

Four new species of dung flies (Diptera: Scathophagidae) from Russian Far East

Четыре новых вида скатофагид (Diptera: Scathophagidae) с Дальнего Востока России

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KEY WORDS: Diptera, Scathophagidae, *Cordilura*, new species, Russia.

КЛЮЧЕВЫЕ СЛОВА: Diptera, Scathophagidae, *Cordilura*, новые виды, Россия.

ABSTRACT. Descriptions of four new species of *Cordilura* (Diptera: Scathophagidae) from Russian Far East are given: *C. amurensis* sp.n., *C. krocha* sp.n., *C. tartariana* sp.n. from Amur District and *C. sifneri* sp.n. from Primorye Territory.

РЕЗЮМЕ. Дано описание четырех новых видов двукрылых рода *Cordilura* (Diptera: Scathophagidae) с Дальнего Востока России: *C. amurensis* sp.n., *C. krocha* sp.n., *C. tartariana* sp.n. из Амурской области и *C. sifneri* sp.n. из Приморского Края.

This work is based on the collection of the Zoological Museum of the Moscow State University (ZMMU). A part of Scathophagidae collection was not determined for a long time. This year I discovered 4 new species during examination. Their descriptions are given below.

The holotypes and paratypes of all new species are kept in the ZMMU.

Cordilura amurensis Ozerov, sp.n.

Figs 1–3.

MATERIAL. Holotype ♂, with label “[РОССИЯ:] Амурская обл.[асть], г[ород] Зея[,] 9.VII.1981[,] А. Шаталкин” [RUSSIA: Amurskaya Oblast', town Zeya, 9.VII.1981, A. Shatalkin] (Registration number Di-0154). Paratypes (all with geographical label as in holotype): 2 ♂♂, 5 ♀♀, 23–27.VI. and 7.VII.1978, A. Shatalkin; 2 ♂♂, 1 ♀, 2 and 5.VII.1981, A. Shatalkin; 1 ♂, 4 ♀♀, 27–30.VII.1981, A. Ozerov, A. Shatalkin.

DESCRIPTION. Male. Frons yellow, matt; with greyish pollen along eyes. Face and gena white. Postcranium with greyish pollen, blackish in upper half and whitish in lower half. Ocellar triangle black. Palpi white. Prementum yellow. Scapus and pedicel yellow, postpedicel blackish. Scutum, anepisternum, anepimeron, metepisternum, postnotum, and scutellum greyish-brown; the rest of thorax's parts yellow. Legs yellow, only fore tarsus from above and tarsomere 5 of hind leg from above dark brownish. Abdomen blackish with greyish pollen. Wing tinged with light brownish; veins brownish. Haltere yellowish.

Postpedicel approximately 2.0 times as long as wide. Arista short haired on whole length.

Scutum with 1 postpronotals (anterior, if present, thin and short), 2 notopleurals, 1+2 supra-alars, (0–1)+0 intralars (thin; along line *ial* behind transverse suture with 3 hairs), 2 postalars, 2+3 dorsocentrals; acrostichals absent; 1 proepisternal and 1 proepimeral setae, both in lower margin; anepisternum with yellow hairs in posterior part and 3 black setae along posterior margin; katapisternum with yellow hairs from below and behind, with 1 strong seta in upper posterior corner. Scutellum with 2 strong basal setae, apicals as hairs.

Apex of R_1 (below part of C between places of fusion of Sc in C and R_1 in C) setose.

Abdomen with darkened hairs, each tergite with weak marginal setae. Sternite 5, epandrium and surstyli as in Figs 1–3.

Female. Except usual sexual differences, female differs from male by body coloration.

Postcranium with greyish pollen, yellow in upper half and whitish in lower half. Antenna and thorax completely yellow. All tarsi yellow. Abdominal tergites dark brown in ground color, more yellow in centre and blackish along posterior margin; tergite 6 yellow.

Body-length 3.6–5.1 mm. Wing-length 3.8–4.9 mm.

