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Coniosternum kovari sp. nov. from Tajikistan, with the key to Palaearctic species of *Coniosternum* (Diptera: Scathophagidae) [1]

Coniosternum kovari sp. nov. z Tadžikistánu a klíč k určení palearktických zástupců rodu *Coniosternum* (Diptera: Scathophagidae)

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Diptera, Scathophagidae, *Scathophaga*, *Scatomyza*, *Coniosternum*, taxonomy, new species, new combination, Palaearctic Region, China, Tajikistan

Abstract. A new Palaearctic species, *Coniosternum kovari* sp. nov., from Tajikistan is described. A new combination, *Conisternum albidohirtum* (Becker, 1907) comb. nov., is proposed for *Scathophaga albidohirta* Becker, 1907. A key distinguishing the genera *Coniosternum* Becker, 1894, *Scathophaga* Meigen, 1803, and *Scatomyza* Fallén, 1810, and a key to all the Palaearctic species of the genus *Coniosternum* are provided, and diagnostic characters are illustrated.

INTRODUCTION

The genus *Coniosternum* Becker, 1894 (type species *Scathophaga obscura* Fallén, 1819, by original designation) is represented in the Palaearctic Region by 15 species including *C. albidohirtum* (Becker, 1907), comb. nov., transferred here from the genus *Scathophaga* Meigen, 1803 and *C. kovari* sp. nov. described here from Tajikistan (cf. Šifner 2008).

The genus *Scathophaga* Meigen, 1803 (type species *Musca merdaria* Fabricius, 1794 = *Musca stercoraria* Linnaeus, 1758, by monotypy) comprises more than 40 Palaearctic species. The species previously recognised as beloging to the genus *Scathophaga* were recently divided into three different genera: (i) *Coniosternum* Becker, 1894, (ii) *Scathophaga* Meigen, 1803 (the name *Scopeuma* Meigen, 1800 was supressed by ICZN 1963: Opinion 678), and (iii) *Scatomyza* Fallén, 1810. The monotypic genus *Ceratinostoma* Meade, 1885 is considered as closely related to *Scathophaga* (Hackman 1956; cf. also Bernasconi et al. 2001). A recent molecular phylogenetic study (Bernasconi et al. 2010) strongly supported the validity of *Coniosternum* as a separate genus, closely related to the rest of the representatives of *Scathophaga*. The finding was also weakly supported in Bernasconi et al. (2000, 2001) and, depending on the analysis performed, in Kutty et al. (2007). A morphological study of the prestomal teeth of the Scathophagidae strongly supports a separate status for the genus *Coniosternum* (Nelson 1988).

Ozerov & Krivosheina (2011b) recently revalidated the genus *Scatomyza* Fallén, 1810 (type species *Musca scybalaria* Linnaeus, 1758, subsequent designation by Lucas (1848)) as a distinct genus from *Scathophaga*. However, the separate position of *Scatomyza* from the other typical *Scathophaga* species has found less support in studies using molecular genetic data (Bernasconi et al 2000, 2001, 2010; Kutty et al. 2007). The diagnostic characters of the genera *Coniosternum*, *Scathophaga*, and *Scathomyza* are discussed and key to identify them is provided.

[1] I dedicate this paper to the memory of my late friend, Scottish entomologist and specialist in Scathophagidae, J. M. Nelson (Edinburgh, Scotland, U.K.).

MATERIAL AND METHODS

Examined specimens are deposited in the followings collections:

FSPC František Šifner private collection, Praha, Czech Republic;
NMPC National Museum, Praha, Czech Republic;
ZISP Zoological Institute of Russian Academy of Sciences St. Petersburg, Russia;
ZMHB Museum für Naturkunde der Humboldt-Universität, Berlin, Germany.

Morphological terminology used follows Cumming & Wood (2009).

TAXONOMY

Coniosternum kovari sp. nov.

