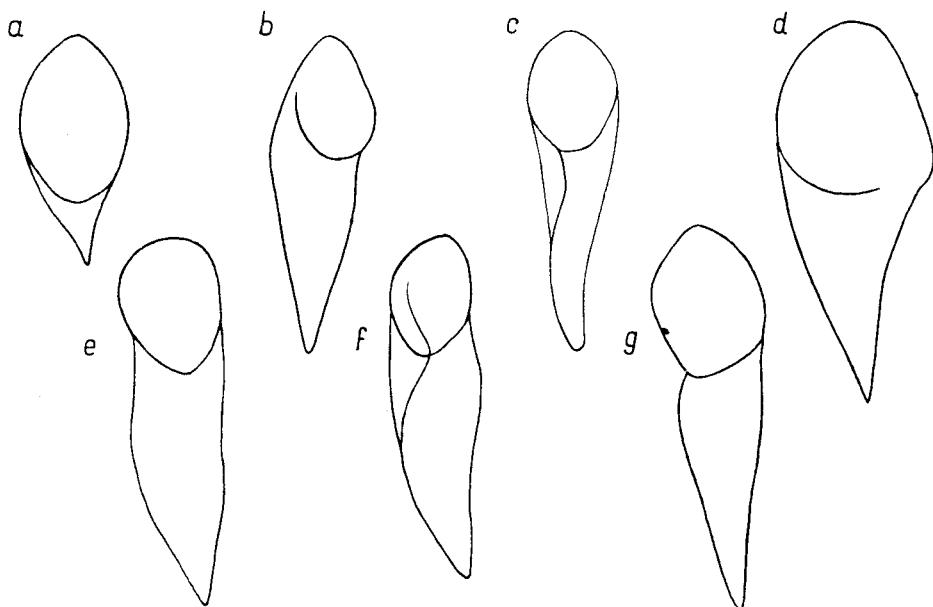


Fig. 1. Right facial hook of female of *Menacanthus* sp. sp. a — *M. alaudae* (Schr.) from *Alauda arvensis* L., prep. WEC 826c; b — *M. annulatus* (Gieb.) from *Passer d. domesticus* (L.), prep. WEC 4040ag; c — *M. bussei* sp. n. (holotype) from *Parus a. ater* L., prep. 9/i/1; d — *M. eurysternum* (Burm.) from *Pica p. pica* (L.), prep. WEC 3102h; e — *M. laticeps* Blag. from *Corvus f. frugilegus* L., prep. 1/c/46; f — *M. monochromateus* (Kell. et Paine) from *Garrulus g. glandarius* (L.), prep. 1/f/8; g — *M. mutabilis* Blag.. ♂ from *Sturnus v. vulgaris* L., prep. 2/a/17. All figs. except c × 670, fig. c × 800

Head of female high, semicircularly domed, temples broad. Facial hooks according to Wd. Eichler 1963 Mundhaken or Kopfhaken) very small, flattened oval, convergent to each other (Fig. 1).

<i>Menacanthus annulatus</i> (Gieb., 1874)	WEC 4040ag		
	long.	lat.	index
Cephalon	0.26	0.50	52
Prothorax	0.18	0.37	
Mesometathorax	0.24	0.51	
Abdomen	0.90	0.65	
Longitudo totalis	1.53		

Menacanthus annulatus (Giebel, 1874)

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

Material examined from *Passer d. domesticus* (L.): 1 ♀, Halle/s (Germany), 14.XI.1949, leg. R. Piechocki.

Forehead flat, triangular with an obtuse angle and rounded margins. Facial hooks (Fig. 1b) long, set obliquely to each other. Temples broad, slightly bent backwards. Thorax normal. Abdomen ovaly elongated, slightly sharpened at its end. Medium sized anal crown with very fine bristles.

Menacanthus brevidentatus Blagoveshchensky, 1948

Typical host: *Lanius minor* G.

Original description based on one female specimen is rather extensive, includes a drawing of general appearance and of head. Characteristic is the absence of bristles on the back margins of abdominal pleurites.

Menacanthus bussei sp. n.*

Typical host: *Parus ater ater* L.

Material examined: 1 ♀ (holotype, coll. mea) from the prep. 9/i/1, Hel, 1.V.1963, leg. Busse from a live bird.

<i>Menacanthus bussei</i> sp. n.	holotypus		
	long.	lat.	index
Cephalon	0.26	0.50	52
Prothorax	0.17	0.37	
Mesometathorax	0.19	0.46	
Abdomen	0.74	0.56	
Longitudo totalis	1.25		

* I name this species in honour of P. Busse, M. Sc., who provided me with a lot of precious Mallophaga materials.

Female (Phot. 1) very small, golden-brown. Head broad. Orbital incision very flat. Facial hooks small and narrow (Fig. 1c). Prothorax big, lighter than the head, mesometathorax a little darker, of the same color as the abdomen. Abdomen egg-shaped with transverse, brown bounds. Anal crown with long and relatively thick bristles. Bristles on the back margins of pleurites fine and thin, a little longer at the middle of the abdomen.

Menacanthus camelinus (Nitzsch, 1874)

Syn.: *Menacanthus dudiyalatora* Ansari, 1951 from *Lanius excubitor lahtora* (Sykes).

Typical host: *Lanius excubitor excubitor* L.

Eichler 1953 gave an extensive description of female. This author placed this species provisionally in the genus *Menacanthus* because of the lack of rows of bristles on back margins of abdominal pleurites and sternites. Facial hooks medium in size, bluntly ended.

Menacanthus carduelis (Denny, 1842)

Typical host: *Carduelis carduelis britannicus* (Hart.).

From the description by Denny 1842 (P. 228, Pl. XX, Fig. 7) I understand that a female is stocky, with a rather high, semicircular forehead.

Menacanthus citrinellae (Denny, 1842)

Typical host: *Emberiza citrinella citrinella* L.

According to Denny 1842 (P. 220, Pl. XXI, Fig. 3) a female has a broad head with somewhat parabolic forehead. Abdomen ovaly elongated.

Menacanthus currucae (Schrank, 1776)

Typical host: *Corvus corone sharpi* Oates.

The original description of male and female with body dimensions and drawings of a female and of a head with long, narrow parallel facial hooks. The writer placed this species near *Menacanthus mutabilis* from *Sturnus vulgaris*. This theory seems to be right as the abdominal pleurites of *M. cornicis* have rows of bristles and the facial hooks are long, similarly to those of *M. mutabilis*. Instead, most species of the genus *Menacanthus* from Corvidae have small facial hooks and more or less reduced rows of abdominal bristles.

Menacanthus currucae (Schrank, 1776)

Syn.: *Liotheum* (s. g. *Menopon*) *minutus* Nitzsch, 1818, nom. n. for *Pediculus currucae* Schrank.

Typical host: *Sylvia curruca* (L.).

It results from the description by Séguay 1944 (Fig. 79 and 80) that a male is small (total length 1.1—1.4 mm), with relatively high forehead. Anal crown with longer bristles at its sides.

Menacanthus eurysternum (Burmeister, 1838)

Syn.: *Menopon picae* Piaget, 1880 from *Pica pica pica* (L.).

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

Material examined from *Pica pica pica* (L.): 1 larva, Opatowice near Wrocław, 31.III.1953, leg. Złotorzycka. 2 ♀♀, Huchting (Germany), 26.II. 1947, leg. E. Jacob, coll. Wd. Eichler.