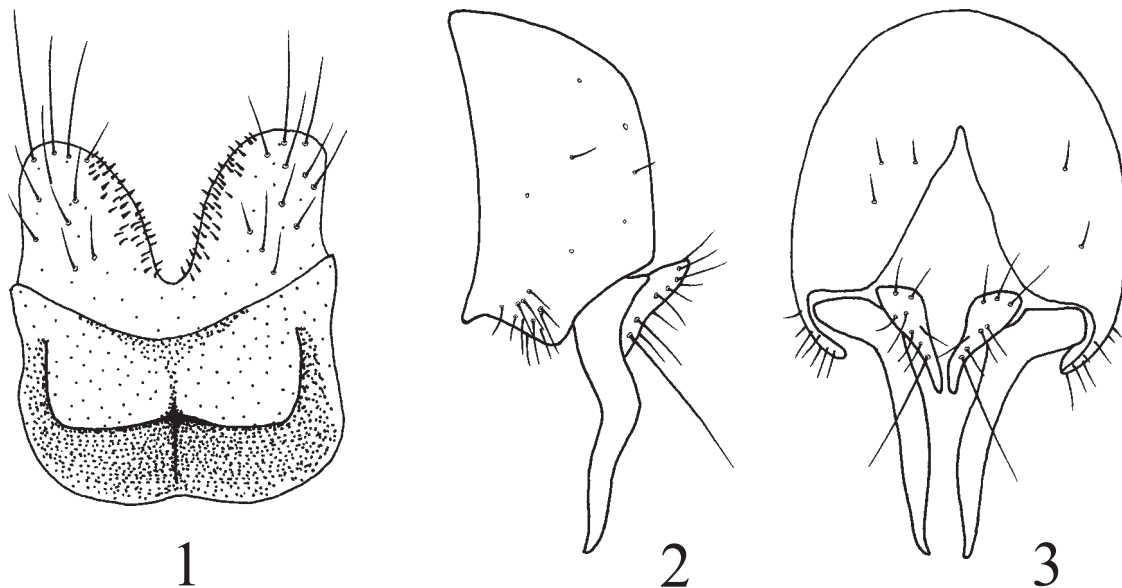
DIAGNOSIS. Arista almost bare and yellow thorax in combination differ distinctly this species from the other known species of *Cordilura* Fallén, 1810. The new species differs also by the structure of male genitalia.

Cordilura krocha Ozerov, sp.n.

Figs 4–6.

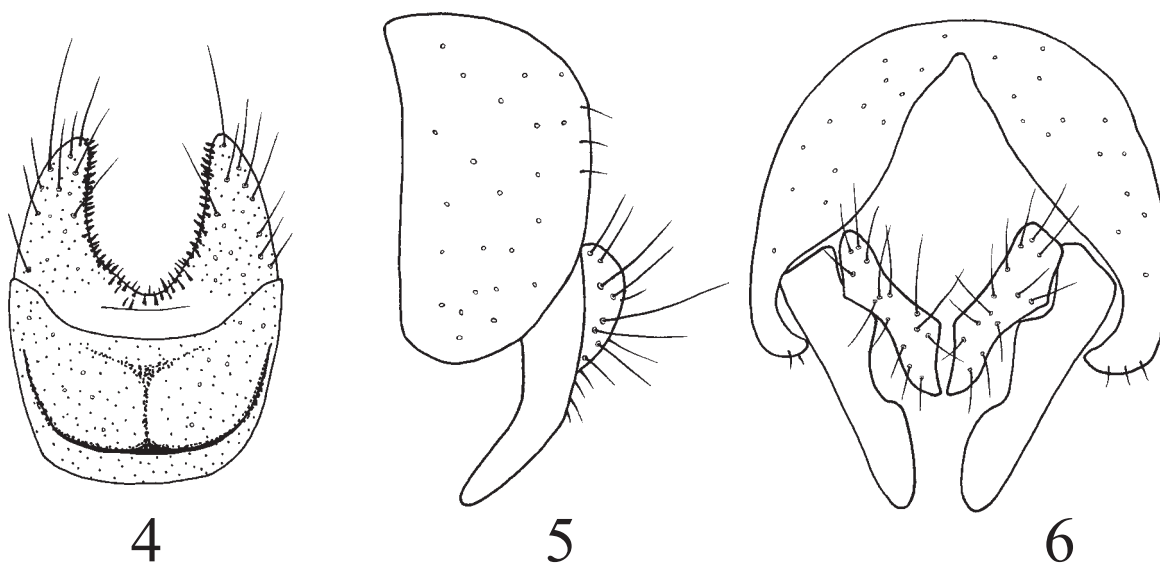
MATERIAL. Holotype ♂, with label “[РОССИЯ:] Амурская обл.[асть], г[ород] Зея[,] 13.VIII.1981[,] А. Шаталкин” [RUSSIA: Amurskaya Oblast', town Zeya, 13.VIII.1981, A. Shatalkin] (Registration number Di-0155). Paratypes (all with geographical label as in holotype): 8 ♂♂, 1 ♀♀, 13–17.VIII.1981, A. Ozerov, A. Shatalkin; 1 ♂, 3.VIII.1982, A. Shatalkin.

