

Contribution to the fauna of dung flies (Diptera: Scathophagidae) of Russia with a key to genera and a checklist of the Russian Scathophagidae

К фауне двукрылых семейства Scathophagidae (Diptera) России с определительной таблицей родов и списком родов и видов

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КЛЮЧЕВЫЕ СЛОВА: Diptera, Scathophagidae, Россия, фауна, определительная таблица родов, список видов, новые синонимы, новые данные по распространению.

ABSTRACT. An identification key for the genera of flies of the family Scathophagidae and a checklist of genera and species of this family currently known from Russia are provided. Diagnoses of genera *Cosmetopus* Becker, 1894, *Ernoneura* Becker, 1894, *Hydromyza* Fallén, 1823, *Leptopa* Zetterstedt, 1838, *Megaphthalma* Becker, 1894, *Scatomyza* Fallén, 1810, *Staegeria* Rondani, 1856 are given, the number of species assigned to these genera in the fauna of Russia is indicated, and keys to species for the genera containing two or more species are provided. *Cosmetopus dentimanus* (Zetterstedt, 1838) and *Leptopa hostae* (Herring, 1955) are newly recorded from Russia. *Leptopa filiformis* Zetterstedt, 1838 is recorded for the first time in the Asian part of the Palearctic Region. Two new synonyms are proposed: *Leptopa* Zetterstedt, 1838 = *Parallelomma* Strobl, 1894, **syn.n.** and *Megaphthalma* Becker, 1894 = *Megaphthalmoides* Ringdahl, 1936, **syn.n.**

РЕЗЮМЕ. Приведена определительная таблица родов двукрылых семейства Scathophagidae фауны России. Даны диагнозы родов *Cosmetopus* Becker, 1894, *Ernoneura* Becker, 1894, *Hydromyza* Fallén, 1823, *Leptopa* Zetterstedt, 1838, *Megaphthalma* Becker, 1894, *Scatomyza* Fallén, 1810, *Staegeria* Rondani, 1856, указано число видов этих родов в фауне России, а для родов, содержащих два или более двух видов даны определительные таблицы

видов. Приведен список родов и видов двукрылых семейства Scathophagidae фауны России. *Cosmetopus dentimanus* (Zetterstedt, 1838) и *Leptopa hostae* (Herring, 1955) впервые отмечены на территории России. *Leptopa filiformis* Zetterstedt, 1838 впервые отмечен в азиатской части Палеарктики. Установлены два новых синонима: *Leptopa* Zetterstedt, 1838 = *Parallelomma* Strobl, 1894, **syn.n.** и *Megaphthalma* Becker, 1894 = *Megaphthalmoides* Ringdahl, 1936, **syn.n.**

Introduction

The Scathophagidae are a small family of calyptrate Diptera distributed throughout the world, except for the Australasian and Oceanian Regions. The majority of genera and species are known from the Northern Hemisphere while most species in the Afrotropical, Oriental and Neotropical Regions are recorded from high elevations.

The world fauna currently comprises 373 species in 65 genera [Chagnon, Sinclair, 2020; Iwasa, 2020, 2021; Bernasconi, Šifner, 2021; Iwasa, Sasaki, 2022]. The number of genera currently varies depending on the approach to generic-level classification of the family by different authors. For example, it was indicated that such characters as the lack or presence of proepisternal or anepimeral hairs, the presence or absence of setulae

on vein R_1 or the number of setae on the scutellum are variable between species within a genus [Hackman, 1956; Ozerov, 2013, 2017; Ozerov, Krivosheina, 2015, 2016]. Therefore, these characters can not be used in the supraspecific taxonomy of the family. So, it was proposed to consider the genera *Cleigastra* Macquart, 1835, *Gonarticus* Becker, 1894, *Gonatherus* Rondani, 1856, *Nanna* Strobl, 1894, *Orthacheta* Becker, 1894 and *Spathephilus* Becker, 1894 as one genus, *Cleigastra* sensu lato [Ozerov, Krivosheina, 2016]. In our opinion, the question of combining species into genera can be solved only on the basis of molecular analysis, including extensive taxonomic sampling with an emphasis on those species where the “generic” trait varies.

The fauna of Scathophagidae of Russia includes 197 species in 27 genera (see checklist below). Revisions or reviews were completed for most genera of Russian Scathophagidae. Several small or monotypic genera remain uncovered, such as *Cosmetopus* Becker, 1894, *Ernoneura* Becker, 1894, *Hydromyza* Fallén, 1823, *Leptopa* Zetterstedt, 1838, *Megaphthalma* Becker, 1894, *Scatomyza* Fallén, 1810, and *Staegeria* Rondani, 1856.

In this paper, diagnoses of these genera are given, the number of species assigned to these genera in the fauna of Russia is indicated, and keys to species for the genera containing two or more species are given.

The last complete key to the Palearctic genera of the family Scathophagidae was published more than 10 years ago [Jong, 2000]. Since then, there have been noticeable changes in the nomenclature: the status of some genera has been revised, some names have become synonyms [e.g., Ozerov, Krivosheina, 2011b, 2016; Ozerov, 2016, 2017, 2019a, 2019c], new genera have been described [e.g., Šifner, 2009, 2010, 2012, 2016]. Therefore, our work provides an identification key for the genera of flies of the family Scathophagidae and a checklist of genera and species of this family currently known from Russia.

Material and methods

The specimens examined for this study are deposited in the Zoological Museum, Moscow State University, Russia (ZMUM).

The terminology used in the generic and species descriptions follows Séguy [1952 (scapular seta)], McAlpine [1981], Cumming & Wood [2009], and Stuckenberg [1999 (postpedicel)].

All genera and species in checklist were listed alphabetically and higher categories omitted. Synonyms and misidentifications are listed chronologically after the valid or currently accepted name and given after “=”. Secondary species combinations contain (all in parenthesis): authorship, year, original genus of species description after m-dash [—].

Taxonomic part

Adult Scathophagidae may be confused with Anthomyiidae, but differ from these and other Calyptratae

families by the following combination of characters: antennal pedicel with complete dorsal suture, the eyes dichoptic in both sexes and are separated by broad frontal vitta in both sexes, the frontal vitta is without setae, the lower calypter is linear (Fig. 50), the meron is glabrous and the ventral surface of scutellum is without setulae.

KEY TO GENERA OF SCATHOPHAGIDAE OF RUSSIA

1. Anepisternum covered with hairs completely or almost completely, with hairs posterior to anterior spiracle (Figs 24, 28, 29) 2
 - Anepisternum covered with hairs usually along dorsal margin and in posterior part only, without hairs posterior to anterior thoracic spiracle (Figs 22, 23, 26, 27) .. 4
2. Katepisternum without setae (Fig. 29). Wing membrane with dark spots (Fig. 53) *Ernoneura* Becker
 - Katepisternum with one strong seta in upper posterior corner (Fig. 28). Wing membrane without dark spots (except for possible shading of crossveins r-m and dm-cu) 3
3. Postmetacoxal bridge present (Fig. 31) *Scatomyza* Fallén
 - Postmetacoxal bridge absent (Fig. 30) *Scathophaga* Meigen
4. Katepisternum with strong 2–3 setae (Figs 25–27) 5
 - Katepisternum with one strong seta as in Fig. 28 10
5. Proepisternum bare without hairs at middle or in anterior part 6
 - Proepisternum is covered with hairs at middle or in anterior part (Fig. 25) 9
6. Postpedicel short, no more than 2 times longer than the pedicel (Fig. 13) 7
 - Postpedicel long, about 3 times longer than pedicel (Figs 1, 10, 14) 8
7. Katepisternum with 2 setae in upper posterior corner. Postpronotal lobe anteriorly without erect spinules *Delina* Robineau-Desvoidy
 - Katepisternum with 3 setae in upper posterior corner. Postpronotal lobe anteriorly with erect spinules *Neochirosia* Malloch
8. Vibrissae weakly developed; proboscis short and wide; postpedicel with rounded upper apical corner (Fig. 14) *Hexamitocera* Becker
 - Vibrissae well developed; proboscis long; postpedicel with acute upper apical corner (Fig. 10) *Cleigastra* Macquart (part)
9. Katepisternum with anterior and upper posterior setae present, lower posterior seta absent (Fig. 27) *Trichopalpus* Rondani (part) (*T. punctipes* (Meigen))
 - Katepisternum with 3 setae (Fig. 25), if with 2 setae, then upper and lower posterior setae present, anterior seta absent (Fig. 26) *Cleigastra* Macquart (part)
10. Fore tibia of both sexes with ventral apical spur (Fig. 39) *Acanthocnema* Becker
 - Fore tibia in both sexes without such spur 11
11. Femur and tibia of foreleg of both sexes with posteroventral row of very strong setae (Fig. 46) 12
 - Femur and tibia of foreleg of both sexes without such row of strong setae 13
12. Head with one pair of orbital setae, postocellar setae absent. Scutellum with a pair of strong apical setae, discal scutellar setae absent or hair-like (Fig. 37). Fore tibia with a row of strong posteroventral setae, anteroventral

- tral setae absent (Fig. 40). Female abdominal sternite 8 without spines (Fig. 59) ... *Norellia* Robineau-Desvoidy
- Head with two pairs of orbital setae, postocellar setae present. Scutellum with a pair of strong discal setae, apical scutellar setae absent or hair-like (Fig. 36). Fore tibia with rows of strong posteroventral and anteroventral setae (Fig. 41). Female abdominal sternite 8 covered with spines (Fig. 60) ... *Norellisoma* Hendel
13. Fore tibia without spinules ventrally 14
- Fore tibia ventrally with short black spinules, usually in two or more rows on whole length (Figs 38, 44, 45, 47–49) 27
14. Palpus with strong apical or subapical seta about as long as or longer than palpus (Figs 3, 4) 15
- Palpus without strong apical or subapical seta (e.g., Figs 5–11, 13–16, 18–21) 16
15. Proepisternum bare, without hairs at middle and on anterior part *Leptopa* Zetterstedt
- Proepisternum covered with hairs at middle or on anterior part (as in Figs 22, 23) *Cordilura* Fallén
16. Head with ocellar setae absent; orbital setae very short (Figs 21, 115) *Hydromyza* Fallén
- Head with ocellar and orbital setae well developed .. 17
17. Head with strong postocellar setae, as strong as ocellar setae (Fig. 18) *Mixocordylura* Hendel
- Postocellar setae thin and short, 2 times shorter than ocellar setae 18
18. Palpus distinctly spatulate (Fig. 19) 19
- Palpus filiform, at most somewhat flattened but never spatulate (e.g., Fig. 16) 20
19. One short and thin vibrissa present. Arista relatively short, about as long as broad postpedicel, widened throughout its length (Fig. 8) *Acerocnema* Becker (part)
- Two strong vibrissae present. Arista well-developed, longer than postpedicel, enlarged only at base (Fig. 19) *Spaziphora* Rondani
20. Arista plumose or pubescent; postgena with strong seta (Fig. 16) *Megaphthalma* Becker
- ... Arista bare or nearly bare (Fig. 17). Postgena without seta or with very fine seta 21
21. Postpronotal lobe anteriorly with erect spines or spinules (Fig. 32) 22
- Postpronotal lobe anteriorly without erect spines or spinules 23
22. Postpedicel approximately 2–2.5 times as long as wide (Fig. 114) *Gimnomera* Rondani (part)
- Postpedicel long, about 4–5 times as long as wide (Fig. 17) *Micropselapha* Becker
23. Vein R_1 bare (e.g., Fig. 52) 24
- . Vein R_1 setulose on apical third of dorsal surface (Figs 57, 58) 26
24. Postpedicel approximately 1.5–2 times as long as scapus 25
- Postpedicel approximately 4 times as long as scapus *Acerocnema* Becker (part)
25. Scutum with scapular setae absent. Male femora of mid and hind legs strongly thickened in the central part (Figs 43, 126). Basitarsus of hind leg as long as 1/2 hind tibia *Staegeria* Rondani
- Scutum with scapular setae present (Fig. 20; see also Fig. 32), if fine, then male femora of mid and hind legs not thickened. Basitarsus of hind leg about 1/3 hind tibia .. *Trichopalpus* Rondani (part)
26. Postpedicel not longer than tarsomere 2 of hind leg *Gimnomera* Rondani (part)
- Postpedicel distinctly longer than tarsomere 2 of hind leg *Acerocnema* Becker (part)
27. Males 28
- Females 33
28. Fore femur modified and/or with short black setae or spinules ventrally (Figs 44, 47–49) 29
- Fore femur without processes, short black setae or spinules ventrally (Fig. 45) *Microprosopa* Becker
29. Tip of vein M_1 downcurved, wing membrane emarginate between M_1 and CuA_1 , margin here with long fringe of hairs (Fig. 55) *Pleurochaetella* Vockeroth
- Vein M_1 not abruptly downcurved (Figs 51, 54) 30
30. Scutellum with a pair of strong apical setae. *Paracosmetopus* Hackman
- Scutellum with two pairs strong setae (apical and basal) ... 31
31. . Fore femur ventrally near midlength with bifurcate tubercle, matching with ventral emargination of fore tibia (Fig. 44) *Cosmetopus* Becker
- Fore femur ventrally with black setae or spinules (Figs 47–49) 32
32. Head and thorax covered with whitish or pale yellow setae *Bostrichopyga* Becker,
- Head and thorax covered with black setae *Pogonota* Zetterstedt
33. Fore femur ventrally with black setae or spinules 34
- Fore femur ventrally without black setae or spinules 36
34. Scutellum with a pair of strong apical setae. Head and thorax covered with whitish or pale yellow setae *Paracosmetopus* Hackman
- Scutellum with two pairs of strong setae (apical and basal) 35
35. Proepisternum with well developed black seta *Pleurochaetella* Vockeroth
- Proepisternum covered with pale hairs only *Pogonota* Zetterstedt
36. Tibia of hind leg without anterodorsal setae *Cosmetopus* Becker
- Tibia of hind leg with 1–2 anterodorsal setae 37
37. Head and thorax covered with whitish or pale yellow setae *Bostrichopyga* Becker
- Head and thorax covered with black setae *Microprosopa* Becker

Genus *Acanthocnema* Becker, 1894

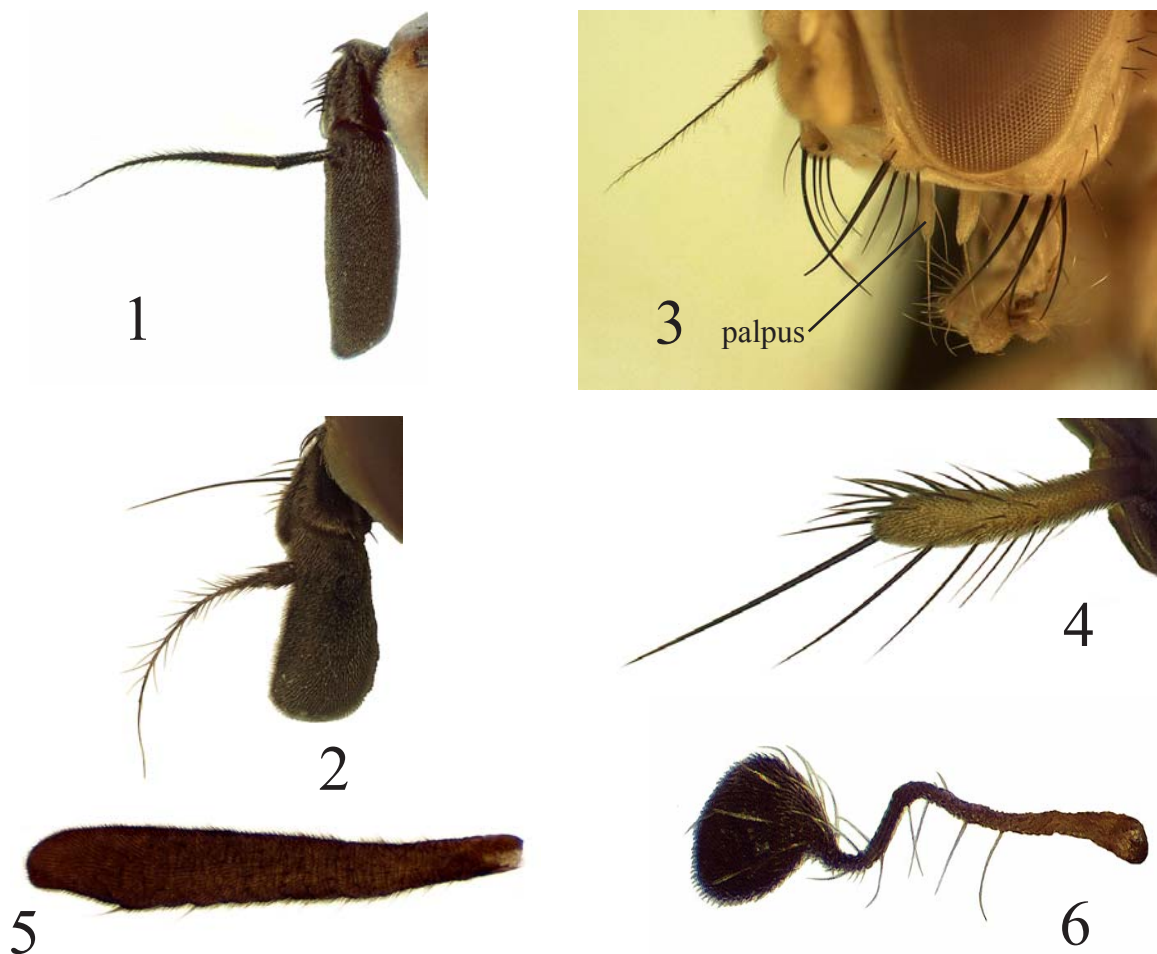
Figs 7, 39, 100.