(Figs 1–4)

Type material. Holotype: ♂, **TAJIKISTAN:** 'Hissar Mts, Vahdat District, Magov (~38°40′N 69°06′E), valley, 18.–21.ix.1989, I. Kovář leg.' (NMPC). Allotype: ♀, the same data as holotype (NMPC). Paratype: ♂, the same data as holotype (FSPC).

Description. Body length 6 mm, primary colouration dark.

Head totally grey, white dusted including the face, orbits and gennae, frontal vitta and parafacials brown, pedicellus and first flagellomere black, arista bare and thickened in first quarter, palpi yellowish-brown, lower part of gennae with yellowish hairs, vibrissal callus with two strog vibrissae and one short bristle.

Thorax. Chaetotaxy standard for the genus, with two intraalar and supraalar bristles, acrostichal bristles very rare in distal part of mesonotum only, basal and apical scutellar bristles of equal size, both cross-veins without dark colouration, all femora yellowish-brown apically.

Abdomen. *Male*. Sternites 3 and 4 distinctly prolonged, sternite 5 with short lobes, medially between both lobes with two projections densely bristled (Fig. 1), cerci separated and narrowed apically, surstyli distinctly short, narrowed apically and with fine short hairs (Fig. 2), praegonite with two bristles, i.e. one dorsal and one lateral (Fig. 3). *Female*. Sternites 5 and 6 distinctly prolonged, sternite 7 weakly narrowed basally, sternites 8 very minute and pointed caudally without distict bristles (Fig. 4).

Differential diagnosis. See the key bellow.

Etymology. I dedicate this species to Ivo Kovář, Czech coleopterologist and specialist in Coccinellidae, and collector of the new species.

Distribution. Known only from Tajikistan.

Coniosternum albidohirtum (Becker, 1907) comb. nov.

(Figs 9–11)

Scatophaga albidohirta Becker, 1907: 254.

Type material examined. Paralectotype: ♂, 1st label: 'Iche Lake, r. [= region] Otchogin, Igaygamt, Gobi, Kozlov leg., 1.-3.vii.1896' [in Cyrillic]; 2nd label: 'Gobi – Asien, vii., No. 51896, ♂, *albidohirta* Beck'; 3rd label: 'syntype, des. by Vockeroth' (ZMHB).

Comments. The illustrated male terminalia of *C. albidohirtum* (Figs 9, 10, 11) belong to a specimen (male, No. 51896) from the Becker's syntype series and kept in collection ZMHB (see Ozerov & Krivosheina 2011a: 105–106 for details). This specimen was recently designated as paralectotype by Ozerov (Ozerov & Krivosheina 2011a) and mentioned as a syntype by

Vockeroth (1954)), and is the specimen mentioned by Becker (1907: 254) as originating from 'zwischen dem See Itsche und dem Fl.[Fluss] Orygyn (1-3.vii.[18]95)' – presently in China, Qinghai Province, Qaidam [as Zaidam in Becker's text]; it is under the administration of Haixi Mongol and Tibetian Autonomus Prefecture in the northwest part of Qinghai Province. Lake 'Itsche' is probably Qinghai Lake, 3600 m a.s.l. and the river 'Orygyn' is probably one of the tributaries of the Huang He river.

The transfer of *Scathophaga albidohirta* to the genus *Coniosternum* is based on the shape of the male terminalia, which are typical for the genus *Coniosternum.*