DESCRIPTION. Male, female. Frons black in upper half and reddish-yellow in lower half in male and reddish-yellow completely in female; matt, with greyish pollen along eyes in both sexes. Face and gena yellowish white. Postcranium with greyish pollen, blackish in upper half and yellow-whitish in lower half. Ocellar triangle black with greyish pollen. Palpi



Figs 1–3. *Cordilura amurensis* sp.n., ♂: 1 — sternite 5; 2 — epiandrium and surstylus, lateral view; 3 — epiandrium and surstyli, dorsal view.

Рис. 1–3. *Cordilura amurensis* sp.n., ♂ 1 — стернит V; 2 — эпандрий и сурстий, сбоку; 3 — эпандрий и сурстилии, сверху.



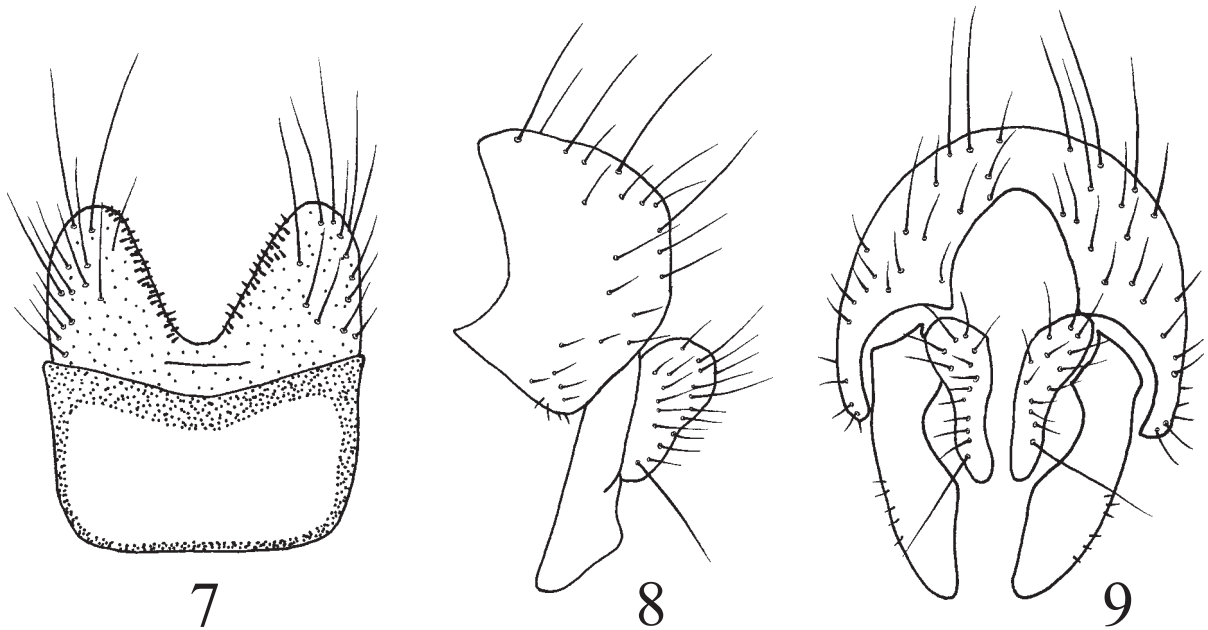
Figs 4–6. *Cordilura krocha* sp.n., ♂: 4 — sternite 5; 5 — epiandrium and surstylus, lateral view; 6 — epiandrium and surstyli, dorsal view.