REMARKS. Diagnosis of the genus, descriptions of species noted in Russia, a key for their identification and changes in nomenclature are given by Ozerov & Krivosheina [2018a] and by Ozerov [2019b]. Currently, there are 4 species in Russia (see checklist below).

Genus *Acerocnema* Becker, 1894

Figs 8, 9, 52, 58, 101–103.

REMARKS. Diagnosis of the genus and a key for identification the species noted in Russia are given by Ozerov & Krivosheina [2018b]. There are 9 species in Russia (see checklist below).



Figs 1–6. Antenna, lateral view (1, 2) and palpus (3–6) of Scathophagidae: 1 — *Cleigastra pilosa* (Zetterstedt); 2 — *Cordilura aemula* (Collin); 3 — *Leptopa filiformis* (Zetterstedt); 4 — *Cordilura remmi* (Elberg); 5 — *Cosmetopus dentimanus* (Zetterstedt); 6 — *Cosmetopus longus* (Walker). 1 — after Ozerov & Krivosheina, 2015, fig. 177; 2, 4 — after Ozerov & Krivosheina, 2020b, figs 4, 8.

Рис. 1–6. Усик, сбоку (1, 2) и щупик (3–6) Scathophagidae: 1 — *Cleigastra pilosa* (Zetterstedt); 2 — *Cordilura aemula* (Collin); 3 — *Leptopa filiformis* (Zetterstedt); 4 — *Cordilura remmi* (Elberg); 5 — *Cosmetopus dentimanus* (Zetterstedt); 6 — *Cosmetopus longus* (Walker). 1 — по Ozerov & Krivosheina, 2015, fig. 177; 2, 4 — по Ozerov & Krivosheina, 2020b, figs 4, 8.

Genus *Bostrichopyga* Becker, 1894
Figs 38, 104.

REMARKS. Monotypic genus. Diagnosis of the genus, changes in nomenclature, description of male, later female of *B. crassipes* (Zetterstedt, 1838) are given by Ozerov & Krivosheina [2014a] and by Ozerov [2019b]. In Russia, *B. crassipes* is known from materials taken from Altai and Yakutia [Ozerov, 2019b].

Genus *Cleigastra* Macquart, 1835
Figs 1, 10, 11, 25, 26, 34, 35, 57, 105–108.

REMARKS. Description of the genus, descriptions of most species noted in Russia and a key for their identification are given by Ozerov & Krivosheina [2015]. Later, a work was published with changes in the nomenclature and with the description of two additional species of *Cleigastra* [Ozerov, Krivosheina,

2016]. Currently, 27 species have been recorded in Russia (see checklist below).

Genus *Cordilura* Fallén, 1810
Figs 2, 4, 12, 33, 109, 110.

REMARKS. *Cordilura* Fallén, 1810 is the largest genus within the family Scathophagidae. Diagnosis and description of the genus, descriptions of all species noted in Russia and a key for their identification are given by Ozerov & Krivosheina [2020b]. There are currently 38 species in Russia (see checklist below).

Genus *Cosmetopus* Becker, 1894
Figs 5, 6, 44, 68, 69, 72–75, 77–80, 111.

DIAGNOSIS. Medium-sized flies (5–7 mm long). Proepisternum is covered with hairs at middle or in anterior part. Anepisternum covered with hairs in posterior half. Katepisternum with one strong seta in upper



Figs 7–12. Head of Scathophagidae, lateral view: 7 — *Acanthocnema altaica* Ozerov & Krivosheina; 8 — *Acerocnema breviseta* (Zetterstedt); 9 — *Acerocnema gorodkovi* Ozerov & Krivosheina; 10 — *Cleigastra articulata* (Becker); 11 — *Cleigastra maritima* Ozerov & Krivosheina; 12 — *Cordilura albilabris* (Fabricius). 7 — after Ozerov & Krivosheina, 2018a, fig. 3; 8, 9 — after Ozerov & Krivosheina, 2018b, figs 2, 1; 11 — after Ozerov & Krivosheina, 2016, fig. 5; 12 — after Ozerov & Krivosheina, 2020b, fig. 7.

Рис. 7–12. Голова Scathophagidae, сбоку: 7 — *Acanthocnema altaica* Ozerov & Krivosheina; 8 — *Acerocnema breviseta* (Zetterstedt); 9 — *Acerocnema gorodkovi* Ozerov & Krivosheina; 10 — *Cleigastra articulata* (Becker); 11 — *Cleigastra maritima* Ozerov & Krivosheina; 12 — *Cordilura albilabris* (Fabricius). 7 — по Ozerov & Krivosheina, 2018a, fig. 3; 8, 9 — по Ozerov & Krivosheina, 2018b, figs 2, 1; 11 — по Ozerov & Krivosheina, 2016, fig. 5; 12 — по Ozerov & Krivosheina, 2020b, fig. 7.



13



14



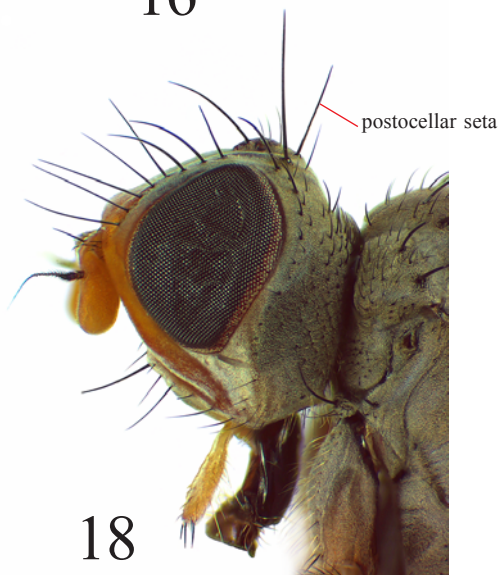
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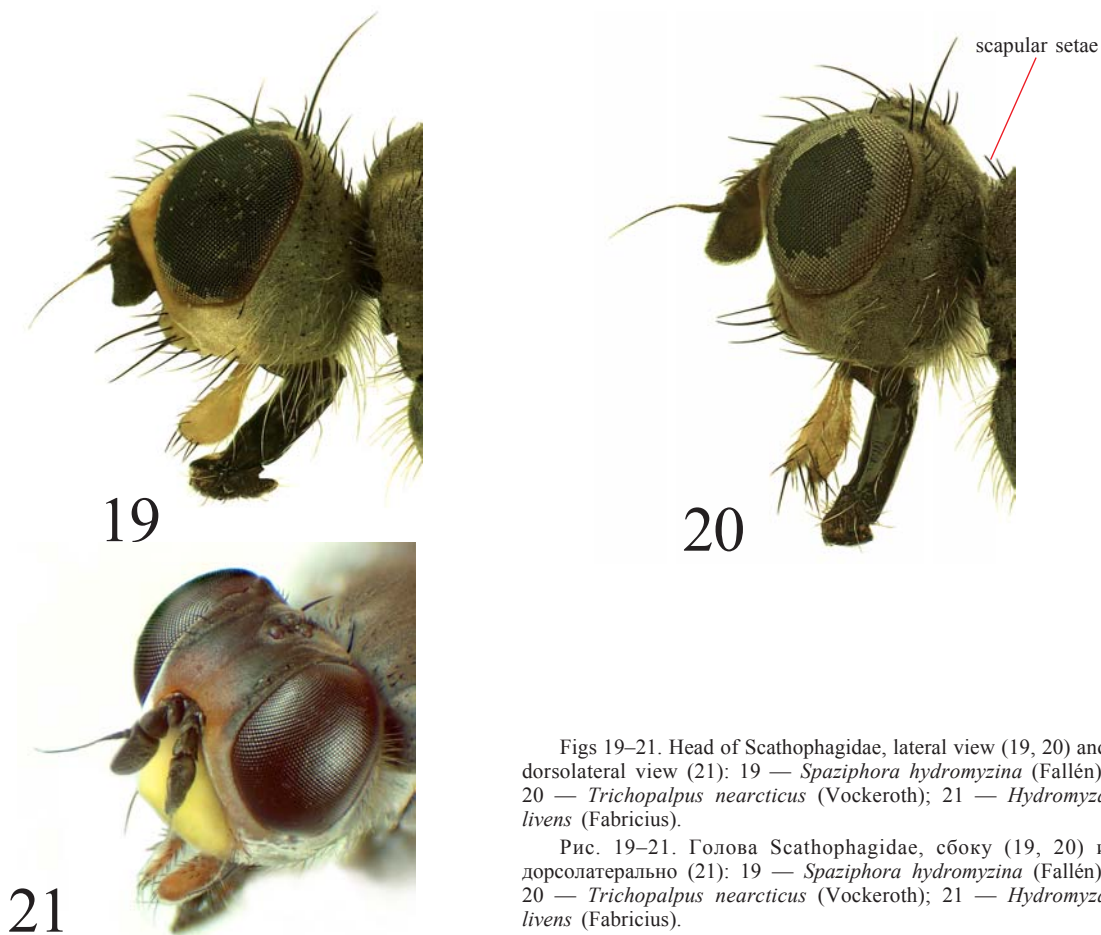


18

postocellar seta

Figs 13–18. Head of Scathophagidae, lateral view: 13 — *Delina nigrita* (Fallén); 14 — *Hexamitocera loxocerata* (Fallén); 15 — *Leptopa filiformis* (Zetterstedt); 16 — *Megaphthalma pallida* (Fallén); 17 — *Micropselapha filiformis* (Zetterstedt); 18 — *Mixocordylura parva* Ozerov. 14 — after Ozerov & Krivosheina, 2015, fig. 3; 17 — after Ozerov, 2014, fig. 7; 18 — after Ozerov & Krivosheina, 2012a, fig. 10.

Рис. 13–18. Голова Scathophagidae, сбоку: 13 — *Delina nigrita* (Fallén); 14 — *Hexamitocera loxocerata* (Fallén); 15 — *Leptopa filiformis* (Zetterstedt); 16 — *Megaphthalma pallida* (Fallén); 17 — *Micropselapha filiformis* (Zetterstedt); 18 — *Mixocordylura parva* Ozerov. 14 — по Ozerov & Krivosheina, 2015, fig. 3; 17 — по Ozerov, 2014, fig. 7; 18 — по Ozerov & Krivosheina, 2012a, fig. 10.



Figs 19–21. Head of Scathophagidae, lateral view (19, 20) and dorsolateral view (21): 19 — *Spaziphora hydromyzina* (Fallén); 20 — *Trichopalpus nearcticus* (Vockeroth); 21 — *Hydromyza livens* (Fabricius).

Рис. 19–21. Голова Scathophagidae, сбоку (19, 20) и дорсолатерально (21): 19 — *Spaziphora hydromyzina* (Fallén); 20 — *Trichopalpus nearcticus* (Vockeroth); 21 — *Hydromyza livens* (Fabricius).

posterior corner. Postmetacoxal bridge absent. Fore tibia ventrally with short black spinules. Male fore femur ventrally near midlength with bifurcate tubercle, matching with ventral emargination of fore tibia (Fig. 44). Female fore femur simple: without numerous short spinules ventrally.

REMARKS. There are 2 species in Russia, *C. dentimanus* (Zetterstedt, 1838) and *C. longus* (Walker, 1849), of which only *C. longus* was previously recorded in Russia from south of European part and Siberia by Gorodkov [1970 (as *C. fulvipes* (Zetterstedt), 1986] without specifying the place of collecting.

MATERIAL in ZMUM. *C. dentimanus*. *Siberia*: 2 ♂♂, 2 ♀♀, Altai, Kosh-Agach, plato Ukok, 2450 m, Lake Muzdy-Bulak (49.3°N, 87.65°E), 8.VII.2008, A. Barkalov. *C. longus*. *European part of Russia*: 1 ♂, 2 ♀♀, Arkhangelsk (64.546°N 40.567°E), 4.VIII.2010, D. Gavryushin; 1 ♂, Nar'yan-Mar env. (67.631°N 52.985°E), 7.VII.2008, A.L. Ozerov; 1 ♂, Murmansk env. (68.979°N 33.151°E), 21.VII.2011, A. Ozerov; 2 ♂♂, Khanty-Mansi AO, Khulga River (64.713°N 61.955°E), 8–17.VII.2018, K. Tomkovich; *Siberia*: 12 ♂♂, 6 ♀♀, Labytnangi (66.657°N 66.391°E), 19–26.VII.1973, R. Kamenskaya; 1 ♂, 2 ♀♀, some place, 6, 9 and 23.VII.1974, V. Sychevskaya; *Far East of Russia*: 1 ♂, Chukotka, Meynypil'gyno env. (62.555°N 177.076°E), 14.VII.2019, P.S. Tomkovich; 1 ♀, Magadan Oblast, Sokol env. (59.92°N 150.71°E), 11–19.VII.2014, N. Vikhrev.