Key to genera *Coniosternum*, *Scatomyza* and *Scathophaga*

1. The whole body covered with yellow to greyish hairs of different length, proepisternum and proepimeron haired, arista plumose or bare, first flagellomere brown to black, surstyli distinctly sclerotized, pointed apically or weakly forked, cerci short, always separated and haired, praegonite of males wide with varying number of bristles, postgonite of males always narrow and arched. 2
– The whole body covered with grey to black short hairs, proepisternum grey haired in anterior part only, proepimeron bare, arista always bare and thickened in first quarter to third, first flagellomere always black, surstyli short and narrowed apically without a sclerotization, cerci prolonged, separated or partially jointed and covered with individual short bristles only, praegonite of males very short with one to three bristles, postgonite of males always wide and weakly pointed apically. ..... ***Coniosternum*** Becker, 1894
2. Anepimeron bare, metepimeral bridge present. ..... ***Scatomyza*** Fallén, 1819
– Anepimeron haired, metepimeral bridge absent. ..... ***Scathophaga*** Meigen, 1803

Comments. Ozerov & Krivosheina (2011b) use for the distinction of both genera, i.e. *Scatomyza* and *Scathophaga*, the following characters: *Scathophaga* – anepimeron with hairs, metepimeral (postmetacoxal) bridge absent, and females egg-laying; *Scatomyza* – anepimeron bare, metepimeral bridge (postmetacoxal) bridge present, and females larviparous. I accept this validation of the genus *Scatomyza* and I use this name in the key.

The morphological characters used for determination of the genus *Coniosternum* are based on the author's knowledge (cf. Šifner 1975, 1981).

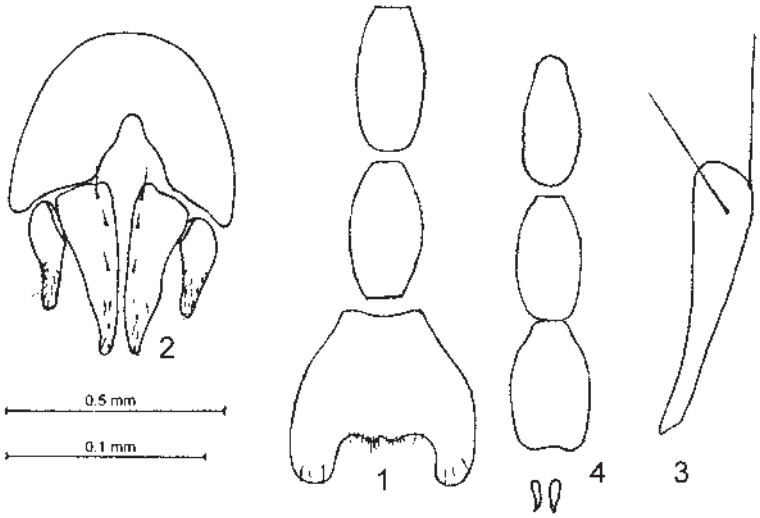
Key to species of the genus *Coniosternum*

1. Lobes of the male abdominal sternite 5 are as long as or shorter than the length of sternite. 2
– Lobes of the male abdominal sternite 5 are longer than length of sternite. 8
2. Posterior portion of male sternite 5 with short bristles between both lobes. 3
– Posterior portion of male sternite 5 of male without short bristles between both lobes (Fig. 5), surstyli of male a little longer than fused cerci (Fig. 6), praegonite of male with two apical bristles (Fig. 7), sternites 8 of female pointed caudally (Fig. 8). (Europe – Šifner 2008: 159). ..... ***C. tinctinerve*** Becker, 1894
3. Lobes of the abdominal sternite 5 of male projecting distinctly laterally (Fig. 9), cerci of male fused (Fig. 10), praegonite of male with three apical bristles (Fig. 11). (China, Turkmenistan – Šifner 2008: 160). .... ***C. albidohirtum*** (Becker, 1907), **comb. nov.**
– Lobes of the abdominal sternite 5 of male projecting caudally. 4
4. Cerci of males distinctly separated. 5
– Cerci of males distinctly fused. 6
5. Cerci of male narrowed and moderately arched outside (Fig. 2), posterior portion of sternite 5 of male between both lobes with two small projections covered with short bristles (Fig. 1), praegonite of male with two apical bristles (Fig. 3), abdominal sternites 8 of female minute and poited apically (Fig.4). (Tajikistan). .... ***C. kovari*** **sp. nov.**
– Cerci of male widened apically (Fig. 12), abdominal sternite 4 of male long and wide (Fig 13), praegonite of male with two apical bristles (Fig. 14), abdominal sternites 8 of female wide, sternite 7 wide and very weakly sclerotized caudally (Fig. 15). (Iran, United Arab Emirates – Šifner 2009: 294). ..... ***C. jezeki*** Šifner, 1981