Рис. 4–6. *Cordilura krocha* sp.n., ♂: 4 — стернит V; 5 — эпандрий и сурстий, сбоку; 6 — эпандрий и сурстилии, сверху.

yellow-whitish. Prementum yellow. Antenna yellow, postpedicel darkened in lower half. Thorax with greyish pollen in both sexes; completely yellow in female; scutum and mediotergite black, pleural sclerites dark, but lighter in lower part in male. Legs yellow; tarsomere 5 of hind leg dark brownish in male; all tarsi yellow in female. Abdomen blackish with greyish pollen; tergites 5 and 6 shining in female. Wing tinged with light brownish; veins brownish. Haltere yellow.

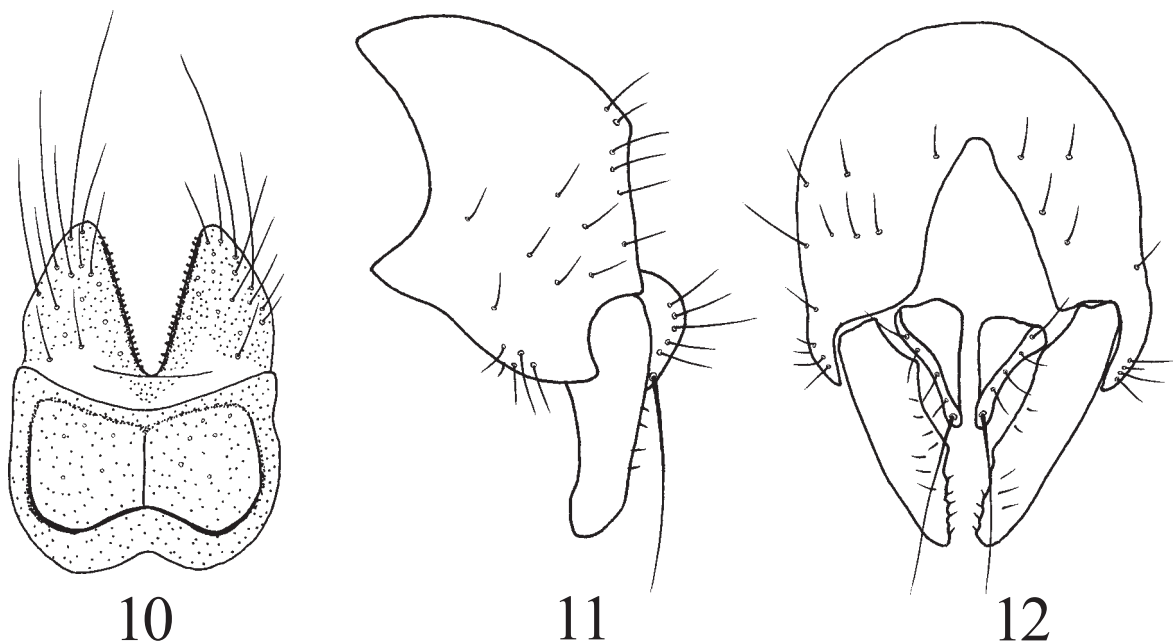
Postpedicel approximately 2.0 times as long as wide. Arista short haired on whole length.