<i>Menacanthus eurysternum</i> (Burm., 1838)	WEC 3102ji			WEC 3102 h		
	long.	lat..	index	long.	lat.	index
Cephalon	0.30	0.57	53	0.30	0.60	50
Prothorax	0.21	0.41		0.24	0.43	
Mesometathorax	0.27	0.65		0.27	0.59	
Abdomen	1.07	0.85		1.12	0.75	
Longitudo totalis	1.68			1.82		

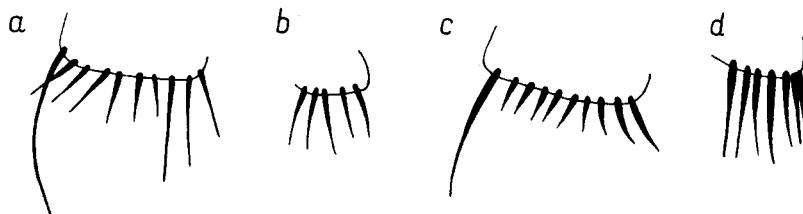


Fig. 2. Bristles on the 2nd abdominal pleurite of female of *Menacanthus* sp. sp. a — *M. eurysternum* (Burm.) (left) from *Pica p. pica* (L.), prep. WEC 3102h; b — *M. merisuoi* Wd. Eichl. (right) from *Nucifraga caryocactes macrorhynchus* Br., prep. WEC 2231a (holotype); c — *M. monochromateus* (Kell. et Paine) (left) from *Garrulus g. glandarius* (L.), prep. 1/f/8; X 270; d — *M. polonicus* Wd. Eichl. et Złot. (right) from *Turdus pilaris* L., prep. 14/d/3 (holotype), X 400

Female relatively big. Forehead wide and semicircular at the end. Facial hooks (Fig. 1d) big, broad at their basis, pointed and parallel. Prothorax relatively broad, mesometathorax normal. Abdomen large, semicircular at the end. Anal crown medium sized with sparse hair. Back margins of abdominal pleurites with rows of bristles (Fig. 2a) of various length.

Menacanthus exilis (Nitzsch, 1866)

Typical host: *Oenanthe oenanthe oenanthe* (L.).

According to the description given by Kéler 1936 a female has the head small in proportion to the rest of body and very short facial hooks.

Menacanthus festivus Wd. Eichler et Złotorzycka, 1963

Typical host: *Fringilla coelebs coelebs* L.

Material examined from *Fringilla c. coelebs* L.: 1 ♀ (holotype, coll. mea) from the preparation 4/p/7, Skowronki (Mierzeja Wiślana), 8.IX.1962, leg. Złotorzycka from a live bird.

This species was described from a single female specimen. The description included body dimensions, a photograph of general appearance and drawing of a facial hook.

Menacanthus gonophaeus (Burmeister, 1838)

Typical host: *Corvus corax corax* L.

From the description of male and female given by Giebel 1876 (P. 282, Pl. XV, Fig. 1) it issues that this is a relatively big species, with broad head.

Menacanthus gulabimaina Ansari, 1951

Typical host: *Sturnus roseus* (L.).

Probably related to *Menacanthus mutabilis* from *Sturnus vulgaris*.

? *Menacanthus inaequalis* (Piaget, 1880)

Typical host: *Lanius collurio collurio* L.

It is not clear enough which genus should this species belong to. Piaget 1880 described it as *Menopon*. Séguin 1944 included it to *Myrsidea*, in spite that he knew the genus *Menacanthus*. It can be understood from his description that *inaequalis* belongs to *Dennyniae* and not to *Menacanthinae*. Hopkins et Clay 1952 placed *inaequalis* in the genus *Menacanthus*, but they had not examined the types.

Menacanthus inscitus nom. novum

for *Pediculus pyrrhulae* Panzer, 1798 (nec Schrank, 1776).

Typical host: *Pyrrhula pyrrhula pyrrhula* (L.).

I do not know either specimens or more recent descriptions.

Menacanthus laticeps Blagoveshchensky, 1948

Typical host: *Corvus frugilegus frugilegus* L.

Original description of male and female illustrated with body dimensions and drawings depicting general appearance and head. The author placed this species near *Menacanthus gonophaeus* from *Coloeus monedula*.

Material examined from *Corvus f. frugilegus* L.: 1 ♂, 13 ♀♀, 6 larvae, Opatowice near Wrocław, 15.I.1952; 1 ♂, 1 ♀, 2 larvae, Wrocław, 20—21.II.1955. All materials leg. Złotorzycka from dead birds.

In complement to the already known characters I give here a drawing of a facial hook (Fig. 1e) and the information that the abdomen is all covered with long, unevenly dislocated hair. No regular rows of bristles.

Menacanthus meniscus (Piaget, 1880)

Typical host: *Calcarius lapponicus* (L.).

I know neither specimens nor recent descriptions.

Menacanthus merisuoii Wd. Eichler, 1953

Typical host: *Nucifraga caryocatactes macrorhynchus* Brehm.

The original description based on a female specimen illustrated with body dimensions and drawings of some details.

Material examined: 1 ♀ (holotype) WEC 2231a, Białowieża (Poland), 1917/18, leg. H. Bischoff, coll. Zool. Mus. Berlin.

The head and prothorax of a female much more dark than the rest of body. Facial hooks a little smaller than those of other *Menacanthus* species from Corvidae.

Menacanthus minusculus Blagoveshchensky, 1940

Typical host: *Turdus philomelos philomelos* Brehm.

Short original description of female with body dimensions and a drawing of general appearance. The writer placed this species near *Menacanthus mutabilis* from *Sturnus vulgaris*.

Menacanthus monedulae Blagoveshchensky, 1951

Typical host: *Coloeus monedula monedula* (L.).

Short original description made on the basis of male and female specimens illustrated with body dimensions and a drawing of head (ventral view).

Menacanthus monochromateus (Kellogg et Paine, 1914)

Typical host: *Garrulus glandarius lanceolatus* Vigors.

For *M. monochromateus* no typical host was defined as such till now. It was described from *G. glandarius lanceolatus* Vig. and from *Pyrrhocorax graculus* (L.). So I establish as typical host *G. gl. lanceolatus* and I presume that on *P. graculus* there occurs some unknown species of the genus *Menacanthus*.

<i>Menacanthus monochromateus</i> (Kell. Paine, 1914)	1/f/8		
	long.	lat.	index
Cephalon	0.30	0.52	58
Prothorax	0.20	0.41	
Mesometathorax	0.25	0.53	
Abdomen	0.94	0.60	
Longitudo totalis	1.52		

Material examined from *Garrulus g. glandarius* (L.): 4 ♀♀, Wrocław — Zoo, 3.V.1957, leg. Złotorzycka from a live bird.

Female of medium size. Head with flat temples, markedly recurvated. Occiput concave. Forehead domed, somewhat sharpened at the end. Facial hooks (Fig. 1f) relatively narrow, parallel to each other. Mesometathorax rela-

tively short, abdomen elyptical, elongated. Anal crown broad, with fair, thick-set hair. Rows of bristles on the back margins of ventral side of abdominal pleurites well marked, especially on the first two segments (Fig. 2c). Further segments with bristles still finer and more difficult to be found.

Menacanthus mutabilis Blagoveshchensky, 1940

Syn.: *Menacanthus himalayicus* Ansari, 1951 from *Sturnus vulgaris humei* Brooks (probably — according to Hopkins et Clay 1953).

Typical host: *Sturnus vulgaris* L.

M. mutabilis was described from *S. v. vulgaris* L. and from *S. vulgaris caucasicus* Lorenz. Since this species occurs on two subgenera of *S. vulgaris*, it probably parasitizes also *Sturnus vulgaris humei*, and thus *M. himalayicus* would be synonymous with *M. mutabilis*.

M. mutabilis is common on starlings and rather well known. Besides the original description of male and female Eichler 1953 published many additional details.

Material examined: 1 ♀ (holotype) WEC 2231a, Białowieża (Poland), 1917/18, leg. licz: 1 ♂, 13.IV.1954; Górkki Wschodnie near Gdańsk: 21 ♀♀, 1 ♂, 18.VII—19.VIII.1961; leg. Złotorzycka from live and dead birds. Górkki Wschodnie: 5 ♀♀, 1 larva, 3—9.IX.1961; leg. Zająć. Nowa Pasieka, district Braniewo (Pomorze): 1 ♂, 11.IX.1961, leg. Busse.