KEY TO SPECIES OF *COSMETOPUS* OF RUSSIA

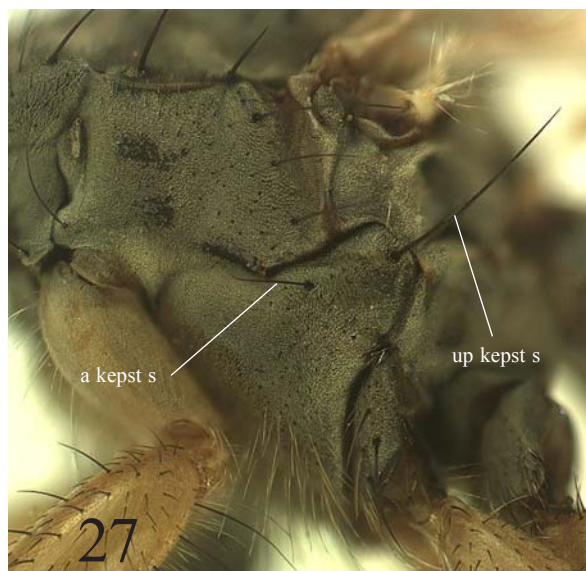
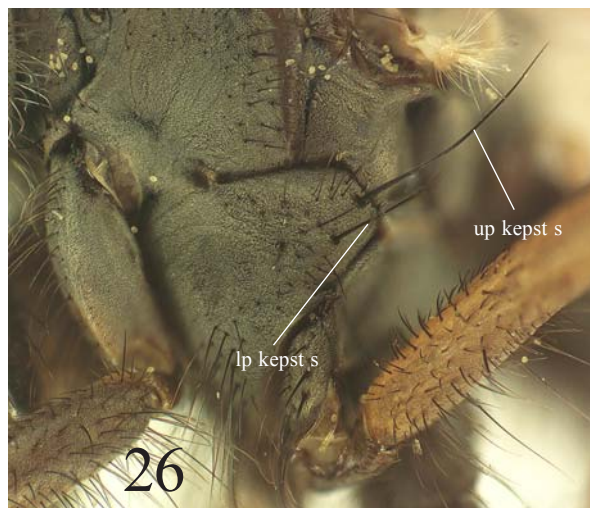
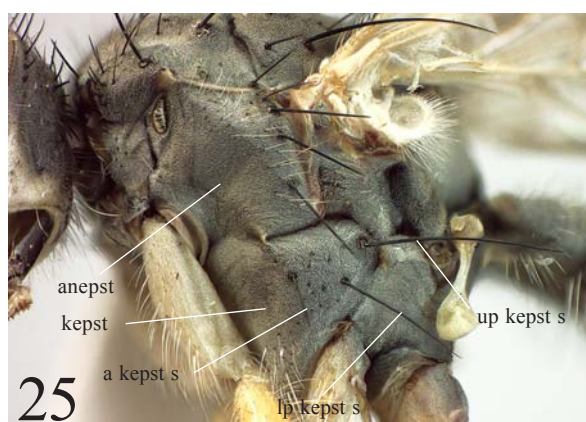
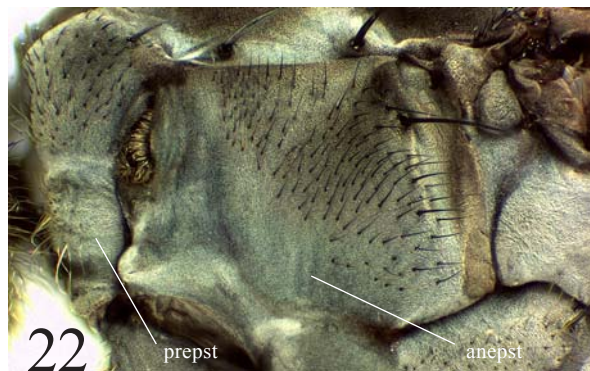
1. Palpus band-like, dark brown (Fig. 5). Male sternites 4 and 5, epandrium, cerci and surstyli as in Figs 69, 74, 75, 77, 78 *C. dentimanus* (Zetterstedt)
- Palpus yellow, somewhat darkened at the end. In the male the palpus begins very thin but suddenly widens in the distal third and is as a whole spatulate (Fig. 6). In the female the palpus is only slightly widened before the apex. Male sternites 4 and 5, epandrium, cerci and surstyli as in Figs 68, 72, 73, 79, 80 *C. longus* (Walker)

Genus *Delina* Robineau-Desvoidy, 1830
Fig. 13.

REMARKS. One species of this genus has been recorded in Russia — *D. nigrita* (Fallén, 1819). Diagnosis of the genus and description of *D. nigrita* is given by Ozerov [2010b].

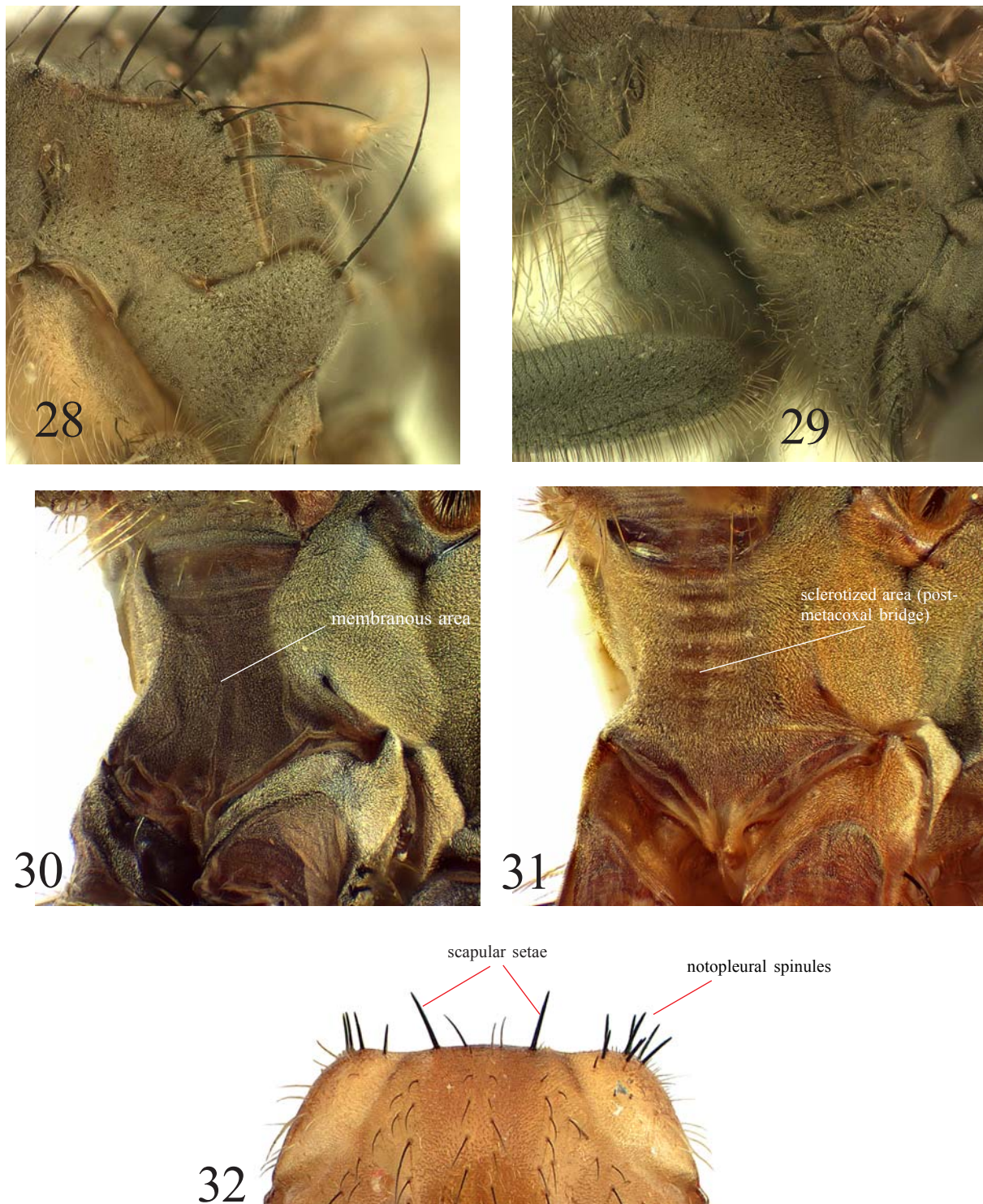
Genus *Ernoneura* Becker, 1894
Figs 29, 53, 61, 81, 82, 113.

DIAGNOSIS. Medium-sized flies (4–7 mm long). Proepisternum is covered with hairs at middle or in anterior part. Anepisternum covered with hairs com-



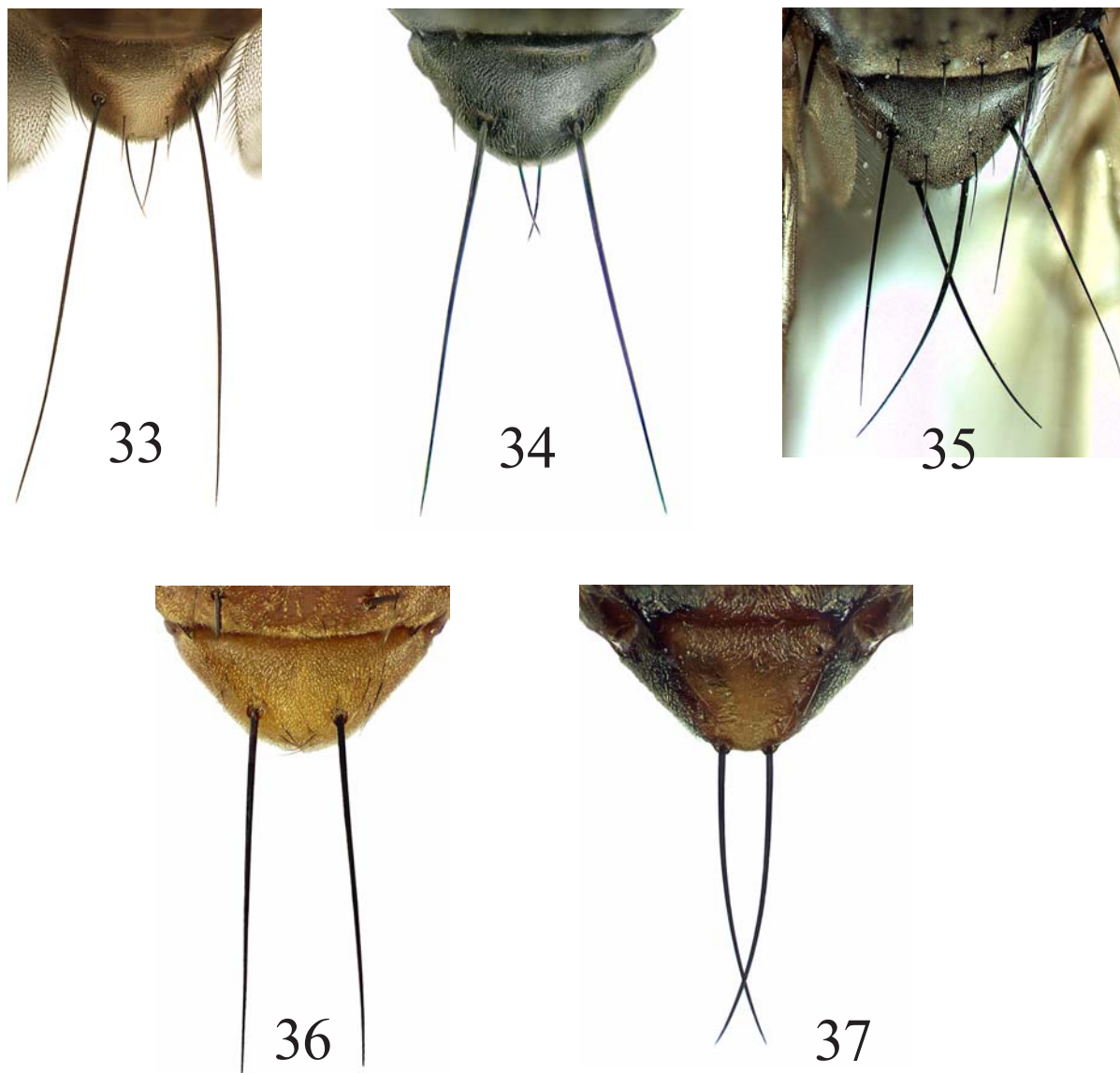
Figs 22–27. Fragments of thorax of Scathophagidae: 22 — *Hydromyza livens* (Fabricius), anepisternum; 23 — *Trichopalpus fraternus* (Meigen), anepisternum; 24 — *Scathophaga litorea* (Fallén), anepisternum; 25 — *Cleigastra flavipes* (Fallén), anepisternum and katepisternum; 26 — *Cleigastra arctica* (Becker), anepisternum and katepisternum; 27 — *Trichopalpus punctipes* (Meigen), anepisternum and katepisternum. Abbreviations: a kepst s — anterior katepisternal seta; anepst — anepisternum; kepst — katepisternum; lp kepst s — lower posterior katepisternal seta; prepst — proepisternum; up kepst s — upper posterior katepisternal seta. 24 — after Ozerov & Krivosheina, 2021, fig. 6; 25 — after Ozerov & Krivosheina, 2015, fig. 1.

Рис. 22–27. Фрагменты груди Scathophagidae: 22 — *Hydromyza livens* (Fabricius), анэпистерн; 23 — *Trichopalpus fraternus* (Meigen), анэпистерн; 24 — *Scathophaga litorea* (Fallén), анэпистерн; 25 — *Cleigastra flavipes* (Fallén), анэпистерн и катэпистерн; 26 — *Cleigastra arctica* (Becker), анэпистерн и катэпистерн; 27 — *Trichopalpus punctipes* (Meigen), анэпистерн и катэпистерн. Обозначения: а kepst s — передняя катэпистернальная щетинка; anepst — анэпистерн; kepst — катэпистерн; lp kepst s — нижняя задняя катэпистернальная щетинка; prepst — проэпистерн; up kepst s — верхняя задняя катэпистернальная щетинка. 24 — по Ozerov & Krivosheina, 2021, fig. 6; 25 — по Ozerov & Krivosheina, 2015, fig. 1.



Figs 28–32. Fragments of thorax of Scathophagidae: 28 — *Scathophaga furcata* (Say), anepisternum and katepisternum; 29 — *Ernoneura argus* (Zetterstedt), anepisternum and katepisternum; 30 — *Scathophaga stercoraria* (Linnaeus), postmetacoxal area; 31 — *Scatomyza scybalaria* (Linnaeus), postmetacoxal area; 32 — *Gimnomera hirta* (Hendel), anterior part of scutum, dorsal view. 30, 31 — after Ozerov & Krivosheina, 2011b, figs 1, 2; 32 — after Ozerov, 2019a, fig. 2.

Рис. 28–32. Фрагменты груди Scathophagidae: 28 — *Scathophaga furcata* (Say), анэпистерн и катэпистерн; 29 — *Ernoneura argus* (Zetterstedt), анэпистерн и катэпистерн; 30 — *Scathophaga stercoraria* (Linnaeus), постметакоксальная область; 31 — *Scatomyza scybalaria* (Linnaeus), постметакоксальная область; 32 — *Gimnomera hirta* (Hendel), передняя часть среднеспинки, сверху. 30, 31 — по Ozerov & Krivosheina, 2011b, figs 1, 2; 32 — по Ozerov, 2019a, fig. 2.



Figs 33–37. Scutellum of Scathophagidae, dorsal view: 33 — *Cordilura albipes* (Fallén); 34 — *Cleigastra flavipes* (Fallén); 35 — *Cleigastra cornuta* (Loew); 36 — *Norellisoma spinimanum* (Fallén); 37 — *Norellia tipularia* (Fabricius). 33 — after Ozerov & Krivosheina, 2020b, fig. 12; 34, 35 — after Ozerov & Krivosheina, 2015, figs 7, 8; 36, 37 — after Ozerov & Krivosheina, 2011a, figs 4, 3.