Scutum with 1 postpronotals (anterior, if present, thin and short), 2 notopleurals, 1+2 supra-alars, (0–1)+0 intralars (thin; along line *ial* behind transverse suture with 3 hairs), 2 postalars, 2+3 dorsocentrals, acrostichals as hairs in two sparse rows; 1 proepimeral seta in lower margin; anepisternum with yellow hairs in posterior part and 2–3 black



Figs 7–9. *Cordilura sifneri* sp.n., ♂: 7 — sternite 5; 8 — epandrium and surstylus, lateral view; 9 — epandrium and surstyli, dorsal view.

Рис. 7–9. *Cordilura sifneri* sp.n., ♂ 7 — стернит V; 8 — эпандрий и сурстий, сбоку; 9 — эпандрий и сурстилы, сверху.



Figs 10–12. *Cordilura tartariana* sp.n., ♂: 10 — sternite 5; 11 — epandrium and surstylus, lateral view; 12 — epandrium and surstyli, dorsal view.

Рис. 10–12. *Cordilura tartariana* sp.n., ♂: 10 — стернит V; 11 — эпандрий и сурстий, сбоку; 12 — эпандрий и сурстилы, сверху.

setae along posterior margin; katepisternum with yellow hairs from below and behind, with 1 strong seta in upper posterior corner. Scutellum with 2 strong basal setae, apicals as hairs.

Apex of R_1 (below part of C between places of fusion of Sc in C and R_1 in C) bare.

Abdomen with thin hairs in male, which shorter and more rare in female. Male sternite 5, epandrium and surstyli as in Figs 4–6.

Body-length 3.6–4.0 mm. Wing-length 3.5–3.7 mm.

DIAGNOSIS. New species has short haired arista and differs distinctly by this character from similar *C. fuscipes*

(Zetterstedt, 1838). The latter species has plumose arista, the length of rays is approximately equal to the width of postpedicel.

Cordilura sifneri Ozerov, **sp.n.**
Figs 7–9.

MATERIAL. Holotype ♂, with labels “[РОССИЯ:] Юж[ное] Приморье[,] 40 км Ю-В Уссурийска[,] А. Озеров” [RUSSIA: Primorskiy Krai, 40 km SO of Ussuriysk, coll. A. Ozerov], “26.V.1985” (Registration number Di-0156). Paratypes (all with geographical label as in holotype, when A. Ozerov collector or “[РОССИЯ:] Юж[ное] Приморье[,] Каменущка”, when A. Shatalkin collector): 4 ♀♀, 12–16.VII.1983, A. Shatalkin; 3 ♂♂, 3 ♀♀, 11–28.VI.1984, A. Ozerov, A. Shatalkin; 7 ♀♀, 25.V–4.VI.1985, A. Ozerov; 14 ♀♀, 13–24.VII.1986, A. Ozerov; 1 ♀, 12.VII.1987, A. Ozerov; 1 ♂, 30.V.1989, A. Shatalkin.

DESCRIPTION. Male, female. Frons yellow, matt; with whitish pollen along eyes. Face and gena yellowish-white. Postcranium with greyish pollen, yellow in upper half and whitish in lower half. Ocellar triangle black. Palpi yellowish-white. Prementum yellow. Antenna yellow. Thorax yellow; scutum with two dark rows, each exterior from *dc* lines; mediotergite with two dark stripes on margins; anepisternum with dark band on upper margin in some specimens. Legs yellow; tarsomere 3 in apical half, tarsomeres 4 and 5 of mid leg, and tarsomere 5 of hind leg dark brownish in male; all tarsi yellow in female. Abdomen yellow in ground color, slightly darkened along border between tergites in male; more darkened in female, its tergites 5 and 6 usually dark brown with yellow spot in centre. Wing tinged with light brownish; veins brownish. Haltere yellow.