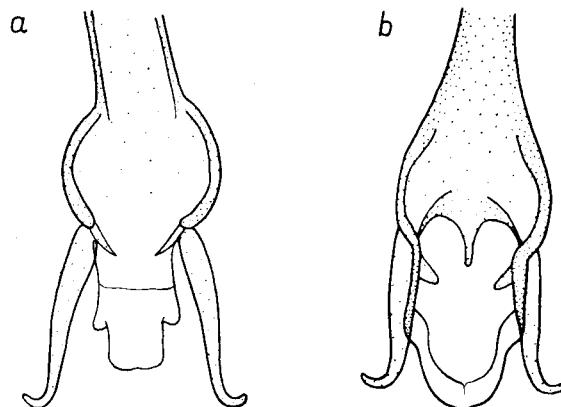


Fig. 3. Male genital apparatus of *Menacanthus* sp. sp.
a — *M. mutabilis* Blag. from *Sturnus v. vulgaris* L.,
prep. 2/a/17, $\times 330$; b — *M. pius* Wd. Eichl. et Złot.
from *Turdus m. merula* L., prep. 14/e/12—2, $\times 430$

In addition to the known characters I give here drawings of facial hook (Fig. 1g) and male genital apparatus (Fig. 3a).

Menacanthus orioli Blagoveshchensky, 1951

Typical host: *Oriolus oriolus kundoo* Sykes.

Original description of female with body dimensions and a drawing of head, ventral view.

Menacanthus perforatus (Piaget, 1880)

Typical host: *Eremophila alpestris chrysolaema* (Wagler).

This species may also occur on *Eremophila alpestris flava* (Gm.) known from Poland.

Menacanthus phylloscopi Blagoveshchensky, 1951

Typical host: *Phylloscopus collybita tristis* Blyth.

The original description of a female illustrated with the dimensions of some specimens and a drawing of head as viewed from the ventral side.

Menacanthus pius Wd. Eichler et Złotorzycka, 1963

Typical host: *Turdus merula merula* L.

This species was described on the basis of some scores of females and of three males. The description includes body dimensions and is illustrated by a photograph of a female and a drawing of female facial hook.

Material examined from a series of types: 1 ♂ (allotype, coll. mea), 2 ♂♂ (paratypes), 1 ♀ (holotype, coll. mea) 14/e/11—1, 34 ♀♀ (paratypes), 9 larvae, Wrocław, 11.IX.1953, leg. Złotorzycka.

I give as a complement to the known characters a drawing of the male genital apparatus (Fig. 3b).

Menacanthus polonicus Wd. Eichler et Złotorzycka, 1963

Typical host: *Turdus pilaris* L.

The original description of a female includes body dimensions, a photograph showing general appearance, and a drawing of a facial hook.

Material examined: 1 ♀ (holotype, coll. mea) 14/d/3—4, 1 larva, Opatowice near Wrocław, 7.XII.1951, leg. Złotorzycka.

In addition to the known characters I give a drawing of a row of abdominal bristles (Fig. 2d).

Menacanthus pusillus (Nitzsch, 1866)

Typical host: *Motacilla alba alba* L.

Short description, unfortunately without any illustrations, was given by Giebel 1874. It is impossible to determine precisely specific traits of this species basing on this description because Giebel mixed *M. pusillus* with *M. citrinellae*. Old descriptions of *M. pusillus* are wide enough to include almost the whole genus *Menacanthus* in its present meaning.

Menacanthus remizae Blagoveshchensky, 1940

Typical host: *Remiz pendulinus pendulinus* (L.).

Extensive original description was based on females and gave body dimensions of some specimens and drawing of a female.

Menacanthus schildmacheri Wd. Eichler, 1953

Typical host: *Prunella modularis modularis* (L.).

The original description of a female with body dimensions and drawing of a facial hook.

Menacanthus setosus (Piaget, 1885)

Typical host: *Coccothraustes coccothraustes coccothraustes* (L.).

Besides the original illustrated description, Hopkins et Clay 1952 published a note as to the existence of types.

Menacanthus sinuatus (Burmeister, 1838)

Syn.: *Menopon minutus* Giebel, 1874 (nec Nitzsch, 1818) from *Parus m. major* L.

Typical host: *Parus major major* L.

Extensive description of a female with the body dimensions and a drawing of the head was given by Neumann 1912. Eichler 1953 gave an illustrated description of a female, too. I do not know any description of a male except a drawing in Denny 1842 (Pl. XX, Fig. 6) which, judging from the animal's narrow and semicircularly ended abdomen, must portray a male.

<i>Menacanthus sinuatus</i> (Burm., 1838)	WEC 198			9/f/2		
	long.	lat.	index	long.	lat.	index
Cephalon	0.23	0.38	61	0.36	0.48	54
Prothorax	0.11	0.23		0.14	0.34	
Mesometathorax	0.13	0.34		0.15	0.15	
Abdomen	0.44	0.41		0.62	0.55	
Longitudo totalis	0.82			1.12		

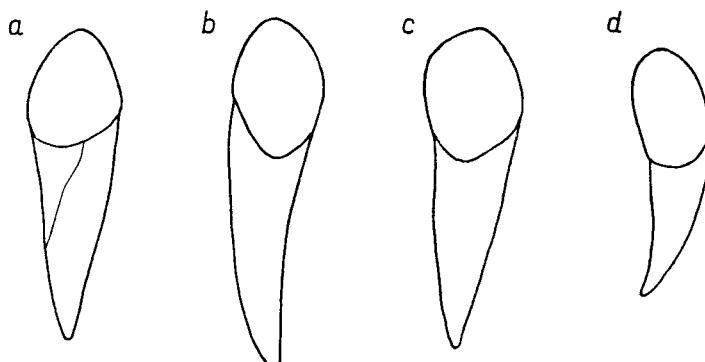


Fig. 4. Right facial hook of female of *Menacanthus* sp. sp. a — *M. sinuatus* (Burm.) from *Parus m. major* L., prep. 9/f/3; b — *M. sittae* (Gieb.) from *Sitta europaea caesia* Wolf., prep. 10/a/1; c — *M. subhorridus* sp. n. (holotype) from *Parus p. palustris* L., prep. 9/k/2; d — *M. verecundus* sp. n. (holotype) from *Sylvia a. atricapilla* (L.), prep. 8/b/8; $\times 670$

Material examined from *Parus m. major* L.: 2 ♀♀, Żelistrzewo (Pomorze), 17.IX.1962, leg. Gromadzki from a live bird; 1 ♂, Ravensburg (Germany), 26.XII.1933, leg. et coll. Wd. Eichler.

Male very small. Forehead broad, slightly narrower than the temporal part at its basis, a little sharpened at the end. Thorax similar to that of a female. The egg-shaped abdomen almost round. General coloring dark-yellow. Details of male genital apparatus indiscernible due to the deformation of the slide. Facial hooks similar in both sexes, in female like in Fig. 4a.

Menacanthus sittae (Giebel, 1866)

Typical host: *Sitta europaea caesia* Wolf.

Material examined from *Sitta europaea caesia* Wolf: 1 ♀, Hel, 10.X.1962, leg. Busse from a live bird.

Female relatively big. Head flat. Broad, semicircular forehead a little sharpened at its end. Facial hooks (Fig. 4b) slender, parallel to each other. Temples broad, somewhat bent posteriad. Prothorax relatively big, semicircularly ended. Mesometathorax medium sized. Abdomen elongated, elyptoid. Pleurites darker than the rest of the abdomen. Anal crown of medium size, with thick hair of various length. General body coloring brown-fulvous with olive undertone.

<i>Menacanthus sittae</i> (Giebel, 1866)	10/a/1		
	long.	lat.	index
Cephalon	0.29	0.51	57
Prothorax	0.20	0.39	
Mesometathorax	0.28	0.53	
Abdomen	0.99	0.72	
Longitudo totalis	1.68		

Menacanthus subsimilis Blagoveshchensky, 1940

Typical host: *Parus coeruleus saturnini* Sar.