Рис. 33–37. Щиток Scathophagidae, сверху: 33 — *Cordilura albipes* (Fallén); 34 — *Cleigastra flavipes* (Fallén); 35 — *Cleigastra cornuta* (Loew); 36 — *Norellisoma spinimanum* (Fallén); 37 — *Norellia tipularia* (Fabricius). 33 — по Ozerov & Krivosheina, 2020b, fig. 12; 34, 35 — по Ozerov & Krivosheina, 2015, figs 7, 8; 36, 37 — по Ozerov & Krivosheina, 2011a, figs 4, 3.

pletely or almost completely, with hairs posterior to anterior spiracle. Katepisternum without strong setae (Fig. 29). Postmetacoxal bridge absent. Wing membrane with dark spots (Fig. 53). Male sternites 4 and 5, epandrium, cerci and surstyli as in Figs 61, 81, 82.

REMARKS. Monotypic Holarctic genus. The species was recorded by Gorodkov [1970, 1986] in Russia from the European part, Siberia and Far East but without indicating specific locality.

MATERIAL in ZMUM. 19 ♂♂, 10 ♀♀, Chukotka, Meynypil'gyno env. (62.538°N 177.151°E), 26–29.VI., 3–13.VII. 2012, 9.VII.2013, P.S. Tomkovich.

Genus *Gimnomera* Rondani, 1866 Figs 32, 114.

REMARKS. Description of the genus, descriptions of species noted in Russia, a key for their identification and changes in nomenclature are given by Ozerov [2019a]. Currently, 19 species have been recorded in Russia (see checklist below).

Genus *Hexamitocera* Becker, 1894 Fig. 14.

REMARKS. *Hexamitocera* includes five species in the World: two are Palearctic, two are Nearctic and



Figs 38–43. Legs of Scathophagidae: 38 — *Bostrichopyga crassipes* (Zetterstedt), fore tibia, anteroventral view; 39 — *Acanthocnema sternalis* Suwa, fore tibia, posterior view; 40 — *Norellia tipularia* (Fabricius), fore tibia, ventral view; 41 — *Norellisoma spinimanum* (Fallén), fore tibia, ventral view; 42, 43 — *Staegeria kunzei* (Zetterstedt), mid tibia, anterodorsal view (42) and mid femur, anterior view (43). 38 — after Ozerov & Krivosheina, 2014a, fig. 2; 39 — after Ozerov & Krivosheina, 2014b, fig. 1 (as *A. vikhrevi*); 40, 41 — after Ozerov & Krivosheina, 2011a, figs 1, 2.

Рис. 38–43. Ноги Scathophagidae: 38 — *Bostrichopyga crassipes* (Zetterstedt), голень передней ноги, антеровентрально; 39 — *Acanthocnema sternalis* Suwa, голень передней ноги, сзади; 40 — *Norellia tipularia* (Fabricius), голень передней ноги, снизу; 41 — *Norellisoma spinimanum* (Fallén), голень передней ноги, снизу; 42, 43 — *Staegeria kunzei* (Zetterstedt), голень средней ноги, антеродорсально (42) и бедро средней ноги, спереди (43). 38 — по Ozerov & Krivosheina, 2014a, fig. 2; 39 — по Ozerov & Krivosheina, 2014b, fig. 1 (as *A. vikhrevi*); 40, 41 — по Ozerov & Krivosheina, 2011a, figs 1, 2.

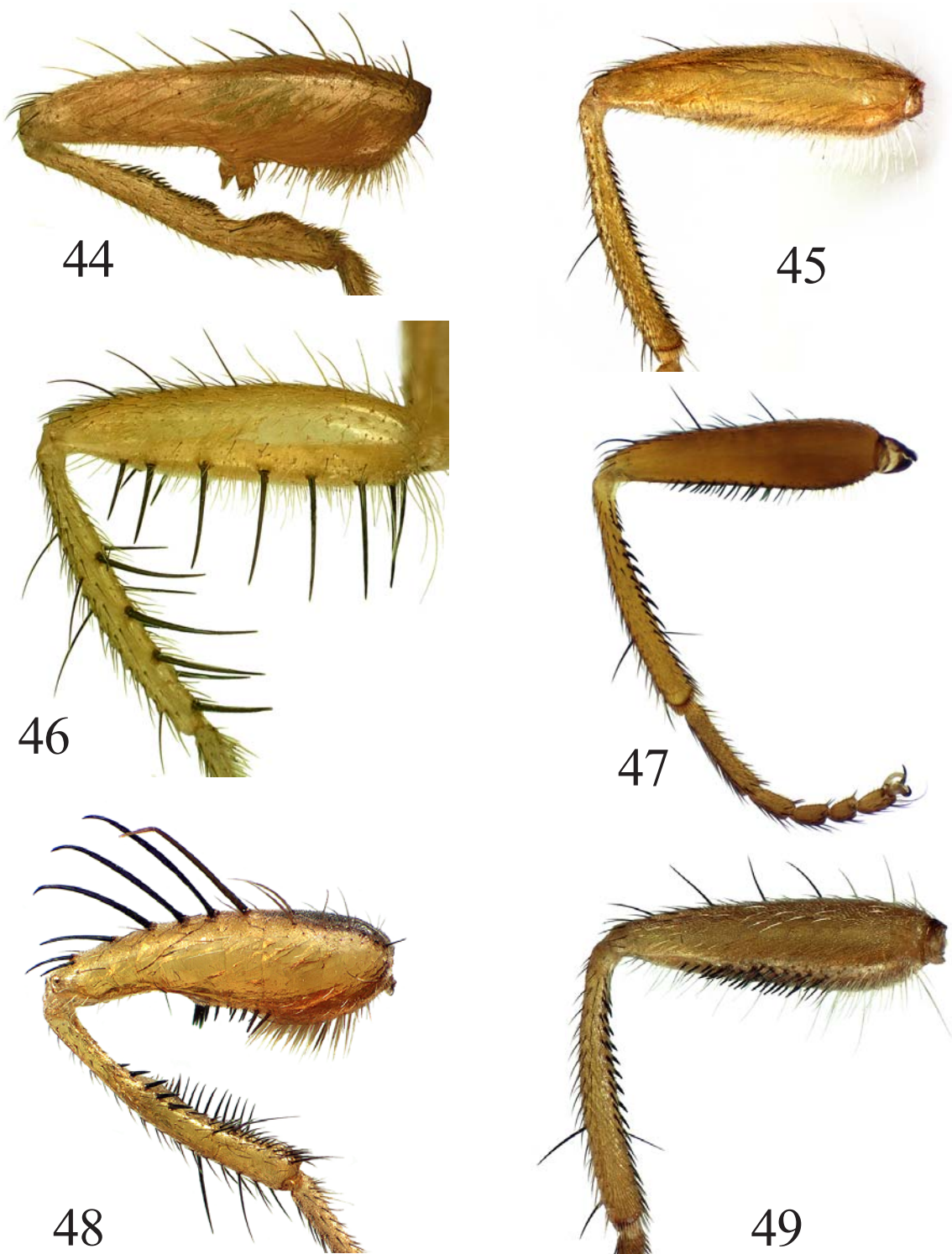
one is Holarctic. Only Holarctic species, *H. loxocera* (Fallén, 1826), is known in Russia. Diagnosis of the genus and description of *H. loxocera* are given by Ozerov & Krivosheina [2015].

Genus *Hydromyza* Fallén, 1823
Figs 21, 22, 62, 83, 84, 115.

DIAGNOSIS. Medium-sized flies (6–9 mm long). Head with ocellar setae absent; orbital setae very short (Figs 21, 115). Proepisternum is covered with hairs at middle or in anterior part. Anepisternum covered with setulae usually along dorsal margin and in posterior

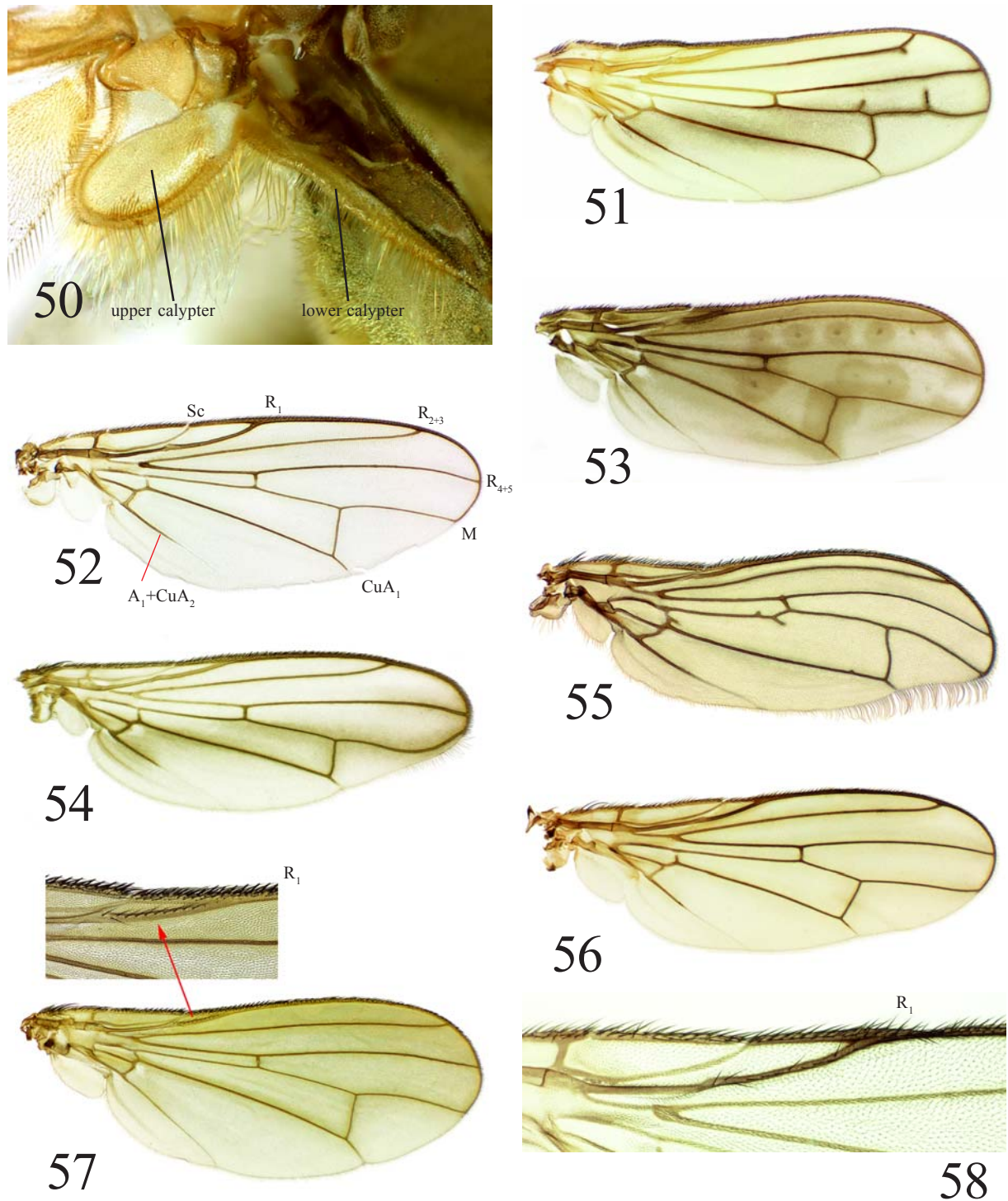
part only, without setulae posterior to anterior spiracle. Katepisternum with one strong seta in upper posterior corner. Postmetacoxal bridge absent. Male sternites 4 and 5, epandrium, cerci and surstyli as in Figs 62, 83, 84.

REMARKS. *Hydromyza* includes two species in the World: one is Palearctic, the second species is Nearctic. Palearctic species, *H. livens* (Fabricius, 1794), is known in Russia from European part [Gorodkov, 1970, 1986]. It is a widespread species that lives in reservoirs almost everywhere where *Nuphar lutea* (Linnaeus) grows, the leaves of which are mined by *H. livens* larvae.



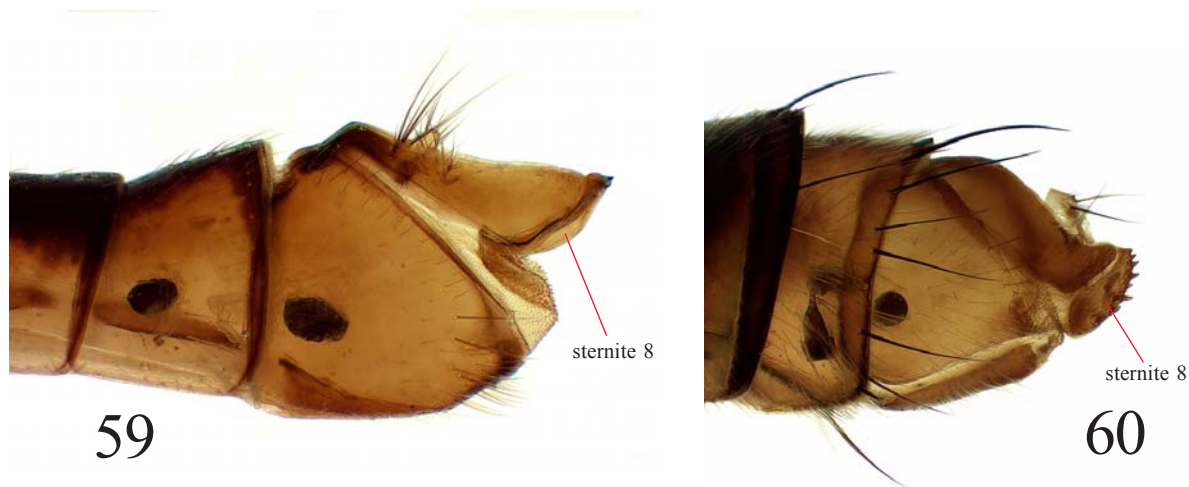
Figs 44–49. Legs of Scathophagidae: 44 — *Cosmetopus longus* (Walker), male fore leg, posterior view; 45 — *Microprosopa pallidicauda* (Zetterstedt), male fore leg, anterior view; 46 — *Norellisoma spinimanum* (Fallén), fore leg, posterior view; 47 — *Paracosmetopus helleni* Hackman, female fore leg, anterior view; 48 — *Pogonota stackelbergi* (Gorodkov), male fore leg, posterior view; 49 — *Pogonota dasyprocta* (Loew), female fore leg, anterior view. 45 — after Ozerov, 2017, fig. 4; 47 — after Ozerov & Krivosheina, 2014a, fig. 12; 48, 49 — after Ozerov, 2016, figs 2, 4.

Рис. 44–49. Ноги Scathophagidae: 44 — *Cosmetopus longus* (Walker), передняя нога самца, сзади; 45 — *Microprosopa pallidicauda* (Zetterstedt), передняя нога самца, спереди; 46 — *Norellisoma spinimanum* (Fallén), передняя нога, сзади; 47 — *Paracosmetopus helleni* Hackman, передняя нога самки, спереди; 48 — *Pogonota stackelbergi* (Gorodkov), передняя нога самца, сзади; 49 — *Pogonota dasyprocta* (Loew), передняя нога самки, спереди. 45 — по Ozerov, 2017, fig. 4; 47 — по Ozerov & Krivosheina, 2014a, fig. 12; 48, 49 — по Ozerov, 2016, figs 2, 4.