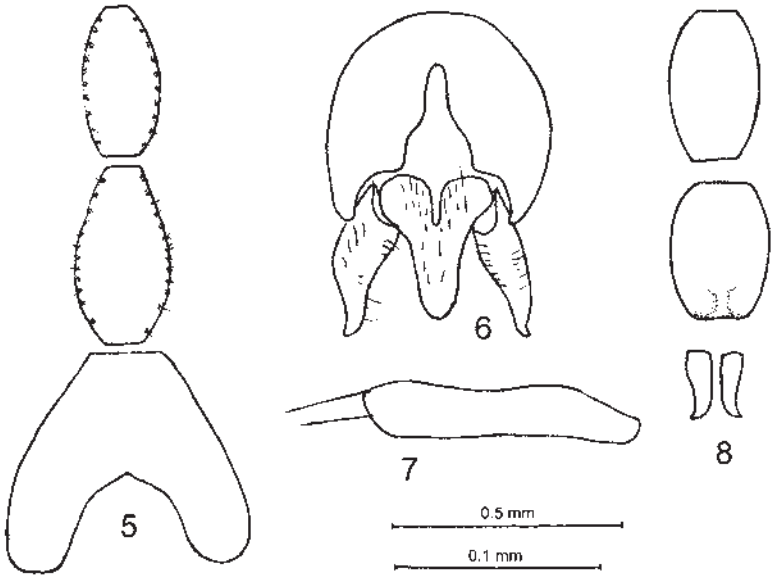
6. Lobes of abdominal sternite 5 of male distinctly arched inwards, sternite 3 very prolonged (Fig. 16), cerci of male distinctly fused (Fig. 17), praegonite of male with two apical bristles (Fig.18), abdominal sternites 8 of female long and pointed apically (Fig. 19). (Euro-Siberian species – Šifner 2008: 159). ..... ***C. obscurum*** (Fallén, 1819)
– Lobes of abdominal sternite of males projecting caudally. 7
7. Lobes of abdominal sternite of male and the body of sternite 5 of equal length (Fig. 20), cerci of male in upper part with short bristles (Fig. 21), praegonite of male weakly widened apically and with two dorsoapical bristles (Fig. 22), abdominal sternites 8 of female more or less triangular, sternites 7 and 6 with distinct bristles caudally (Fig. 23). (Iraq, China, Mongolia – Šifner 2008: 158; Ozerov & Krivosheina 2011b: 106). ..... ***C. mihalyii*** Šifner, 1975
– Lobes of the abdominal sternite 5 of male very short, sternite 4 very wide and oval (Fig. 24), cerci of male in upper part with four bristles (Fig. 25), praegonite of male with one apical and one dorsal bristle (Fig. 26), abdominal sternites 8 of female widened caudally, sternite 7 bristled caudally (Fig. 27). (Mongolia – Šifner 2008: 158). .. .. ***C. kaszabi*** Šifner, 1975
8. Posterior portion of the male sternite 5 with short bristles between both lobes. 12
– Posterior portion of the male sternite 5 without bristles between both lobes. 9
9. Cerci of males distinctly separated. 10
– Cerci of males distinctly fused. 11
10. Lobes of the male abdominal sternite 5 projecting distinctly laterally, sternite 4 rectangular (Fig. 28), cerci of male pointed apically (Fig. 29), praegonite of male with two apical bristles (Fig. 30). (Spain – Šifner 2008: 159). ... . ***C. nigrohirtum*** Czerny, 1909
– Lobes of the male abdominal sternite 5 arched inwards (Fig. 31), cerci of male very long, pointed apically and in upper part with bristles (Fig. 32). (China – Šifner 2008: 158). ..... ***C. infumatum*** Becker, 1907