Original description based on one female with dimensions and a drawing of body. The author compared this species with *Menacanthus curuccae* from *Sylvia curruca*.

Menacanthus subhorridus sp. n.

Syn.: *Menacanthus sinuatus* ssp. Wd. Eichl., 1953 from *Parus palustris* L. [nec *Menacanthus sinuatus* (Burm., 1838) from *Parus m. major* L.].

Material examined from *Parus p. palustris* L.: 1 ♀ (holotype, coll. mea) 9/k/2, Żelistrzewo, (Pomorze), 17.IX.1962, leg. Gromadzki from a live bird; Paratype; 1 ♂, described by Wd. Eichler 1953 (Abb. 19 and 20) as *Menacanthus sinuatus* ssp. from *Parus palustris* L.

Female (Phot. 2) similar to the female *Menacanthus sinuatus* from *Parus major*, but the head is more flat. Facial hooks as in Fig. 4c. Mesometathorax longer, legs more delicate, abdomen more slender than that of *M. sinuatus*.

According to Eichler 1953 the male is 1.29 mm long and 0.52 mm wide. Head length 0.27 mm, head width 0.49 mm. The head index calculated from these data in percent is 53. Thus a male *M. subhorridus* is far bigger than a male *M. sinuatus* and it resembles in size the females, opposite than it is in *M. sinuatus*. Head proportions of male and female are similar, while in *M. sinuatus* they are different.

<i>Menacanthus subhorridus</i> sp. n.	holotypus		
	long.	lat.	index
Cephalon	0.26	0.50	52
Prothorax	0.16	0.35	
Mesometathorax	0.23	0.41	
Abdomen	0.72	0.49	
Longitudo totalis	1.26		

Menacanthus tenuifrons Blagoveshchensky, 1940

Typical host: *Troglodytes troglodytes hyrcanus* Zar. et Loudon.

Original description based on one female illustrated with body dimensions and a drawing of habitus.

Menacanthus verecundus sp. n.

Typical host: *Sylvia atricapilla atricapilla* (L.).

Material examined: 1 ♀ (holotype, coll. mea) 8/b/8, Hel, 31.VIII.1962, leg. Busse from a live bird.

<i>Menacanthus verecundus</i> sp. n.	holotypus		
	long.	lat.	index
Cephalon	0.23	0.44	52
Prothorax	0.15	0.33	
Mesometathorax	0.21	0.45	
Abdomen	0.74	0.58	
Longitudo totalis	1.28		

Female (Phot. 3) resembles in habitus and color the female of *Menacanthus vistulanus* from *Sylvia borin*, but it has a more flat head and the facial hooks formed differently (Fig. 4d). Abdomen relatively broad. Anal crown well developed, with thick and rather long hair.

Menacanthus vistulanus Wd. Eichler et Złotorzycka, 1963

Typical host: *Sylvia borin* (Bodd.).

Original description of two females from the same host, with body dimensions of the holotype, a photograph showing the general appearance and a drawing of the facial hook.

Holotype, coll. mea, 1 ♀ 8/a/1, Skowronki (Mierzeja Wiślana), 11.IX.1962, leg. Złotorzycka. Paratype coll. Wd. Eichler.

Menacanthus wegelini Wd. Eichler, 1953

Typical host: *Acrocephalus paludicola* (Vieillot).

Original description of one female illustrated with some of the body dimensions and a drawing of a long facial hook.

Material examined: 1 ♀ (holotype, coll. Wd. Eichler) WEC 335a, Tunis, IV.1886, leg. A. Koenig.

To the known characters I add the total length of the holotype amounting to 1.35 mm.

Menacanthus wipszyckii Wd. Eichler et Złotorzycka, 1963

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

Original description made on the base of one female with dimensions, a photograph of the animal and a drawing of the facial hook.

Holotype, coll. mea from the preparation 4/h/4, Wrocław, 14.XI.1953, leg. Złotorzycka from a shot bird.

Genus *Picacanthus* Wd. Eichler, 1953

Species typica: *Picacanthus dryobates* Wd. Eichl. from *Dryobates major* (L.).

Males and females both of medium size, similar as the species of *Menacanthus* occurring on Corvidae. Facial hooks short, broad at the basis, pointed and falciform at the end. No rows of bristles on the back margins of abdominal pleurites like it is in *Menacanthus*, instead there are rows of thin hair. Male genital apparatus similar as in *Menacanthus*, but parameres are thinner and more delicate.

Occurrence: *Picidae*.

Picacanthus dryobates Wd. Eichler, 1953

Typical host: *Dryobates major major* (L.).

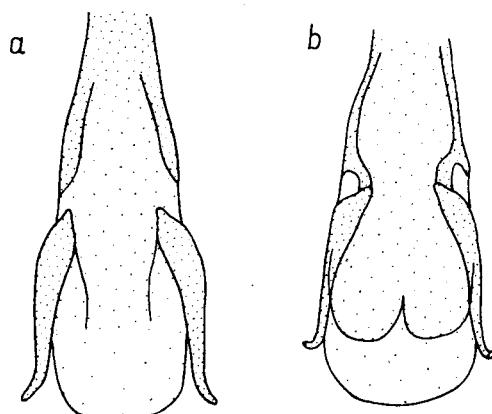


Fig. 5. Male genital apparatus of *Picacanthus* sp. sp. a — *P. dryobates* Wd. Eichl. from *Dryobates m. major* (L.), prep. WEC 293 (holotype); b — *P. picorum* Wd. Eichl. from *Picus c. canus* Gm., prep. WEC 532 (holotype); × 250

Original description of male and female with some body dimensions, a drawing of facial hook and chaetotaxis of iv abdominal segment. The author compared this species with *Picacanthus picorum* from *Picus canus*.

Material examined from *Dryobates m. major* (L.): 1 ♂ (holotype, coll. Wd. Eichler) WEC 293, Taevaskoda (Eesti), 8.X.1935, leg. Voore. 4 ♂♂, ♀♀, 6 larvae, forestry Wickowo, 23.IX.1961, leg. E. Wołk.

To the known characters I add a drawing of male genital apparatus of the holotype (Fig. 5a).

Picacanthus pici (Denny, 1842)

Typical host: *Picus viridis pluvius* Hartert.

It results from the description given by Denny 1842 (P. 219, Pl. XX, Fig. 5) that a female is rather big, massive, with broad prothorax and long abdomen.

Picacanthus picicola (Packard, 1873)

Typical host: *Picoides arcticus* (Swainson).

The species *P. picicola* was described from *Picoides arcticus* and *P. tridactylus dorsalis* Baird. and had, till now, no determined typical host. So I establish *Picoides arcticus* (Swains.) as typical host and presume that on *Picoides tridactylus dorsalis* there occurs some undefined species of the genus *Picacanthus*.

To the Polish fauna there might belong only the *Picacanthus* from *Picoides tridactylus*, as *Picoides arcticus* is not known from Poland.

Picacanthus picorum Wd. Eichler, 1953

Typical host: *Picus canus canus* Gm.

Brief original description based on a male and a female is completed by some body dimensions and some drawings of details.

Material examined: 1 ♂ (holotype) WEC 532 and 1 ♀ (paratype), Kottenforst bei Bonn a. Rh., 20.IV.1938, leg. G. Niethammer.

<i>Picacanthus picorum</i> Wd. Eichl., 1953	WEC 532			WEC 532		
	long.	lat.	index	long.	lat.	index
Cephalon	0.30	0.53	57	0.34	0.55	62
Prothorax	0.21	0.41		0.24	0.42	
Mesometathorax	0.29	0.52		0.35	0.55	
Abdomen	0.99	0.70		0.06	0.77	
Longitudo totalis	1.74			1.86		

Male and female relatively big. Facial hooks short, falciform. Prothorax with slightly rounded back margin. Abdomen long, rather broad. Female anal crown with hair longer and more dense at the sides. Male genital apparatus as in Fig. 5b.

Genus *Lanicanthus* gen. novum

Species typica: *Lanicanthus aequalis* sp. n. from *Lanius collurio* L.