Postpedicel approximately 2.5 times as long as wide. Arista short haired on whole length.

Scutum with 2 postpronotals, 2 notopleurals, 1+2 supra-alars, 1+2 intra-alars, 2 postalars, 2+3 dorsocentrals, acrostichals as hairs in two sparse rows; 1–3 proepisternal setae in lower margin; proepimeron with several yellow hairs; anepisternum with yellow hairs in posterior part and 2–3 black setae along posterior margin; katapisternum with yellow hairs from below and behind, with 1 strong seta in upper posterior corner. Scutellum with 2 strong basal setae, apicals as hairs.

Apex of R_1 (below part of *C* between places of fusion of Sc in *C* and R_1 in *C*) setose.

Abdomen with darkened hairs, each tergite with weak marginal setae in male, hairs shorter in female. Male sternite 5, epandrium and surstyli as in Figs 7–9.

Body-length 4.8–6.5 mm. Wing-length 4.6–6.2 mm.

DIAGNOSIS. *Cordilura sifneri* has completely yellow postpedicel and differ easily by this character from similar *C. amurensis*, which has black postpedicel (see above).

ETYMOLOGY. The new species is called in honour of Dr. František Šifner, who made great contribution in the study of Palaearctic Scathophagidae.

Cordilura tartaricana Ozerov, **sp.n.**
Figs 10–12.

MATERIAL. Holotype ♂, with label “[РОССИЯ:] Амурская обл[асть], г[ород] Зея[,] 27.VI.1978[,] А. Шаталкин” [RUSSIA: Amurskaya Oblast', town Zeya, 27.VI.1978, A. Shatalkin] (Registration number Di-0157). Paratypes (all with geographical label as in holotype): 1 ♀, 7.VII.1977, A. Shatalkin; 4 ♂♂, 4 ♀♀, 23–27.VI.1978, A. Shatalkin; 1 ♂, 1 ♀, 8.VII.1978, A. Shatalkin; 1 ♂, 12 ♀♀, 5–30.VII.1981, O. Gorbunov, A. Ozerov, A. Shatalkin; 2 ♀♀, 27 и 31.VII.1982, A. Shatalkin.

DESCRIPTION. Male, female. Frons yellow, matt; with greyish pollen along eyes. Face and gena white. Postcranium with greyish pollen, blackish in upper half and whitish in lower half in male and yellow in upper half and whitish in lower half in female. Ocellar triangle black. Palpi white. Prementum yellow. Antenna black as a rule completely in male; scapus and pedicel usually yellow in female. Thorax yellow in ground color, with greyish pollen; anepisternum, anepimeron and mediotergite in some specimens partly blackish. Legs yellow completely. Abdomen blackish with greyish pollen; female tergite 6 brownish. Wing tinged with light brownish; veins brown. Haltere yellowish.

Postpedicel approximately 2.0 times as long as wide. Arista short haired on whole length.

Scutum with 2 postpronotals, 2 notopleurals, 1+2 supra-alars, 1+2 intra-alars, 2 postalars, 2+3 dorsocentrals, acrostichals as hairs in two sparse rows; 2–3 proepisternal setae in lower margin; 1 proepimeral seta in lower margin; anepisternum with yellow hairs in posterior part and 4–5 black setae along posterior margin; katapisternum with yellow hairs from below and behind, with 1 strong seta in upper posterior corner. Scutellum with 2 strong basal setae, apicals as hairs.

Apex of R_1 (below part of *C* between places of fusion of Sc in *C* and R_1 in *C*) setose.

Abdomen with darkened hairs, each tergite with weak marginal setae in male, hairs shorter in female. Male sternite 5, epandrium and surstyli as in Figs 10–12.

Body-length 5.1–6.4 mm. Wing-length 4.9–5.8 mm.

DIAGNOSIS. Scutum with black stripes and 2 notopleural setae differ this species from similar *C. sifneri* (see above).