Figs 50–58. Lower and upper calypters of wing (50) and wings (51–58) of Scathophagidae: 50 — *Scathophaga stercoraria* (Linnaeus); 51 — *Pogonota barbata* (Zetterstedt); 52 — *Acerocnema arctica* Ozerov; 53 — *Ernoneura argus* (Zetterstedt); 54 — *Pogonota immunda* (Zetterstedt); 55 — *Pleurochaetella barkalovi* Ozerov; 56 — *Microprosopa pallidicauda* (Zetterstedt); 57 — *Cleigastra apicalis* (Meigen); 58 — *Acerocnema lobanovi* Ozerov, fragment. 51, 54 — after Ozerov, 2016, figs 7, 8; 55 — after Ozerov & Krivosheina, 2012b, fig. 6; 56 — after Ozerov, 2017, fig. 9.

Рис. 50–58. Закрыловые чешуйки крыла (50) и крылья (51–58) Scathophagidae: 50 — *Scathophaga stercoraria* (Linnaeus); 51 — *Pogonota barbata* (Zetterstedt); 52 — *Acerocnema arctica* Ozerov; 53 — *Ernoneura argus* (Zetterstedt); 54 — *Pogonota immunda* (Zetterstedt); 55 — *Pleurochaetella barkalovi* Ozerov; 56 — *Microprosopa pallidicauda* (Zetterstedt); 57 — *Cleigastra apicalis* (Meigen); 58 — *Acerocnema lobanovi* Ozerov, fragment. 51, 54 — по Ozerov, 2016, figs 7, 8; 55 — по Ozerov & Krivosheina, 2012b, fig. 6; 56 — по Ozerov, 2017, fig. 9.



Figs 59, 60. End of female abdomen, lateral view: 59 — *Norellia tipularia* (Fabricius); 60 — *Norellisoma spinimanum* (Fallén). 59, 60 — after Ozerov & Krivosheina, 2011a, figs 10, 11.

Рис. 59, 60. Конец брюшка самки, сбоку: 59 — *Norellia tipularia* (Fabricius); 60 — *Norellisoma spinimanum* (Fallén). 59, 60 — по Ozerov & Krivosheina, 2011a, figs 10, 11.

Genus *Leptopa* Zetterstedt, 1838

Figs 3, 15, 63, 85, 86, 116.

DIAGNOSIS. Medium-sized flies (4–5 mm long). Palpus short, noticeably shorter than proboscis, with strong apical seta about as long as or longer than palpus (Fig. 3). Proepisternum bare without hairs at middle or in anterior part. Anepisternum covered with setulae usually along dorsal margin and in posterior part only, without setulae posterior to anterior spiracle. Katepisternum with one strong seta in upper posterior corner. Postmetacoxal bridge absent. Fore tibia ventrally covered with hairs, without spinules forming rows.

REMARKS. One species of *Leptopa* is known in the Palearctic — *Leptopa filiformis* Zetterstedt, 1838. In this paper, we also consider species of the genus *Parallelomma* Strobl, 1894 in the genus *Leptopa*.

The description of the genus *Parallelomma* was given by Becker [1894]. In the same paper, Becker cites the differences between *Parallelomma* and *Leptopa*. However, Becker mistakenly believed that *L. filiformis* does not have a long seta on the palpus, while it is present in this species. Therefore, if we use the key proposed by Becker [Becker, 1894: 85, 86] to determine genera, given the fact that *L. filiformis* has seta on the palpus, then *L. filiformis* enters into the genus *Parallelomma*. All other characters indicated by Becker for the genus *Parallelomma* also correspond to *Leptopa*. *L. filiformis* has enlarged vibrissal angle with a row of centrally directed setae and postgena with strong setae (Fig. 15), which distinguishes this species from *Parallelomma* species. We attribute these characters to the characters of the species rank and therefore propose to include the species *Parallelomma* in the genus *Leptopa*, and the name *Parallelomma* Strobl, 1894 is considered a new junior synonym of *Leptopa* Zetterstedt, 1838.

Thus, currently 6 species from the genus *Leptopa* have been registered in Russia (see checklist below).

Leptopa filiformis is mentioned in Russia in European part by Gorodkov [1970, 1986] without indicating specific locality. This species is recorded for the first time in Siberia (see material below). Male sternites 4 and 5, epandrium, cerci and surstyli as in Figs 63, 85, 86.

Leptopa hostae (Herring, 1955) is found in the ZMUM from Kuril Islands (see below) and mentioned in territory of Russia firstly in this paper. Description and drawings of male genitalia of *L. hostae* are given by Ozerov [2010c]; this species differs from the similar species *L. vittatum* (Meigen, 1826) by longer hairs on the arista.

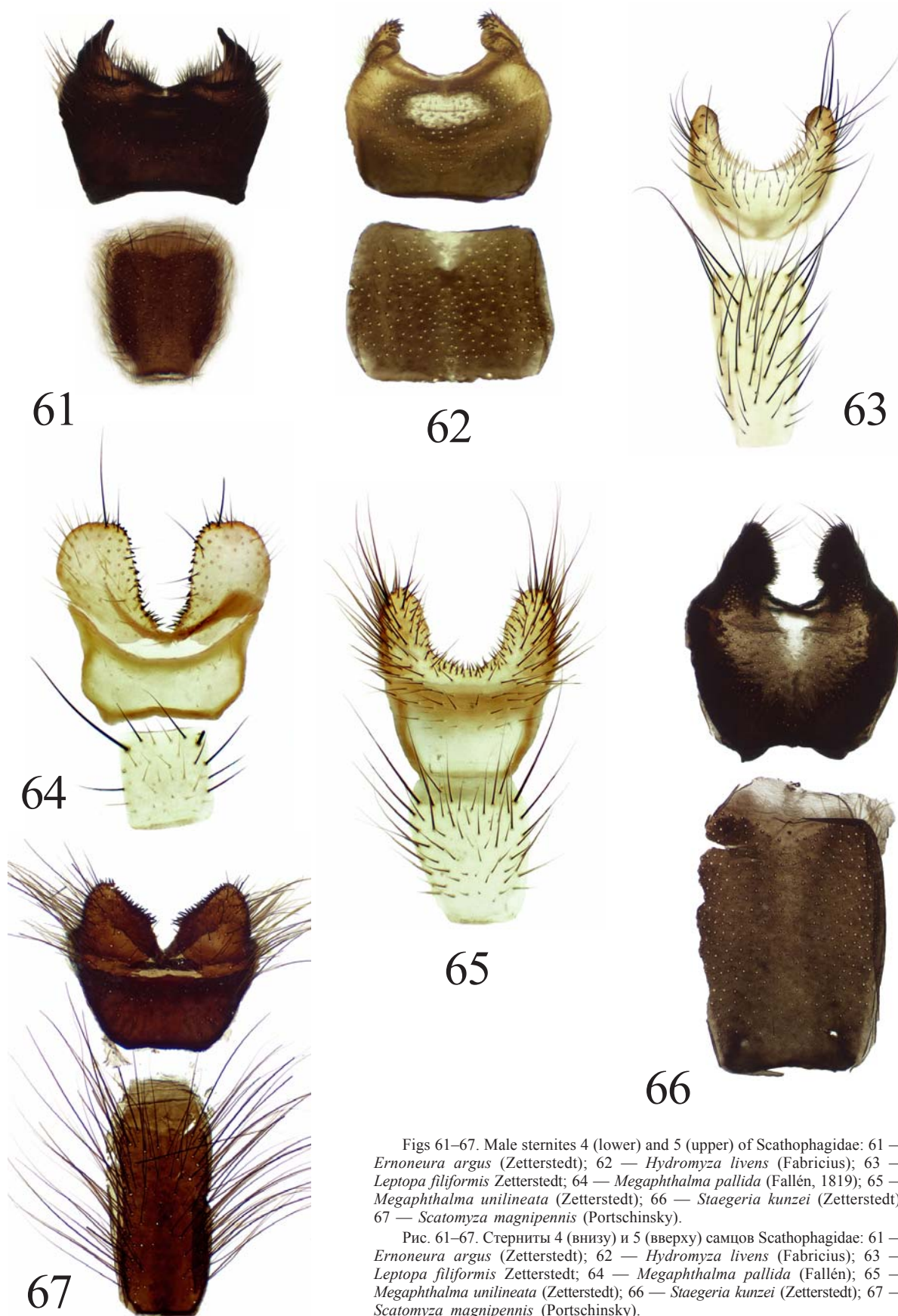
Descriptions of the rest species noted in Russia (see checklist below), a key for their determination and material kept in ZMUM are given by Ozerov [2010c].

MATERIAL in ZMUM. *Leptopa filiformis*. *European part of Russia*: 1 ♂, Karelia, Poyakonda (66.589°N 32.821°E), 8.VII.2010, A.L. Ozerov; 2 ♂♂, 2 ♀♀, Moscow Oblast, Andreevskoe (55.962°N 35.607°E), 10.VII.2006, A.L. Ozerov; 2 ♂♂, Moscovo (55.975°N 35.586°E), 2–3.VI.2006, A.L. Ozerov; Moscow Oblast, 6 ♂♂, 4 ♀♀, Naro-Fominsk env. (ca. 55.455°N 36.882°E), 12.V.2006, 22.V.2007, 30.V.2009, 15.V.2010, 29.V. and 28.VI.2011, D. Gavryushin); 3 ♂♂, 2 ♀♀, Bashkiria, Beloretsk env., River Nura, 607 m (54.051°N 58.268°E), 10–16.VII.2015, D. Gavryushin); *Siberia*: 1 ♂, Altai, Seminsky pass, River Turala (50.99°N 85.68°E), 1350 m, 8–12.VII.2016, N. Vikhrev; 1 ♀, Krasnoyarsk Krai, Kryuchkovo Station (56.096°N 92.109°E), 14–23.VII.2009, K. Tomkovich; 1 ♂, Krasnoyarsk Krai, ~Tanzybei (53.07°N 91.13°E), 28–29.V.2018, N. Vikhrev; 1 ♀, Novosibirsk env. (54.75°N 83.01°E), 11.V.2008, O. Kosterin). *Leptopa hostae*. *Far East of Russia*: 1 ♂, Kuril Islands, State Nature Reserve Kurilsky, Filatovsky Cordon (44.11°N 146.01°E), 18–19.VII.2014, T.V. Galinskaya.

Genus *Megaphthalma* Becker, 1894

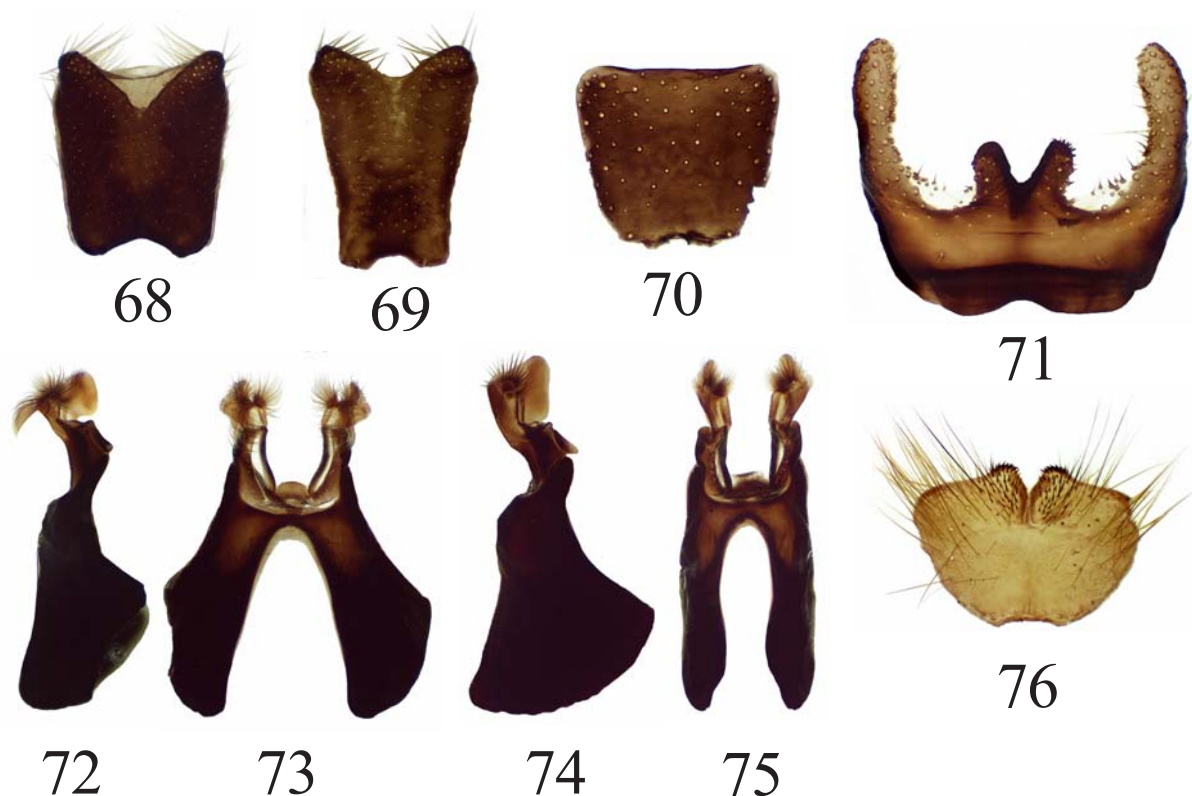
Figs 16, 64, 65, 87–90, 117.

DIAGNOSIS. Medium-sized flies (4–6 mm long). Postgena with strong seta (Fig. 16). Palpus without



Figs 61–67. Male sternites 4 (lower) and 5 (upper) of Scathophagidae: 61 — *Ernoneura argus* (Zetterstedt); 62 — *Hydromyza livens* (Fabricius); 63 — *Leptopa filiformis* Zetterstedt; 64 — *Megaphthalma pallida* (Fallén, 1819); 65 — *Megaphthalma unilineata* (Zetterstedt); 66 — *Staegeria kunzei* (Zetterstedt); 67 — *Scatomyza magnipennis* (Portschinsky).

Рис. 61–67. Стерниты 4 (внизу) и 5 (вверху) самцов Scathophagidae: 61 — *Ernoneura argus* (Zetterstedt); 62 — *Hydromyza livens* (Fabricius); 63 — *Leptopa filiformis* Zetterstedt; 64 — *Megaphthalma pallida* (Fallén); 65 — *Megaphthalma unilineata* (Zetterstedt); 66 — *Staegeria kunzei* (Zetterstedt); 67 — *Scatomyza magnipennis* (Portschinsky).



Figs 68–76. Male sternites 4 (68–70) and sternites 5 (71, 73, 75, 76 — dorsally; 72, 74 — laterally) of Scathophagidae: 68, 72, 73 — *Cosmetopus longus* (Walker); 69, 74, 75 — *Cosmetopus dentimanus* (Zetterstedt); 70, 71 — *Scatomyza mellipes* (Coquillett); 76 — *Scatomyza scybalaria* (Linnaeus). 71, 76 — after Ozerov & Krivosheina, 2011b, figs 8, 12.

Рис. 68–76. Стерниты самца 4 (68–70) и 5 (71, 73, 75, 76 — сверху; 72, 74 — сбоку) Scathophagidae: 68, 72, 73 — *Cosmetopus longus* (Walker); 69, 74, 75 — *Cosmetopus dentimanus* (Zetterstedt); 70, 71 — *Scatomyza mellipes* (Coquillett); 76 — *Scatomyza scybalaria* (Linnaeus). 71, 76 — по Ozerov & Krivosheina, 2011b, figs 8, 12.

strong apical or subapical seta (Fig. 16). Proepisternum is covered with hairs at middle or in anterior part. Anepisternum covered with setulae along dorsal margin and in posterior part only, without setulae posterior to anterior spiracle. Katepisternum with one strong seta in upper posterior corner. Postmetacoxal bridge absent. Fore tibia ventrally covered with hairs, without spinules forming rows.