Habitus as in Phot. 4 and 5. Small size. Coloring light, except the dark, oval-elongated orbital spots. Facial hooks strongly reduced, hardly visible, but resembling in shape those of *Picacanthus*. Rows of bristles on the back margins of abdominal pleurites strongly reduced, even to two or one bristle. Female similar to the male. Anal crown well developed.

Occurrence: *Laniidae* (till now *Lanius collurio* only).

Lanicanthus aequalis sp. n.

Typical host: *Lanius collurio collurio* L.

Material examined: 1 ♂ (holotype, coll. mea) 15/a/20, 2 ♀♀, Górkí Wschodnie near Gdańsk, 11.VIII. 1961, leg. Złotorzycka from a live bird; 1 ♀, Nowa Pasłeka, district Braniewo (Pomorze), 3.IX.1961; 2 ♂♂, 8 ♀♀, 5 larvae, Pasłeka (Pomorze), 23.VIII.1963, leg. Busse.

<i>Lanicanthus aequalis</i> sp. n.	15/a/20 holotypus			15/a/21 paratype		
	long.	lat.	index	long.	lat.	index
Cephalon	0.25	0.39	64	0.27	0.47	57
Prothorax	0.13	0.20		0.17	0.32	
Mesometathorax	—	0.30		0.23	0.38	
Abdomen	0.61	0.43		0.64	0.51	
Genitalia	0.32					
Longitudo totalis	1.00			1.15		

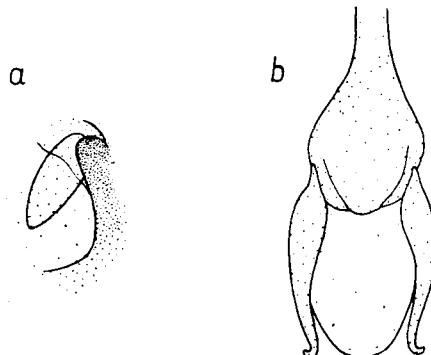


Fig. 6. *Lanicanthus aequalis* g. n., sp. n. from *Lanius c. collurio* L. a — right facial hook of female, prep. 15/a/21, $\times 880$; b — male genital apparatus, prep. 15/a/20, $\times 370$

Both male and female (Phot. 4 and 5) very small, light-yellow. Head fairly broad with chestnut orbital spots. Facial hooks (Fig. 6a) very small (about 0.02 mm long). Legs big and thick. Abdomen egg-shaped, transversely striated with light-yellow bands, covered with hair of different length. Male genital apparatus as in Fig. 6b.

Family Ricinidae Neumann

Exclusively on Passeriformes — represented by the single genus *Ricinus*.

Genus *Ricinus* De Geer, 1778

Species typica: *Ricinus fringillae* De Geer, 1778 from *Emberiza citrinella* L.

All species differ in habitus and size (over 2 mm long) from other *Mallophaga* parasitizing on Passeriformes. Head characteristic in shape (Fig. 9c), has lobate processes — the palettes ("Paletten" of Eichler).

Occurrence in Central Europe: *Oriolidae*, *Fringillidae*, *Alaudidae*, *Motacillidae*, *Prunellidae*, *Sylviidae*, *Troglodytidae*, *Muscicapidae*, *Paridae*, *Turdidae* and *Bombycillidae*.

Ricinus accentor Wd. Eichler, 1953

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

Original description based on a female with the head characteristic in shape and big palettes.

Ricinus bombycillae (Denny, 1842)

Syn.: *Physostomum intermedium* Piaget, 1880 from *Bombycilla garrulus* (L.).

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

Material examined from *Bombycilla g. garrulus* (L.): 1 ♀, Wrocław, 2.I.1950, leg. Złotorzycka; 1 ♀ and 2 larvae, Zawiercie, XII.1954, leg. Dąbrowski.

<i>Ricinus bombycillae</i> (Denny, 1842)	17/a/1			17/a/3		
	long.	lat.	index	long.	lat.	index
Cephalon	0.77	0.72	107	0.76	0.76	109
Prothorax	0.50	0.68		0.49	0.64	
Mesometathorax	0.56	1.06		0.51	0.51	
Abdomen	2.29	1.32		2.27	1.35	
Longitudo totalis	3.90			3.85		

Head a little elongated, palettes very small. Distinct orbital sinuses well marked with dark spots at the end. Prothorax almost barrel-shaped. Prothoracic plate as in Fig. 7a. Mesometathorax long, trapezoid. Abdomen elliptic, semicircularly ended. Pleurites with a dark-brownish pattern. Middle of the abdomen light with the segments iv to viii slightly darkened. General coloring yellow brownish.

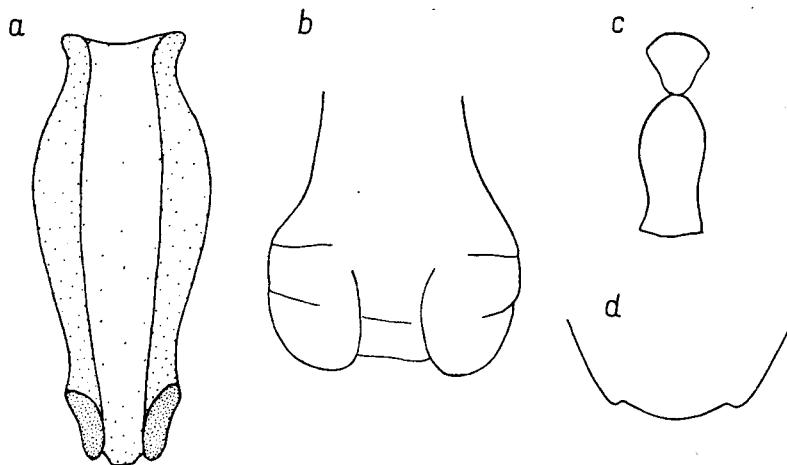


Fig. 7. *Ricinus* sp. sp. a — prothoracic plate ♀ *R. bombycillae* (Denny) from *Bombycilla g. garrulus* (L.), prep. 17/a/3, $\times 270$; b — male genital apparatus of *R. ernstlangi* Wd. Eichl. from *Turdus merula* L., prep. WEC 1847 1, $\times 250$; c — thoracic plates ♀ *R. frenatus* (Burm.) from *Regulus regulus* (L.), prep. WEC 7769a, $\times 72$; d — outline of abdomen end ♀ *R. frenatus* (Burm.) from *Regulus regulus* (L.), prep. WEC 7769a, $\times 145$

Ricinus dolichocephalus (Scopoli, 1763)

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

Noted from Poland by Clay et Hopkins 1951, who wrote: "Neotype male and neoallotype female from NE Poland (Meinertzhangen collection, slide No. 4190). Neoparatypes: 3 males and 10 females from same host, from NE Poland, Switzerland, and Cyprus."

These writers (1951, 1960) gave for *Ricinus dolichocephalus* a curt description with illustrations.

Ricinus elongatus (Olfers, 1816)

Typical host: *Turdus viscivorus viscivorus* L.

Clay et Hopkins 1960 tended to identify *R. elongatus* with *R. ernstlangi* from *Turdus merula* and *R. mystax* from *Turdus pilaris*. However, basing on the material examined and on literature, I consider these species as separate.

Ricinus ernstlangi Wd. Eichler, 1941

Typical host: *Turdus merula* L.

Material examined from *Turdus merula merula* L.: Hel: 17 ♀♀, 3 larvae, 8.IV.—4.V.1963, leg. Busse from live birds. 1 ♂, Rostock (Germany), 14.V.1935, leg. R. Roesler, coll. Wd. Eichler. 1 ♀, Erlangen (Germany), 1.IX.1949.