11. Abdominal sternite 4 of male rectangular with a distinct projection caudally (Fig. 33), praegonite of male with three bristles, e.i. two apical and one subapical on inner side (Fig. 34), cerci fused (Fig. 36), abdominal sternites 8 of female long, sternite 7 more or less circular, sternite 6 prolonged, both sternites with four bristles caudally (Fig. 35). (Czech Republic – Šifner 2008: 159). ..... ***C. nelsoni*** Šifner, 2003
– Lobes of the abdominal sternites 5 of male long and apically weakly arched outside (Fig. 37), cerci of male narrowed apically and with four bristles (Fig. 38), praegonite of male with two bristles, e.i. one apical and one lateral bristle on external side (Fig. 39), abdominal sternites 8 of female widened apically and with fine bristles (Fig. 40). (Austria,Turkmenistan, Afganistan – Šifner 2008: 158; Czech Republic – Šifner 2013: 45). .... ***C. fluviale*** (Rondani, 1867)
12. Cerci of males distinctly separated. 13
– Cerci of male fused. 14
13. Cerci of male wide (Fig. 41), abdominal sternite 4 of male narrowed distally, sternite 3 oval (Fig. 42), praegonite of male with one apical bristle (Fig. 43), abdominal sternites 8 of female with two fine bristles and widened caudally, sternite 7 with six strong bristles (Fig. 44). (Europe – Šifner 2008: 157). .... ***C. decipiens*** (Haliday, 1832)
– Cerci and surstyli in equal length (Fig. 45), lobes of the male abdominal sternite 5 arched inwards and covered with short bristles (Fig. 46), praegonite of male with two apical bristles (Fig. 47), sternites 8 of female pointed apically (Fig. 48). (Euro-Siberian – Šifner 2008: 158). ..... ***C. lapponicum*** Ringdahl, 1920
14. Cerci of male wide and narrowed apically (Fig. 49), lobes of the male abdominal sternite 5 long, sternite 4 rectangular (Fig. 50), praegonite of male with three bristles, i.e. two apical bristles and one dorsal bristle (Fig. 51), abdominal sternites 8 of female wide and without bristles (Fig. 52). (Albania – Šifner 2008: 158). .... ***C. milani*** Šifner, 1981
– Surstyli of male reaching practically up to end of cerci and haired interiorly (Fig. 53), praegonite of male with three bristles, i.e. one apical bristle long, one preapical short and one dorsal very long reaching up to the end of apical bristle (Fig. 54), lobes of the abdominal sternite 5 of male very long (Fig. 55). (Turkey –Šifner 2008: 159). .... ***C. moceki*** Šifner, 2004