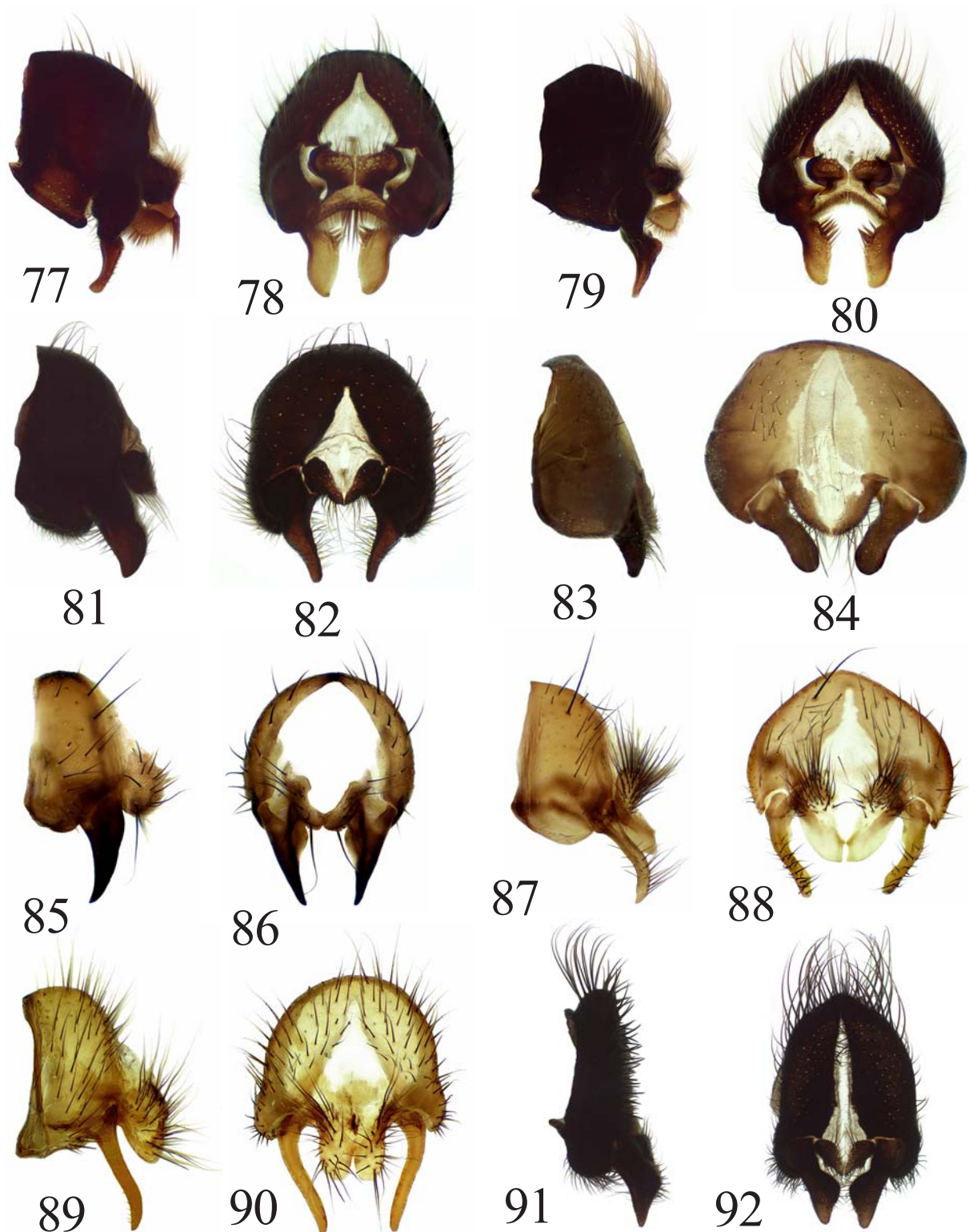
REMARKS. In this paper, we also consider species of the genus *Megaphthalmoides* Ringdahl, 1936 in the genus *Megaphthalma*. In our opinion, all the characters indicated by Ringdahl [1936:179] for the division of *Megaphthalma* and *Megaphthalmoides* are variable in genera *Cleigastra* [Krivosheina, 2015, 2016], *Gimnomera* [Ozerov, 2019a], *Cordilura* [Ozerov, Krivosheina, 2020b], *Microprosopa* [Ozerov, 2017], *Scathophaga* [Ozerov, Krivosheina, 2021], *Trichopalpus* [Ozerov, 2019c] and can not be used in the supraspecific taxonomy of the family. The name *Megaphthalmoides* is a new junior synonym of *Megaphthalma*.

Two species have been recorded in Russia, *M. pallida* (Fallén, 1812) and *M. unilineata* (Zetterstedt, 1838).

M. pallida was recorded in Russia from European part from forest zone by Gorodkov [1970] without indicating specific locality and from Far East [Ozerov, 2009; Ozerov, Krivosheina, 2014b].

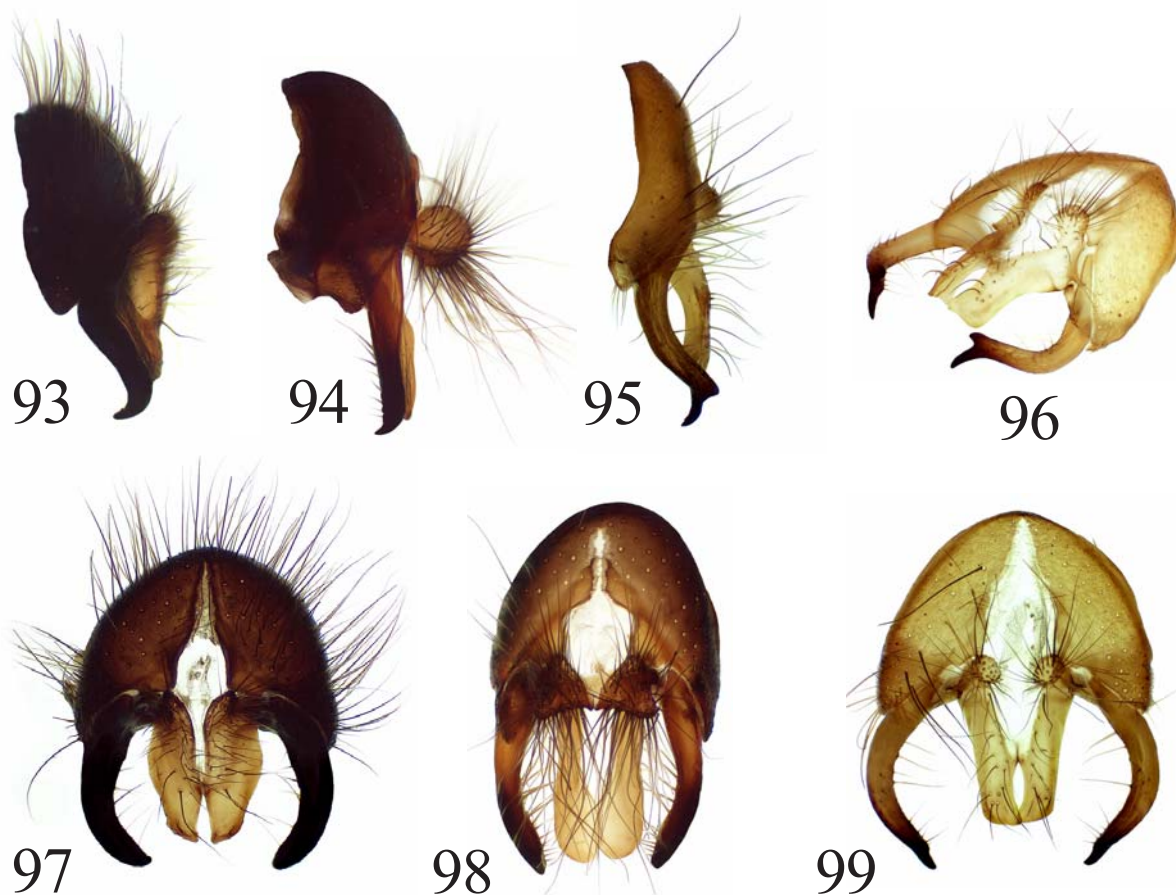
M. unilineata was noted from Kola Peninsula and West Siberia [Gorodkov, 1970, 1986] without indicating specific locality and from Far East [Ozerov, Krivosheina, 2014b].

MATERIAL in ZMUM. *M. pallida*. European part of Russia: 1 ♂, Arkhangelsk Oblast, Solvychevodsk (61.342°N 46.913°E), 16.VIII.2010, D. Gavryushin; 1 ♀, Murmansk Oblast, Luven'ga (67.103°N 32.708°E), 17–20.VII.2006, T.V. Galynskaya; 1 ♀, Karelia, Primorskiy env. (66.555°N 33.006°E), 5.VII.2010, A.L. Ozerov; 3 ♀♀, Bashkiria, Beloretsk (54.051°N 58.268°E), 9.VIII.2012, D. Gavryushin; 1 ♂, Tatarstan, Volzhsko-Kamsky Nature Reserve, Lake Raifa (55.897°N 48.733°E), 11.VIII.2005, Basov; 2 ♂♂, 1 ♀, Moscow Oblast, Egor'evsk (55.378°N 39.027°E), 19.VII.1972, 3.IX.1978, A. Shatalkin; 1 ♂, 1 ♀, Moscow Oblast, Golitsino (55.649°N 37.011°E), A. Shatalkin; 3 ♂♂, 3 ♀♀, Moscow Oblast, Naro-Fominsk env. (55.390°N 36.774°E, 55.368°N 36.738°E, 55.394°N 36.715°E, 55.360°N 36.740°E), 6 and 15.V., 20.VIII.2008, 1.IX.2009, 29.VI.2014, D. Gavryushin; 2 ♂♂, Moscow Oblast, Ozhigovo (55.448°N 36.870°E), 16.VI.2007, 31.V.2008, D. Gavryushin; 2 ♀♀, Moscow Oblast, Ignatkovo (55.939°N 35.620°E), 13.VI.2008, A.L. Ozerov; 1 ♂, Moscow Oblast, Andreevskoe (55.974°N 35.604°E), 10.VI.2006, A.L. Ozerov; *Siberia*: 1 ♀, Novosibirsk Oblast, Karakanskiy Bor (54.354°N 81.899°E), 12.VIII.2007, O. Kosterin; 1 ♀, Krasnoyarsk Krai, Kryuchkovo station (56.096°N 62.109°E), 14–23.VII.2009, K. Tomkovich; *Far East of Russia*: 18 ♂♂, 17 ♀♀, Amur Oblast, Zeya Town (53.748°N 127.261°E), 30.VI., 2 and 14.VIII.1979, 4–10.VIII., 13– 18.VIII., 21–29.VIII, 4.IX.1981, 8 and 12.VIII.1982, A. Shatalkin; 1 ♀, Khabarovsk Krai, Lake Amut (50.809°N 136.396°E), 27.VI.–17.VII.2019, V. Mutin; 1 ♀, Magadan Oblast, Sokol env. (59.92°N 150.71°E), 11–



Figs 77–92. Epandrium, cerci and surstyli of Scathophagidae, lateral view (77, 79, 81, 83, 85, 87, 89, 91) and dorsal view (78, 80, 82, 84, 86, 88, 90, 92): 77, 78 — *Cosmetopus dentimanus* (Zetterstedt); 79, 80 — *Cosmetopus longus* (Walker); 81, 82 — *Ernoneura argus* (Zetterstedt); 83, 84 — *Hydromyza livens* (Fabricius); 85, 86 — *Leptopa filiformis* Zetterstedt; 87, 88 — *Megaphthalma pallida* (Fallén); 89, 90 — *Megaphthalma unilineata* (Zetterstedt); 91, 92 — *Staegeria kunzei* (Zetterstedt).

Рис. 1–7. Эпандрий, церки и сурстили Scathophagidae, сбоку (77, 79, 81, 83, 85, 87, 89, 91) и сверху (78, 80, 82, 84, 86, 88, 90, 92): 77, 78 — *Cosmetopus dentimanus* (Zetterstedt); 79, 80 — *Cosmetopus longus* (Walker); 81, 82 — *Ernoneura argus* (Zetterstedt); 83, 84 — *Hydromyza livens* (Fabricius); 85, 86 — *Leptopa filiformis* Zetterstedt; 87, 88 — *Megaphthalma pallida* (Fallén); 89, 90 — *Megaphthalma unilineata* (Zetterstedt); 91, 92 — *Staegeria kunzei* (Zetterstedt).



Figs 93–99. Epandrium, cerci and surstyli of Scatophagidae, lateral view (93–95), dorsal view (97–99) and dorsolateral view (96): 93, 97 — *Scatomyza magnipennis* (Portschinsky); 94, 98 — *Scatomyza mellipes* (Coquillett); 95, 96, 99 — *Scatomyza scybalaria* (Linnaeus). 94–96, 98, 99 — after Ozerov & Krivosheina, 2011b, figs 11, 10, 14, 15, 13.

Figs 93–99. Эпандрий, церки и сурстили Scatophagidae, сбоку (93–95), сверху (97–99) и досолатерально (96): 93, 97 — *Scatomyza magnipennis* (Portschinsky); 94, 98 — *Scatomyza mellipes* (Coquillett); 95, 96, 99 — *Scatomyza scybalaria* (Linnaeus). 94–96, 98, 99 — по Ozerov & Krivosheina, 2011b, figs 11, 10, 14, 15, 13.

19.VII.2014, N. Vikhrev; 3 ♂♂, 1 ♀, Primorsky Krai, Kamenushka (43.634°N 132.222°E), 14.VII.1983, 13 and 30.VI.1984, 2.VII.1988, A. Shatalkin; 1 ♀, Primorsky Krai, Melkovodnoe (42.859°N 133.613°E), 3.IX.1987, A.L. Ozerov; 2 ♀♀, Primorsky Krai, Lazovsky Nature Reserve, cordon "Amerika" (43.283°N 134.044°E), 13 and 28.VII.1986, A.L. Ozerov; 1 ♀, Sakhalin Oblast, 40 km E Zonal'noe (50.673°N 143.329°E), 2.VIII.2002, A. Leley, V. Storozhenko; *M. unilineata*. European part of Russia: 1 ♂, Murmansk env. (68.918°N 33.059°E), 9–13.VIII.2010, N. Vikhrev; 1 ♂, Arkhangelsk Oblast, 60 km N of Nar'yan-Mar (68.175°N 53.645°E), 11.VII.2008, N. Vikhrev; 1 ♀, Vorkuta (67.5°N 64.0°E), 19–25.VII.2010, N. Vikhrev; 1 ♀, Moscow Oblast, 13 km SE Pushchino (54.749°N 37.751°E), 31.VII.2009, D. Gavryusin; *Siberia*: 1 ♂, Altai, Seminsky pass (51.06°N 85.59°E), 1650 m, 27–30.VI.2016, N. Vikhrev; 1 ♂, 1 ♀, Krasnoyarsk Krai, Kryuchkovo station (56.096°N, 62.109°E), 14–23.VII.2009, K. Tomkovich; 1 ♂, Krasnoyarsk Krai, "Stolby" (55.962°N 92.750°E), 28–31.VII.2009, K. Tomkovich; *Far East of Russia*: 1 ♂, 1 ♀, Amur Oblast, River Nora (52.528°N 129.965°E), 28.VII.2008, E.M. Veselova, A.B. Ryvkin; 2 ♂♂, 1 ♀, Chukotka, River Anadyr (64°50'N 175°57'E), 29.VII.2013, O.A. Chruleva.