<i>Ricinus ernstlangi</i> Wd. Eichl., 1941	WEC 1847			14/e/81		
	long.	lat.	index	long.	lat.	index
Cephalon	0.75	0.66	114	0.88	0.77	114
Prothorax	0.42	0.52		0.64	0.75	
Mesometathorax	0.44	0.77		0.62	1.01	
Abdomen	1.78	0.87		2.68	1.25	
Genitalia	0.37					
Longitudo totalis	3.31			4.34		

R. ernstlangi is smaller than *R. elongatus*. Head slightly elongated, while in *R. elongatus* it is rather broad. The broadest part of head is below the orbital sinus, while in *R. elongatus* it is above the sinus. Prothoracic plate markedly narrowing backwards, while in *R. elongatus* it is not (compare Clay et Hopkins 1960, Fig. 40). Male genital apparatus as in Fig. 7b.

Ricinus frenatus (Burmeister, 1838)

Typical host: *Troglodytes t. troglodytes* (L.) or *Regulus regulus regulus* (L.). Material examined from *Regulus regulus regulus* (L.): 1 ♀, Hiddensee (Germany), 5.IV.1957, leg. W. Berger, coll. Wd. Eichler.

<i>Ricinus frenatus</i> (Burm., 1838)	WEC 7769a		
	long.	lat.	index
Cephalon	0.61	0.45	136
Prothorax	0.29	0.39	
Mesometathorax	0.36	0.57	
Abdomen	1.39	0.58	
Longitudo totalis	2.45		

Female slender and relatively small. Head elongated, the preantennal part with concave lateral margins. Palettes medium sized. Temples flexed far backwards, pointed. Thoracic plates broad, in particular the mesometathoracic one (Fig. 7c). Abdomen fusiform. The last segment semicircular with small protuberances at both sides (Fig. 7d).

Ricinus fringillae De Geer, 1778

Syn.: *Liotheum nitidissimus* Nitzsch, 1818.

Typical host: *Emberiza citrinella* L.

Dimensions of female together with drawings of a number of details were given by Clay et Hopkins 1954. Male characters with drawings were given by Clay et Hopkins 1960.

Material examined from *Emberiza citrinella citrinella* L.: 1 ♂, Hodonin (Czechoslovakia), 14.I.1951; ♀, Zbrod-Hodonin (Czechoslovakia), 8.V.1950, leg. F. Balát, coll. Wd. Eichler.

<i>Ricinus</i> <i>fringillae</i> De Geer, 1778	WEC 7366a			WEC 7356a		
	long.	lat.	index	long.	lat.	index
Cephalon	0.55	0.50	110	0.69	0.62	111
Prothorax	0.32	0.45		0.40	0.56	
Mesometathorax	0.36	0.63		0.45	0.80	
Abdomen	1.30	0.89		1.86	1.00	
Genitalia	0.40					
Longitudo totalis	2.41			3.24		

Size medium. Head relatively small, light-yellow, the rest of body yellow-brownish. Lateral margins of forehead concave. Palettes rather small. Prothorax broad. Abdomen big, most broad at the level of segment vii. Male genital apparatus dark colored.

Ricinus irascens (Burmeister, 1838)

Syn.: *Ricinus uchidai* Fresca, 1924 from *Fringilla c. coelebs* L.

Typical host: *Fringilla coelebs coelebs* L.

Material examined from *Fringilla c. coelebs* L.: 1♀, Keipino (Kartuzy), 18.V.1957; 2♀, Hel, 5.IX.1962, leg. Busse from a live bird.

<i>Ricinus</i> <i>irascens</i> (Burm., 1838)	4/p/6—1			4/p/9		
	long.	lat.	index	long.	lat.	index
Cephalon	0.62	0.55	113	0.66	0.56	118
Prothorax	0.36	0.51		0.40	0.51	
Mesometathorax	0.41	0.68		0.44	0.52	
Abdomen	1.64	0.89		1.80	0.75	
Longitudo totalis	2.85			3.08		

Females medium sized, with yellowish head and darker rest of the body. Temples sharply ended. Eyes markedly protuberant. The front pair of eyes a little smaller than the back one. Mandibulae as in Fig. 8a. Prothorax as in Fig. 8b. Abdomen relatively narrow. Pleurites dark brown. Inside of the abdomen light yellow with a conspicuous darkening at the middle.

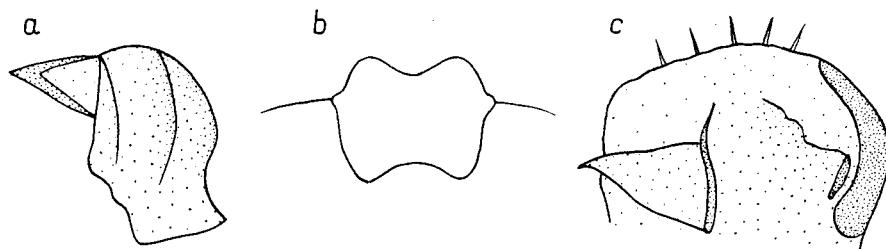


Fig. 8. *Ricinus* sp. sp. a — right mandibula, and b — outline of prothorax ♀ *R. irascens* (Burm.) from *Fringilla c. coelebs* L., prep. 4/p/10, × 65; c — right mandibula ♀ *R. major* Fres. from *Emberiza calandra* (L.), prep. 4/y/17—1, × 600

Ricinus japonicus (Uchida, 1915)

Typical host: *Anthus spinoletta japonicus* Tem. et Schleg.
Original description based on a female, no drawings.

Ricinus maculatus (Piaget, 1885)

Typical host according to Hopkins et Clay 1952 is questionable:
Picoides tridactylus crissoleucus (Reich.).

I have never found any *Mallophaga* of the genus *Ricinus* on *Picidae*. Probably *Ricinus maculatus* has passed to *Picooides tridactylus* accidentally from some bird belonging to *Passeriformes*.

Ricinus major Fresca, 1924

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

Material examined from *Emberiza calandra* (L.): 2 ♀♀, Wrocław, 5.III.1961, leg. Złotorzycka.

<i>Ricinus major</i> Fresca, 1924	4/y/17—1			4/y/17—2		
	long.	lat.	index	long.	lat.	index
Cephalon	0.68	0.69	98	0.74	0.72	103
Prothorax	0.40	0.61		0.42	0.61	
Mesometathorax	0.43	0.87		0.43	0.89	
Abdomen	1.97	1.18		2.00	1.20	
Longitudo totalis	3.34			3.39		

General coloring light-yellow, except the brownish edge of the body. The semicircular end of clypeus more flat than that of the other species. Palettes of medium size. Mandibles as in Fig. 8c. Head broadest above the orbital sinus. Temples slightly bent posteriad. Prothorax similar to that of *R. irascens*, but the protuberances at the sides are bigger and each of them bears one long bristle and two very short ones. Abdomen broadly oval, broadest at the level of segment v. Darkening of the median part of abdomen hardly visible.

Ricinus medius Uchida, 1926

Nomen novum for *Physostomum intermedium* Uchida, 1915 (nec Piaget, 1880).

Typical host: *Parus ater insularis* Hellmayr.

R. medius had till now no defined typical host, because it was reported from *Parus ater insularis* Hell. and *Parus atricapillus restrictus* Hell. So I establish *Parus ater insularis* Hell. as typical host and presume that on *Parus atricapillus restrictus* Hell. occurs some unknown species of the genus *Ricinus*.

Ricinus merulae (Durrant, 1906)

Typical host: *Turdus migratorius propinquus* Ridgway.

This species is probably likely to be found on *Turdus migratorius migratorius* (L.) which occurs in Poland.

Ricinus mystax (Burmeister, 1838)

Typical host: *Turdus pilaris* L.

I think that this species is not synonymous with *R. elongatus* (Olf.) as did suggest Clay et Hopkins since they did not examine the types of either *R. mystax* or *R. elongatus* (Hopkins et Clay 1952).

Ricinus rubeculae (Schrank, 1776)

Syn.: *Nirmus pterocephalus* Olfers, 1816 from *Erithacus r. rubecula* (L.); *Physostomum agonus* Nitzsch, 1866 from *Erithacus r. rubecula* (L.).