Notes. I have not examined any specimen of *Coniosternum infumatum* Becker, 1907 and figures (Figs 31, 32) are drawn based on photos by Ozerov (Ozerov & Krivosheina 2011b: 107). Detailed descriptions or redescriptions including faunistic data of all species are available in papers by Šifner (1975, 1981, 2003, 2004).

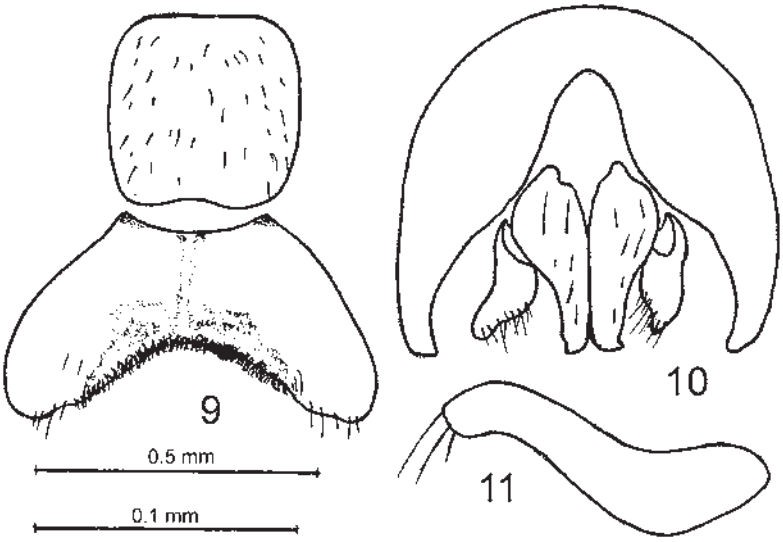
Strobl (1894) listed *Conisternum* [sic] Becker, apparently a printer's error. The same author in other works, i.e. Strobl (1898: 254, 1909: 182) spelled the name correctly as *Coniosternum* (cf. also Šifner 2008: 157, 2009: 294).



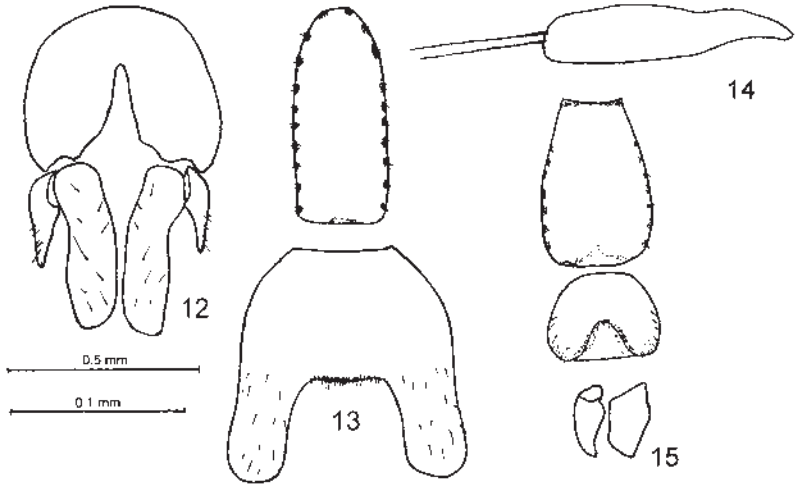
Figs 1–4. *Coniosternum kovari* sp. nov. 1 – male, paratype: abdominal sternites 3 to 5; 2 –male cerci and surstyli (caudal view); 3 – left praegonite; 4 – ♀, abdominal sternites 5 to 8. Scale bars: 0.5 mm (Figs 1, 2, 4); 0.1 mm (Fig. 3).
Obr. 1–4. *Coniosternum kovari* sp. nov. 1 – samec, paratyp: abdominální sternity 3 až 5; 2 – samčí cerci a surstyli (kaudální pohled); 3 – levý praegonit; 4 – ♀, abdominální sternity 5 až 8. Měřítka: 0,5 mm (obr. 1, 2, 4); 0,1 mm (obr. 3).