KEY TO SPECIES OF *MEGAPHTHALMA* OF RUSSIA

1. Scutellum with a pair of basal setae; apical setae absent or like hairs. Vein R_1 setulose on apical third of dorsal

surface. Arista long haired, the longest hairs approximately equal to 1/2 width of postpedicel (Fig. 16). Male sternites 4 and 5, epandrium, cerci and surstyli as in Figs 64, 87, 88 *M. pallida* (Fallén)

— Scutellum with a pair of basal and a pair of apical setae. Vein R_1 bare. Arista short haired, the longest hairs approximately equal to 1/4 width of postpedicel. Male sternites 4 and 5, epandrium, cerci and surstyli as in Figs 65, 89, 90 *M. unilineata* (Zetterstedt)

Genus *Microprosopa* Becker, 1894 Figs 45, 56, 118, 119.

REMARKS. Description of the genus and species noted in Russia, a key for their determination and changes in nomenclature are given by Ozerov [2017]. Currently, 12 species have been recorded in Russia (see checklist below).

Genus *Micropselapha* Becker, 1894 Fig. 17.

REMARKS. Palearctic genus. At the present time two species are known — *M. filiformis* (Zetterstedt,

1846) and *M. basovi* Ozerov, 2010, both are recorded in Russia. Description of *M. basovi* and its differences from *M. filiformis* are given by Ozerov [2010d]. Changes in nomenclature of this genus are given by Ozerov [2014].

Genus *Mixocordylura* Hendel, 1909
Fig. 18.

REMARKS. Small Palaearctic genus with two species only, both are known from territory of Russia (see checklist below). Diagnosis of the genus, descriptions of both species and their differences from each other are given by Ozerov & Krivosheina [2012a].

Genus *Neochirosia* Malloch, 1917
Fig. 112.

REMARKS. Diagnosis of the genus, descriptions of four species noted in Russia (see checklist below) and key for their determination are given by Ozerov [2010b].

Genus *Norellia* Robineau-Desvoidy, 1830
Figs 37, 40, 59.

REMARKS. In Russia, one species of this genus has been recorded — *N. tipularia* (Fabricius, 1794) from a single female taken from Moscow Region. Diagnosis of the genus and description of *N. tipularia* are given by Ozerov & Krivosheina [2011a].

Genus *Norellisoma* Wahlgren, 1917
Figs 36, 41, 46, 60, 120.

REMARKS. Description of the genus, descriptions of the species noted in Russia, key for their differences and changes in the nomenclature are given by Ozerov & Krivosheina [2020a]. Currently, there are 12 species in Russia (see checklist below).

Genus *Paracosmetopus* Hackman, 1956
Figs 47, 121.

REMARKS. Monotypic Palaearctic genus with a single species *P. helleni* Hackman, 1956. The diagnosis of the genus and the description of the *P. helleni* are given by Ozerov & Krivosheina [2014a]. In Russia, *P. helleni* is known from materials taken from the European part and Siberia [Hackman, 1956; Ozerov, Krivosheina, 2014a].

Genus *Pogonota* Zetterstedt, 1860
Figs 48, 49, 51, 54.

REMARKS. Description of the genus, descriptions of the species noted in Russia, a key for their determination and changes in nomenclature are given by Ozerov [2016]. Currently, 8 species have been recorded in Russia (see checklist below).

Genus *Pleurochaetella* Vockeroth, 1965
Fig. 55.

REMARKS. Two species are known in Russia (see checklist below). Diagnosis of the genus, descriptions of both species and a key for their determination are given by Ozerov & Krivosheina [2012b].

Genus *Scathophaga* Meigen, 1803
Figs 24, 28, 30, 50, 122–124.

REMARKS. *Scathophaga* Meigen, 1803 is the second largest genus after *Cordilura* Fallén, 1810 within the family Scathophagidae. 29 species are known in the territory of Russia (see checklist below). Description of the genus, descriptions of the species noted in Russia, and a key for their determination are given by Ozerov & Krivosheina [2021].

Genus *Scatomyza* Fallén, 1810
Figs 31, 67, 70, 71, 76, 93–99.

DIAGNOSIS. Medium-sized flies (6–11 mm long). Proepisternum is covered with hairs at middle or in anterior part. Anepisternum is covered with hairs completely or almost completely, with hairs posterior to anterior spiracle. Katepisternum with a strong seta in upper posterior corner. Postmetacoxal bridge present (Fig. 31). The presence of postmetacoxal bridge easily differs this genus from others genera of Scathophagidae.

REMARKS. There are three species in Russia: *S. magnipennis* (Portschinsky, 1887), *S. mellipes* (Coquillett, 1899) and *S. scybalaria* (Linnaeus, 1758).

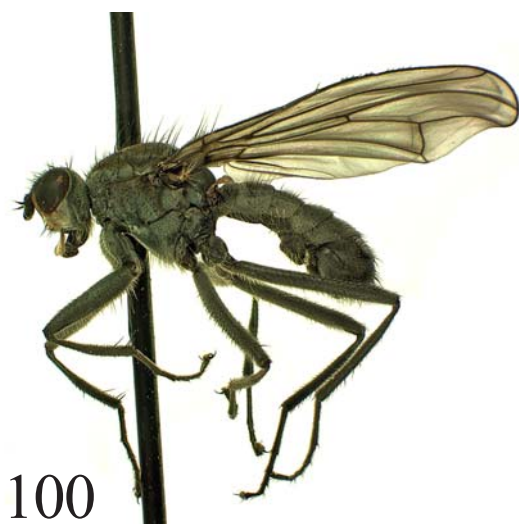
S. magnipennis is known in Russia from Altai and Buryatia [Gorodkov, 1967]; there are specimens from Altai in ZMUM (1 ♂, Kuray Ridge, 2500–2700 m (50.33°N 87.75°E), 3.VII.2008, Barkalov; 7 ♂♂, 4 ♀♀, Kosh-Agach env. (50.01°N 88.66°E), 1750 m, 2–4.VII.2016, N. Vikhrev).

S. mellipes is noted in Russia from Far East [Gorodkov, 1986; Ozerov, Krivosheina, 2014b].

S. scybalaria is widespread species in Russia. It is known from European part to Sakhalin Oblast [Gorodkov, 1986; Ozerov, Krivosheina, 2014b].

KEY TO SPECIES OF *SCATOMYZA* OF RUSSIA

1. Wing brownish. Femora of all legs black completely. Scapus and pedicel black. Male sternites 4 and 5, epanthrium, cerci and surstyli as in Figs 67, 93, 97 *S. magnipennis* (Portschinsky)
- . Wing yellowish. Femora of all legs yellow or dark yellow, sometimes femora darkened on the dorsal/postero-dorsal side or in the middle part (*S. mellipes*). Scapus and pedicel yellow or reddish-yellow 2
2. Postpedicel blackish. Male hind femur without anterodorsal setae apically. Male sternite 5 with long lateral process (Fig. 71). Surstyli not forked at the top (Figs 94, 98) *S. mellipes* Coquillett
- Postpedicel yellow. Male hind femur with 1–3 anterodorsal setae apically. Male sternite 5 without long lateral process (Fig. 76). Surstyli are forked at the top (Figs 95, 96, 99) *S. scybalaria* Linnaeus



Figs 100–105. Habitus of Scathophagidae: 100 — *Acanthocnema altaica* Ozerov & Krivosheina; 101 — *Aceroconema breviseta* (Zetterstedt); 102 — *Aceroconema nitens* Ozerov & Krivosheina; 103 — *Aceroconema richterae* Ozerov; 104 — *Bostrichopyga crassipes* (Zetterstedt); 105 — *Cleigastra apicalis* (Meigen). 100 — after Ozerov & Krivosheina, 2018a, fig. 1; 102 — after Ozerov & Krivosheina, 2018b, fig. 6; 103 — after Ozerov, 2015, fig. 1; 104 — after Ozerov & Krivosheina, 2014a, fig. 1; 105 — after Ozerov, 2013, fig. 19.

Рис. 100–105. Общий вид Scathophagidae: 100 — *Acanthocnema altaica* Ozerov & Krivosheina; 101 — *Aceroconema breviseta* (Zetterstedt); 102 — *Aceroconema nitens* Ozerov & Krivosheina; 103 — *Aceroconema richterae* Ozerov; 104 — *Bostrichopyga crassipes* (Zetterstedt); 105 — *Cleigastra apicalis* (Meigen). 100 — по Ozerov & Krivosheina, 2018a, fig. 1; 102 — по Ozerov & Krivosheina, 2018b, fig. 6; 103 — по Ozerov, 2015, fig. 1; 104 — по Ozerov & Krivosheina, 2014a, fig. 1; 105 — по Ozerov, 2013, fig. 19.



Figs 106–111. Habitus of Scathophagidae: 106 — *Cleigastra arctica* (Becker); 107 — *Cleigastra flavipes* (Fallén); 108 — *Cleigastra planiceps* (Fallén); 109 — *Codilura albipes* (Fallén); 110 — *Cordilura picipes* (Meigen); 111 — *Cosmetopus longus* (Walker). 106–108 — after Ozerov & Krivosheina, 2015, figs 102, 45, 42; 110 — after Ozerov & Krivosheina, 2020b, fig. 2.

Рис. 106–111. Общий вид Scathophagidae: 106 — *Cleigastra arctica* (Becker); 107 — *Cleigastra flavipes* (Fallén); 108 — *Cleigastra planiceps* (Fallén); 109 — *Codilura albipes* (Fallén); 110 — *Cordilura picipes* (Meigen); 111 — *Cosmetopus longus* (Walker). 106–108 — по Ozerov & Krivosheina, 2015, figs 102, 45, 42; 110 — по Ozerov & Krivosheina, 2020b, fig. 2.



Figs 112–117. Habitus of Scathophagidae: 112 — *Neochirosia veratri* (Hendel); 113 — *Ernoneura argus* (Zetterstedt); 114 — *Gimnomera tarsea* (Fallén); 115 — *Hydromyza livens* (Fabricius); 116 — *Leptopa filiformis* Zetterstedt; 117 — *Megaphthalma pallida* (Fallén). 114 — after Ozerov, 2019a, fig.1.

Рис. 112–117. Общий вид Scathophagidae: 112 — *Neochirosia veratri* (Hendel); 113 — *Ernoneura argus* (Zetterstedt); 114 — *Gimnomera tarsea* (Fallén); 115 — *Hydromyza livens* (Fabricius); 116 — *Leptopa filiformis* Zetterstedt; 117 — *Megaphthalma pallida* (Fallén). 114 — по Ozerov, 2019a, fig.1.



118



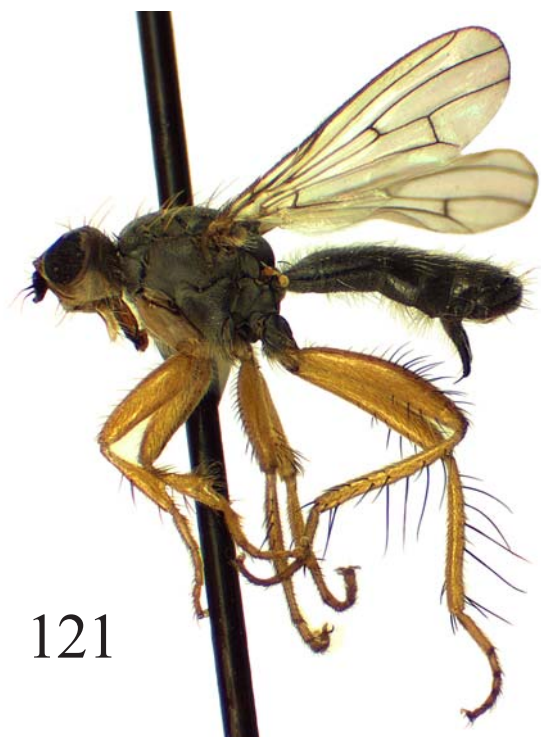
119



120



122



121



123

Figs 118–123. Habitus of Scathophagidae: 118— *Microprosopa frigida* (Holmgren); 119 — *Microprosopa pallidicauda* (Zetterstedt); 120 — *Norellisoma spinimanum* (Fallén); 121 — *Paracosmetopus helleni* Hackman; 122 — *Scathophaga furcata* (Say); 123 — *Scathophaga obscura* (Fallén). 118, 119 — after Ozerov, 2017, figs 2, 1; 120 — after Ozerov, 2010a, fig 1; 121 — after Ozerov & Krivosheina, 2014a, fig. 8; 122, 123 — after Ozerov & Krivosheina, 2021, figs 3, 1.

Рис. 118–123. Общий вид Scathophagidae: 118— *Microprosopa frigida* (Holmgren); 119 — *Microprosopa pallidicauda* (Zetterstedt); 120 — *Norellisoma spinimanum* (Fallén); 121 — *Paracosmetopus helleni* Hackman; 122 — *Scathophaga furcata* (Say); 123 — *Scathophaga obscura* (Fallén). 118, 119 — по Ozerov, 2017, figs 2, 1; 120 — по Ozerov, 2010a, fig 1; 121 — по Ozerov & Krivosheina, 2014a, fig. 8; 122, 123 — по Ozerov & Krivosheina, 2021, figs 3, 1.



Figs 124–128. Habitus of Scathophagidae: 124 — *Scathophaga stercoraria* (Linnaeus); 125 — *Spaziphora hydromyzina* (Fallén); 126 — *Staegeria kunzei* (Zetterstedt); 127 — *Trichopalpus fraternus* (Meigen); 128 — *Trichopalpus punctipes* (Meigen). 124 — after Ozerov & Freidberg, 2011, fig. 24; 127, 128 — after Ozerov, 2019c, figs 1, 2.

Рис. 124–128. Общий вид Scathophagidae: 124 — *Scathophaga stercoraria* (Linnaeus); 125 — *Spaziphora hydromyzina* (Fallén); 126 — *Staegeria kunzei* (Zetterstedt); 127 — *Trichopalpus fraternus* (Meigen); 128 — *Trichopalpus punctipes* (Meigen). 124 — по Ozerov & Freidberg, 2011, fig. 24; 127, 128 — по Ozerov, 2019c, figs 1, 2.

Genus *Spaziphora* Rondani, 1856
Figs 19, 125.

REMARKS. Holarctic genus with three species, two of them (see checklist below) are noted in Russia. Description of the genus, descriptions of all known species, and a key for their determination are given by Ozerov [2012].

Genus *Staegeria* Rondani, 1856
Figs 42, 43, 66, 91, 92, 126.

DIAGNOSIS. Body-length 6–7 mm. Proepisternum is covered with setulae at middle or in anterior part. Anepisternum covered with setulae along dorsal margin and in posterior part only, without setulae posterior to anterior spiracle. Katepisternum with a single strong

seta in upper posterior corner. Scapular setae absent. Postpronotal lobe anteriorly without erect spines. Fore tibia without spinules ventrally. Male femora of mid and hind legs strongly thickened in the central part (Figs 43, 126). Male tibiae of mid and hind legs with 3–4 very long and strong setae posterodorsally in basal half (Fig. 42). Vein R_1 bare. Male sternites 4 and 5, epandrium, cerci and surstyli as in Figs 66, 91, 92.

REMARKS. One species of this genus has been recorded in Russia — *S. kunzei* (Zetterstedt, 1821). The species was recorded in Russia from the European part and Siberia by Gorodkov [1970, 1986] without indicating specific locality.

MATERIAL in ZMUM. *European part of Russia*: 1 ♂, 1 ♀, Moscow Oblast (55.842°N 37.412°E), 13.VII.1936, B. Rohden-dorf; 2 ♂♂, 1 ♀, Leningrad Oblast, Kiperort peninsula (60.48°N 28.56°E), 15–25.V.2012, K. Tomkovich.