Typical host: *Erithacus rubecula rubecula* (L.).

Some characters and several drawings were given by Clay et Hopkins 1954, 1960.

Material examined from *Erithacus r. rubecula* (L.): 1♀, Hel, 15.IV.1963, leg. Busse from a live bird; 1♂, Hodonin (Czechoslovakia), 5.IV.1952, leg. F. Balát, coll. Wd. Eichler; 1♀, Hausbruch (Germany), 2.IV.1949, leg. W. Sierst, coll. Zool. Mus. Hamburg.

<i>Ricinus rubeculae</i> (Schr., 1776)	WEC 7360b			14/s/1		
	long.	lat.	index	long.	lat.	index
Cephalon	0.68	0.53	128	0.73	0.58	126
Prothorax	0.31	0.44		0.36	0.49	
Mesometathorax	0.40	0.56		0.47	0.62	
Abdomen	1.29	0.69		1.59	0.70	
Longitudo totalis	2.65			2.90		

Head strongly elongated, broadest above the orbital sinus. Palettes of medium size. Eyes not protruding. Temples bent far backwards, pointed. Mandibles broad at their bases, ending in long sharp prongs. Prothorax barrel-shaped. Prothoracic plate as in Fig. 9a. Abdomen slender, light at the middle, with well marked intersegmental lines. Male genital apparatus with cuneiform parameres.

Ricinus serratus serratus (Durrant, 1906)

Syn.: *Physostomum clypeatum* Mjöberg, 1910 from *Eremophila alpestris* L.

Typical host: *Eremophila alpestris hoyti* (Bishop).

I know this species only from the original descriptions of *R. serratus* and *R. clypeatum*.

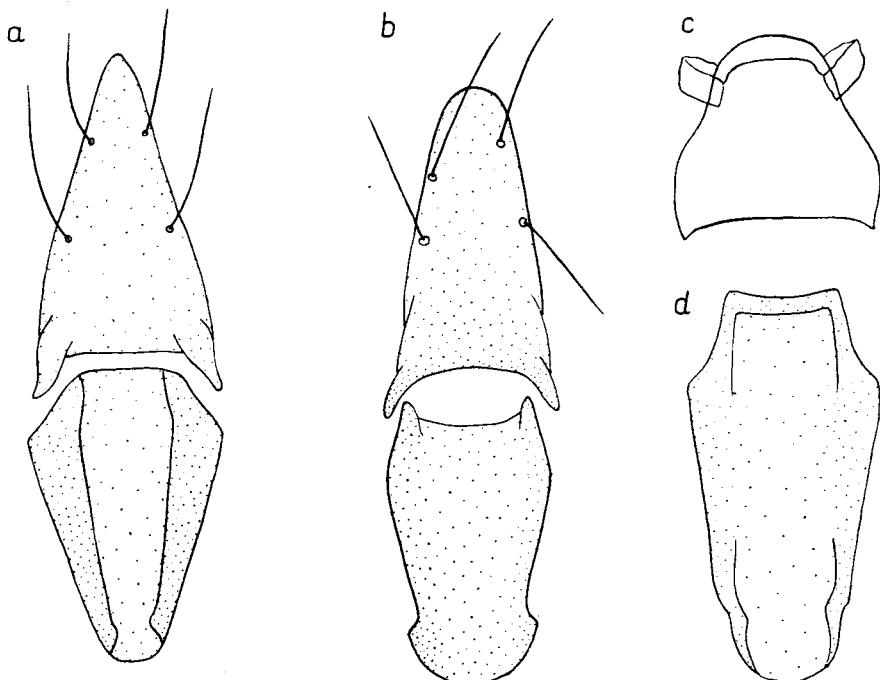


Fig. 9. *Ricinus* sp. a — thoracic plates ♀ *R. rubeculae* (Schr.) from *Erythacus r. rubecula* (L.), prep. 14/s/1, $\times 270$; b — thoracic plates ♀ *R. similis* (Gieb.) from *Luscinia svecica cyanecula* (Meisn.), prep. WEC 7367a, $\times 250$; c — head outline (schematic), and d — prothoracic plate ♀ *R. thoracicus* (Pack.) from *Plectrophenax nivalis* (L.), prep. WEC 3070a, $\times 60$ and $\times 270$, resp.

Ricinus serratus magnus Uchida, 1926

Typical host: *Alauda arvensis* L.

According to Uchida 1926 this species differs from the nominal form in size. *R. s. magnus* is a little narrower. These differences being of little taxonomical value, it seems that *R. s. magnus* should be regarded as a subspecies of *R. serratus*. No drawings in the original description.

Ricinus similis (Giebel, 1874)

Typical host: *Luscinia svecica* (L.).

Material examined from *Luscinia svecica cyanecula* (Meisner): 1 ♀, Hodonin (Czechoslovakia), 2.IV.1948, leg. F. Balát.

Coloring coffee-brown. Head elongated, broadest back of the orbital sinuses. Palettes relatively small. Mandibulae very narrow, pointed. Eyes very small, not convex. Gular and prothoracic plates as in Fig. 9b. Prothorax barrel-shaped, more narrow at front than at the end. Mesometathorax relatively narrow, darker than the rest of the body. Abdomen elliptic. The last segment wide semicircular, with a marked anal crown. The regions of inter-segmental lines light colored. The segments vi — viii at the middle darker than the other segments. Pleurites very dark with a black pattern. Pleural stigmata light.

<i>Ricinus</i> <i>similis</i> Giebel, 1874	WEC 7357a		
	long.	lat.	index
Cephalon	0.72	0.59	122
Prothorax	0.34	0.47	
Mesometathorax	0.44	0.69	
Abdomen	1.77	0.86	
Longitudo totalis	3.08		

Ricinus thoracicus (Packard, 1870)

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

Material examined from *Plectrophenax nivalis* (L.): 1 ♀ WEC 3010a (no more data available).

<i>Ricinus</i> <i>thoracicus</i> (Pack., 1870)	WEC 3010a		
	long.	lat.	index
Cephalon	0.68	0.68	100
Prothorax	0.42	0.61	
Mesometathorax	0.48	0.89	
Abdomen	2.11	1.16	
Longitudo totalis	3.51		

General dimensions big, but head relatively small, with characteristic outlines (Fig. 9c). Clypeus relatively narrow and small. Head markedly broadening backwards. Temples little bent posteriad. Occipital margin straight while in other species it is concave. Palettes big. Mandibles very small. Thorax broad. Prothoracic plate as in Fig. 9d. Elliptic abdomen long and relatively broad, normal in color.

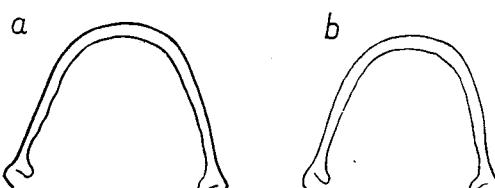


Fig. 10. Forehead in *Picicola* sp. sp. a — *P. canidus* (Nitzsch) ♀ from *P. c. canus* Gm., prep. WEC 358; b — *P. contiguus* sp. n. ♀ (paratype) from *P. v. viridis* L., prep. WEC 3702e; X 75

Subfamily *Degeeriellinae* Wd. Eichler

Degeeriellinae are widespread on various groups of birds and are represented by a number of genera (see Eichler 1963).

I discuss here only the Centraleuropean representatives of the genus *Picicola*.

Genus *Picicola* Clay et Meinertzhagen, 1938

Species typica: *Picicola praeposterus* Clay et Meinertzhagen, 1938 from *Dendrocopos assimilis* (Blyth.).

The genus includes slender species, with ovaly rounded, elongated forehead and narrow, nirmoidal abdomen. It resembles greatly *Kelerinirmus* Wd. Eichl. which occurs on *Accipitres*. The particular species are similar to each other and were not always correctly identified. As one of good specific characters I consider the shape of mesosternal plate of the thorax (see Figs. 10 and 11).

Occurrence: *Pici*.

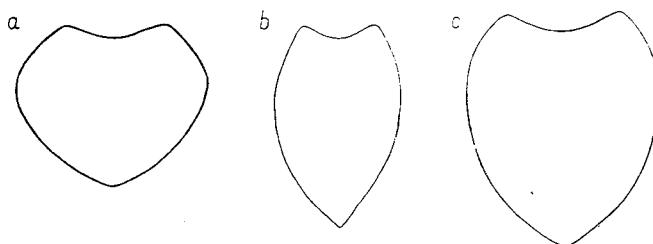


Fig. 11. Mesosternal plate in *Picicola* sp. sp. a — *P. candidus* (Nitzsch) ♀ from *P. c. canus* Gm., prep. WEC 358c; b — *P. contiguus* sp. n. ♀ (paratype) from *P. v. viridis* L., prep. 26/a/10—4; c — *P. dissors* sp. n. ♀ (holotype) from *D. major* (L.), prep. WEC 3696a; $\times 450$

Picicola candidus (Nitzsch, 1866)

Typical host: *Picus canus canus* Gm.

Short description of male and female was given by Eichler 1942. In older literature *P. candidus* was reported also from *Picus canus* and *P. viridis*.

<i>Picicola candidus</i> (Nitzsch, 1866)	WEC 358c		
	long	lat.	index
Cephalon	0.54	0.40	135
Prothorax	0.13	0.26	
Mesometathorax	0.16	0.38	
Abdomen	1.13	0.57	
Longitudo totalis	1.94		

dis. Eichler 1953 questioned the classification of *Picicola* from *Picus canus* and *P. viridis* as belonging to one species, but he traditionally placed both forms in *P. candidus*.

After a close comparison of *Picicola* from *Picus canus* and *P. viridis* I came to a conclusion that there are two separate species: *Picicola candidus* from *Picus canus* and *Picicola contiguus* sp. n. from *Picus viridis*.

Material examined from *Picus c. canus* Gm.: 1♀, Germany, 14. or 15.XII.1883, leg. A. Koenig, coll. Wd. Eichler.

A female has the head a little less elongated than *P. contiguus* sp. n. Forehead ovaly parabolic (Fig. 10a). The preantennal part equal to the post-antennal one. Prothorax rectangular. Mesometathorax flattened with rounded lateral margins. Mesosternal plate as in Fig. 11a. Abdomen fusiform.

Picicola contiguus sp. n.

Typical host: *Picus viridis viridis* L.

Material examined: 1♂ (holotype, coll. mea) from the preparation 26/a/10—1, Opatowice near Wrocław, 24.III.1958, leg. Złotorzycka. Paratypes: 1♂, 5♀♀ from the same bird as holotype; 2♂♂, 5♀♀, Erlangen (Germany), 11.I.1950, coll. Wd. Eichler; other materials: 1 larva from the same bird as holotype.

<i>Picicola contiguus</i> sp. n.	holotypus			paratype 26/a/10—4e		
	long.	lat.	index	long.	lat.	index
Cephalon	0.56	0.31	181	0.52	0.36	144
Prothorax	0.10	0.18		0.15	0.21	
Mesometathorax	0.18	0.29		0.20	0.34	
Abdomen	0.77	0.33		1.12	0.39	
Genitalia	0.32					
Longitudo totalis	1.45			1.83		

Habitus as in Phot. 17 and 18. Head narrower than in *P. candidus*. Preantennal part more narrow and longer than the postantennal one. Outlines of the forehead as in Fig. 10b. Prothorax smaller and not as flat as in *P. candidus*. Mesometathorax bell-shaped, with slightly rounded lateral margins. Mesosternal plate small and elongated (Fig. 11b). Abdomen normally elongated. Male genital apparatus with a long and massive basal part and short, narrow, falciform parameres.

Note: The paratypes from Erlangen kindly lent me by Prof. Wd. Eichler show the essential specific characters, but, probably due to a different method of preparation combined with staining, their dimensions are somewhat different (total length greater by 0.10 to 0.20 mm) and the borderlines of mesosternal plate are obliterated.

Picicola dissors sp. n.

Typical host: *Dryobates major* (L.).

Material examined: 1♀ (holotype) from the preparation WEC 3696a, Bruck (Germany), 24.XI.1949.

Female (Phot. 19) relatively long. Head similar to that of *P. candidus*. Preantennal part equal in length to the postantennal one. Forehead elliptic,

similar to that of *P. contiguus* sp. n. Prothorax rectangular, a little flattened. Mesometathorax with the lateral margins almost straight. Mesosternal plate (Fig. 11c) much bigger than in *P. candidus*; it resembles in its slightly elongated silhouette the plate of *P. contiguus*. Abdomen narrow and strongly elongated.

<i>Picicola</i> <i>dissors</i> sp. n.	holotypus		
	long.	lat.	index
Cephalon	0.51	0.38	137
Prothorax	0.18	0.24	
Mesometathorax	0.18	0.37	
Abdomen	1.21	0.40	
Longitudo totalis	2.00		

S u m m a r y

Lanicanthus g.n. was described pro *Lanicanthus aequalis* sp. n. The following new species were described in the present paper: *Lanicanthus aequalis* sp. n. from *Lanius collurio* L., *Menacanthus bussei* sp. n. from *Parus a. ater* L., *M. subhorridus* sp. n. from *Parus palustris* L., *M. verecundus* sp. n. from *Sylvia a. atricapilla* (L.), *Picicola contiguus* sp. n. from *Picus v. viridis* L., and *P. dissors* sp. n. from *Dryobates major* L. New name was proposed: *Menacanthus inscitus* nom. nov. pro *Pediculus pyrrhulae* Panz. (nec Schrank) from *Pyrrhula p. pyrrhula* (L.).

Author's address:
Katedra Parazytoligii Ogólnej
Uniwersytetu Wrocławskiego
Wrocław, Sienkiewicza 21

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S T R E S Z C Z E N I E

Opisano w niniejszej pracy *Lanicanthus* g. n. pro *Lanicanthus aequalis* sp. n. oraz nowe gatunki: *Lanicanthus aequalis* sp. n. z *Lanius collurio* L., *Menacanthus bussei* sp. n. z *Parus a. ater* L., *M. subhorridus* sp. n. z *Parus palustris* L., *M. verecundus* sp. n. z *Sylvia a. atricapilla* (L.), *Picicola contiguous* sp. n. z *Picus v. viridis* L., oraz *P. dissors* sp. n. z *Dryobates major* L. Zaproponowano nową nazwę: *Menacanthus inscitus* nom. nov. pro *Pediculus pyrrhulae* Panz. (nec Schrank) z *Pyrrhula p. pyrrhula* (L.).

EXPLANATION OF PLATES I-II

- Phot. 1. *Menacanthus bussei* sp. n. ♀ (holotype) from *Parus a. ater* L., prep. 9/i/1, × 50.
- Phot. 2. *Menacanthus subhorridus* sp. n. ♀ (holotype) from *Parus p. palustris* L., prep. 9/k/2, × 54.
- Phot. 3. *Menacanthus verecundus* sp. n. ♀ (holotype) from *Sylvia a. atricapilla* (L.), prep 8/b/8, × 50.
- Phot. 4. *Lanicanthus aequalis* g. n., sp. n. ♂ (holotype) from *Lanius c. collurio* L., prep. 15/a/20, × 64.
- Phot. 5. *Lanicanthus aequalis* g. n., sp. n. ♀ (paratype) from *Lanius c. collurio* L., prep. 15/a/21, × 54.
- Phot. 6. *Picicola contiguus* sp. n. ♂ (holotype) from *Picus v. viridis* L., prep. 26/a/10—1, × 54.
- Phot. 7. *Picicola contiguus* sp. n. ♀ (paratype) from *Picus v. viridis* L., prep. 26/a/10—4, × 43.
- Phot. 8. *Picicola dissors* sp. n. ♀ (holotype) from *Dryobates major* (L.), prep. WEC 3696a, × 42.