Genus *Trichopalpus* Rondani, 1856

Figs 20, 23, 27, 127, 128.

REMARKS. Diagnosis of the genus, descriptions of the species noted in Russia, a key for their identification and changes in nomenclature are given by Ozerov [2019c]. Currently, there are 6 species in Russia (see checklist below).

Checklist of the family Scathophagidae of Russia

Acanthocnema Becker, 1894

altaica Ozerov et Krivosheina, 2018
latipennis Becker, 1894
proboscidea Ozerov et Krivosheina, 2018
sternalis Suwa, 1986
 =*vikhrevi* Ozerov et Krivosheina, 2014

Acerocnema Becker, 1894

arctica Ozerov, 2013
barkalovi Ozerov, 2007
breviseta (Zetterstedt, 1846 — *Cordylura*)
 =*tiefi* Becker, 1894
gorodkovi Ozerov et Krivosheina, 2018
lobanovi Ozerov, 2007
macrocera (Meigen, 1826 — *Cordylura*)
nitens Ozerov et Krivosheina, 2018
paradoxopyga Stackelberg, 1952
richterae Ozerov, 2015

Bostrichopyga Becker, 1894

crassipes (Zetterstedt, 1838 — *Cordylura*)

Cleigastra Macquart, 1835

=*Gonatherus* Rondani, 1856
 =*Gonarticus* Becker, 1894
 =*Nanna* Strobl, 1894
 =*Amaurosoma* Becker, 1894
 =*Spathophilus* Becker, 1894
 =*Orthacheta* Becker, 1894
abdominalis (Zetterstedt, 1846 — *Cordylura*)
amurensis (Ozerov, 2010 — *Nanna*)
antennata (Zetterstedt, 1838 — *Scatomyza*)
apicalis (Meigen, 1826 — *Cordylura*)
arctica (Becker, 1907 — *Pselaphephila*)
armillata (Zetterstedt, 1846 — *Cordylura*)
articulata (Becker, 1894 — *Amaurosoma*)
bispinosa (Malloch, 1920 — *Amaurosoma*)
brevifrons (Zetterstedt, 1838 — *Cordylura*)
cornuta (Loew, 1863 — *Cordylura*)

Cryophila (Ozerov et Krivosheina, 2015 — *Nanna*)

flavipes (Fallén, 1819 — *Cordylura*)
inermis (Becker, 1894 — *Amaurosoma*)
intermedia Ozerov et Krivosheina, 2016
katmaiensis (Malloch, 1920 — *Amaurosoma*)
leucostoma (Zetterstedt, 1846 — *Cordylura*)
loewi (Becker, 1894 — *Pselaphephila*)
longicornis (von Roser, 1840 — *Cordylura*)
maritima Ozerov et Krivosheina, 2016
nigriventris (Loew, 1864 — *Cordylura*)
obscuripes (Becker, 1915 — *Acerocnema*)
 =*indotatum* (Engelmark, 1999 — *Nanna*)
pilosa (Zetterstedt, 1838 — *Cordylura*)
planiceps (Fallén, 1826 — *Cordylura*)
 =*fumipennis* (Hendel, 1930 — *Gonatherus*)
puberula (Becker, 1894 — *Amaurosoma*)
rossolimoe (Ozerov, 2010 — *Nanna*)
sundukovi Ozerov, 2013
tibiella (Zetterstedt, 1838 — *Cordylura*)

Cordilura Fallén, 1810

=*Phrosia* Robineau-Desvoidy, 1830
 =*Scoliaphleps* Becker, 1894
 =*Cordilurina* James, 1955
 =*Cordylura*, unjustified emend.
aberrans (Becker, 1894 — *Cordylura*)
 =*rubifrontata* Becker, 1894 — *Cordylura*.
aemula (Collin, 1958 — *Cordylura*)
albilabris (Fabricius, 1805 — *Ocyptera*)
albipes (Fallén, 1819 — *Cordylura*)
amurensis Ozerov, 2007
atrata (Zetterstedt, 1846 — *Cordylura*)
bicoloripes Ozerov, 1997
ciliata (Meigen, 1826 — *Cordylura*)
fulvifrons Ozerov, 1997
fuscipes (Zetterstedt, 1838)
 =*apicata* (Hendel, 1930 — *Cordylura*)
 =*nigrithorax* (Hendel, 1930 — *Cordylura*)
 =*ochracea* (Hendel, 1930 — *Cordylura*)
grunini Ozerov et Krivosheina, 2017
impudica (Rondani, 1867 — *Cordylura*)
 =*umbrosa* (Loew, 1873 — *Cordylura*)
kakaberrans Ozerov, 1997
kosterini Ozerov et Krivosheina, 2014
krocha Ozerov, 2007
monochroma Ozerov et Krivosheina, 2014
nartshukae Ozerov et Krivosheina, 2015
negrobovi Ozerov et Krivosheina, 2017
nubecula Sasakawa, 1986
nubilosa Ozerov et Krivosheina, 2020
picipes (Meigen, 1826 — *Cordylura*)
picticornis (Loew, 1864 — *Cordylura*)
 =*latigenis* Hendel, 1930 — *Cordylura*)
proboscidea (Zetterstedt, 1838 — *Cordylura*)
pudica (Meigen, 1826 — *Cordylura*)
remmi Elberg, 1972
remota Ozerov, 1997
richterae Ozerov et Krivosheina, 2015
rufimana (Meigen, 1826 — *Cordylura*)
rufipes (Meigen, 1826 — *Cordylura*)
 =*pubera* Linnaeus, 1758 sensu Fallén, 1810:15, misidentification
sagittifera Gorodkov, 1974
shatalkini Ozerov, 1997
sibirica Gorodkov, 1974
sidorenkoi Ozerov et Krivosheina, 2012
sifneri Ozerov, 2007
socialis (Becker, 1894)
tartariana Ozerov, 2007
ustulata (Zetterstedt, 1838 — *Cordylura*)
zaitzevi Gorodkov, 1974

Cosmetopus Becker, 1894

dentimanus (Zetterstedt, 1838 — *Cordylura*)

longus (Walker, 1849 — *Cordylura*)
 =*fulvipes* (Zetterstedt, 1838 — *Cordylura*)

Delina Robineau-Desvoidy, 1830
nigrita (Fallén, 1819 — *Cordylura*)

Ernoneura Becker, 1894
argus (Zetterstedt, 1838 — *Scatomyza*)

Gimnomera Rondani, 1867
 =*Cochliarium* Becker, 1894
 =*Langechristia* Ozerov, 1999
 =*Gymnomera*, error
alanica (Ozerov, 1999 — *Cochliarium*)
albipila (Zetterstedt, 1846 — *Cordilura*)
 =*lucida* (Becker, 1900 — *Microprosopa*)
amica (Ozerov, 1999 — *Langechristia*)
castanipes (Becker, 1894 — *Cochliarium*)
cuneiventris (Zetterstedt, 1846 — *Cordilura*)
dorsata (Zetterstedt, 1838 — *Cordilura*)
hirta Hendel, 1930 — *Gymnomera*.
lasiosoma (Becker, 1894 — *Cochliarium*)
mellina (Becker, 1900 — *Gymnomera*)
montana Ozerov et Krivosheina, 2013
nigricorpus Ozerov, 2019
novgorodovae (Ozerov, 2007 — *Cochliarium*)
 =*sorokinae* (Ozerov, 2007 — *Cochliarium*)
nudipedis Ozerov, 2019
pallisetia Ozerov, 2019
speciosa (Ozerov, 1999 — *Langechristia*)
tarsea (Fallén, 1819 — *Cordilura*)
tibialis (Malloch, 1919 — *Dasypleuron*)
 =*sibirica* (Engelmark, 1999 — *Cochliarium*)
tukuringra (Ozerov, 1999 — *Cochliarium*)
ziegleri (Ozerov, 1999 — *Langechristia*)

Hexamitocera Becker, 1894
loxocerata (Fallén, 1826 — *Cordilura*)

Hydromyza Fallén, 1823
livens (Fabricius, 1794 — *Musca*)

Leptopa Zetterstedt, 1838
 =*Parallelomma* Becker, 1894
 =*Chylizosoma* Hendel, 1924
caucasica (Ozerov, 2010 — *Parallelomma*)
filiformis Zetterstedt, 1838
hostae (Herring, 1955 — *Chylizosoma*)
media (Becker, 1894 — *Parallelomma*)
sellata (Hackman, 1956 — *Chylizosoma*)
vittata (Meigen, 1826 — *Cordylura*)

Megaphthalma Becker, 1894
 =*Megaphthalmoides* Ringdahl, 1936
pallida (Fallén, 1819 — *Cordilura*)
unilineata (Zetterstedt, 1838 — *Cordilura*)

Microprosopa Becker, 1894
 =*Allomyella* Malloch, 1923
albipennis (Zetterstedt, 1838 — *Cordilura*)
crinipes Ringdahl, 1928
frigida (Holmgren, 1883 — *Cordilura*)
 =*varitibia* Becker, 1897
haemorrhoidalis (Meigen, 1826 — *Cordilura*)
heteromyzina (Zetterstedt, 1838 — *Scatomyza*)
lineata (Zetterstedt, 1838 — *Cordilura*)
pallidicauda (Zetterstedt, 1838 — *Cordilura*)
paveli Ozerov et Krivosheina, 2013
portenkoi Stackelberg, 1952
taimyrica Ozerov, 2017
unguiculata (Malloch, 1919 — *Allomyia*)
zlobini Ozerov, 2009

Micropselapha Becker, 1894
basovi Ozerov, 2010
filiformis (Zetterstedt, 1846 — *Cordilura*)

Mixocordylura Hendel, 1909
longifacies Hendel, 1909
parva Ozerov et Krivosheina, 2012

Neochirosia Malloch, 1917
anthrax (Schiner, 1864 — *Cleigastra*)
nigriceps (Becker, 1894 — *Clidogastra*)
pechorica Ozerov, 2010
veratri (Hendel, 1925 — *Clidogastra*)

Norellia Robineau-Desvoidy, 1830
tipularia (Fabricius, 1794 — *Musca*)

Norellisoma Hendel, 1910
 =*Norelliosoma*, error.
armipes (Meigen, 1826 — *Cordylura*)
caucasicum (Ozerov, 1993 — *Norellia*)
flavostriatum Ozerov, 2009
insulare (Ozerov, 1993 — *Norellia*)
lesgiae (Becker, 1894 — *Norellia*)
litturatum (Meigen, 1826 — *Cordylura*)
 =*altaica* (Ozerov, 2008 — *Norellia*)
montanoprattense (Ozerov, 1993 — *Norellia*)
oreinum Ozerov, 2010
orientale (Ozerov, 1993 — *Norellia*)
spinimanum (Fallén, 1819 — *Cordylura*)
 =*septentrionale* (Hendel, 1930 — *Norelliosoma*)
tomkovichi Ozerov, 2010
yolduense (Ozerov, 2008 — *Norellia*)

Paracosmetopus Hackman, 1956
hellehi Hackman, 1956

Pleurochaetella Vockeroth, 1965
barkalovi Ozerov in Ozerov & Krivosheina, 2012
simplicipes (Becker, 1900 — *Cosmetopus*)

Pogonota Zetterstedt, 1860
 =*Lasioscelus* Becker, 1894
 =*Okeniella* Hendel, 1907
barbata (Zetterstedt, 1838 — *Cordylura*)
caudata (Zetterstedt, 1838 — *Cordylura*)
dasyprocta (Loew, 1864 — *Cordylura*)
gorodkovi (Ozerov, 2007 — *Okeniella*)
immunda (Zetterstedt, 1838 — *Cordylura*)
nigricans (Loew, 1873 — *Cordylura*)
sahlbergi (Becker, 1900 — *Lasioscelus*)
stackelbergi (Gorodkov, 1967 — *Okeniella*)

Scathophaga Meigen, 1803
 =*Scopeuma* Meigen, 1800
 =*Conisternum* Strobl, 1894
 =*Coniosternum* Becker, 1894
 =*Scatophaga*, unjustified emend.
apicalis (Curtis in Ross, 1835 — *Scatophaga*)
 =*arctica* (Becker, 1897 — *Scatophaga*)
 =*perfecta* (Becker, 1907 — *Scatophaga*)
buryatica Ozerov et Krivosheina, 2019
calida (Haliday in Curtis, 1832 — *Scatophaga*)
cordylurina (Holmgren, 1883 — *Scatomyza*)
crinita (Coquillett, 1901 — *Scatophaga*)
dasythrix (Becker, 1894 — *Scathophaga*)
decipiens (Haliday in Curtis, 1832 — *Scatophaga*)
 =*fluvialis* (Rondani, 1866 — *Scatina*)
exalata Ozerov, 1996
furcata (Say, 1823 — *Pyropha)*
incola (Becker, 1900 — *Scatophaga*)
incompleta Ozerov et Krivosheina, 2020
inquinata (Meigen, 1826 — *Scatophaga*)

- intermedia* (Walker, 1849 — *Scatophaga*)
 =*hadleyi* Ozerov, 2013
karelica Ozerov, 2013
lapponica (Ringdahl, 1920 — *Coniosternum*)
litorea (Fallén, 1819 — *Scatomyza*)
 =*stuxbergii* (Holmgren, 1880 — *Scatomyza*)
lutaria (Fabricius, 1794 — *Musca*)
mollis (Becker, 1894 — *Scatophaga*)
 =*sychevskayae* Ozerov, 2010
multisetosa (Holmgren, 1883 — *Scatomyza*)
nigripalpis (Becker, 1907 — *Scatophaga*)
 =*orbitalis* (Becker, 1915 — *Scopeuma*)
obscura (Fallén, 1819 — *Cordylura*)
obscurinervis (Becker, 1900 — *Scatophaga*)
pictipennis (Oldenberg, 1923 — *Scatophaga*)
spurca (Meigen, 1826 — *Scatophaga*)
 =*Scatomyza suilla* (Fabricius); Fallén (1819:3). Misidentification
stercoraria (Linnaeus, 1758 — *Musca*)
 =*erythrostoma* Holmgren, 1883 — *Scatomyza*)
taeniopa (Rondani, 1867 — *Scatophaga*)
tinctinervis (Becker, 1894 — *Coniosternum*)
varipes (Holmgren, 1883 — *Scatomyza*)
 =*septentrionalis* (Becker, 1897 — *Scatophaga*)
yakutica Ozerov, 2017
- Scatomyza** Fallén, 1810
magnipennis (Portschinsky, 1887 — *Scatophaga*)
mellipes (Coquillett, 1899 — *Scatophaga*)
 =*eo*a Ozerov, 2007b (*Scatophaga*)
scybalaria (Linnaeus, 1758 — *Musca*)
- Spaziphora** Rondani, 1856
hydromyzina (Fallén, 1819 — *Cordylura*)
tomkovichi Ozerov, 2012
- Staegeria** Rondani, 1856
kunzei (Zetterstedt, 1821 — *Cordylura*)
- Trichopalpus** Rondani, 1856
 =*Chaetosa* Coquillett, 1898
 =*Paramicroprosopa* Ringdahl, 1936
 =*Huckettia* Vockeroth, 1995
 =*Tricopalpus*, error
fraternus (Meigen, 1826)
lacteipennis (Ringdahl, 1920 — *Microprosopa*)
nearcticus (Vockeroth, 1995 — *Huckettia*)
nigribasis (Curran, 1927 — *Tricopalpus*)
obscurellus (Zetterstedt, 1846 — *Cordylura*)
punctipes (Meigen, 1826 — *Cordylura*)
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