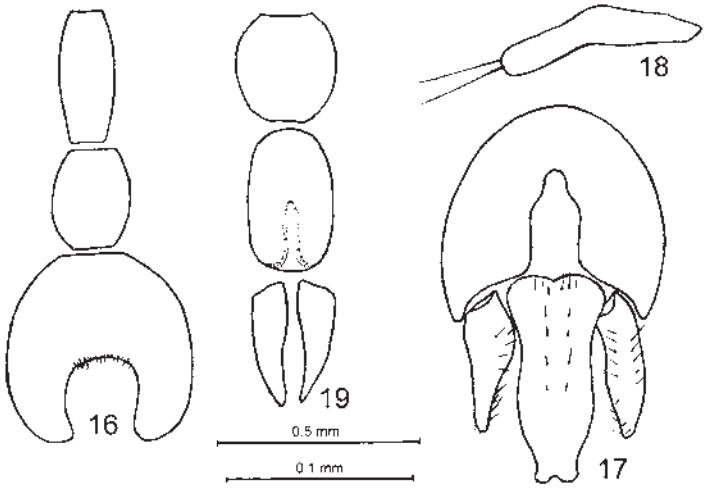
Figs 5–8. *Coniosternum tinctinerve* Becker, 1894: 5 – male abdominal sternites 3 to 5; 6 – male cerci and surstyli (caudal view); 7 – left praegonite; 8 – female abdominal sternites 6 to 8. Scale bars: 0.5 mm (Figs 3, 6, 8); 0.1 mm (Fig. 7).
Obr. 5–8. *Coniosternum tinctinerve* Becker, 1894: 5 – samčí abdominální sternity 3 až 5; 6 – samčí cerci a surstyli (kaudální pohled); 7 – levý praegonit; 8 – samičí abdominální sternity 6 až 8. Měřítka: 0,5 mm (obr. 3, 6, 8); 0,1 mm (obr. 7).



Figs 9–11. *Coniosternum albidohirtum* (Becker, 1907), comb. nov.: 9 – male abdominal sternites 4 to 5; 10 – male cerci and surstyli (caudal view); 11 – left praegonite. Scale bars: 0.5 mm (Figs 9, 10); 0.1 mm (Fig. 11).
Obr. 9–11. *Coniosternum albidohirtum* (Becker, 1907), comb. nov.: 9 – samčí abdominální sternity 4 až 5; 10 – samčí cerci a surstyli (kaudální pohled); 11 – levý praegonit. Měřítka: 0,5 mm (obr. 9, 10); 0,1 mm (obr. 11).

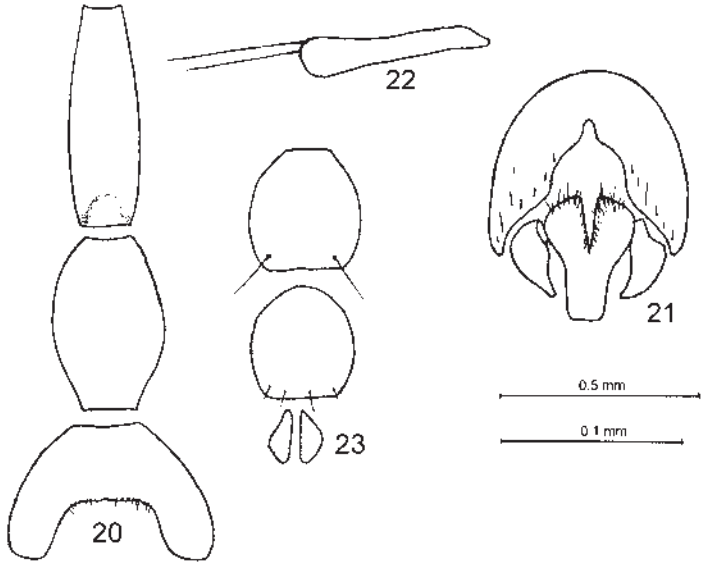


Figs 12–15. *Coniosternum jezeki* Šifner, 1981: 12 – male cerci and surstyli (caudal view); 13 – male abdominal sternites 4 to 5; 14 – left praegonite; 15 – female abdominal sternites 6 to 8. Scale bars: 0.5 mm (Figs 12, 13, 15); 0.1 mm (Fig. 14).
Obr. 12–15. *Coniosternum jezeki* Šifner, 1981: 12 – samčí cerci a surstyli (kaudální pohled); 13 – samčí abdominální sternity 4 až 5; 14 – levý praegonit; 15 – samičí abdominální sternity 6 až 8. Měřítka: 0,5 mm (obr. 12, 13, 15); 0,1 mm (obr. 14).



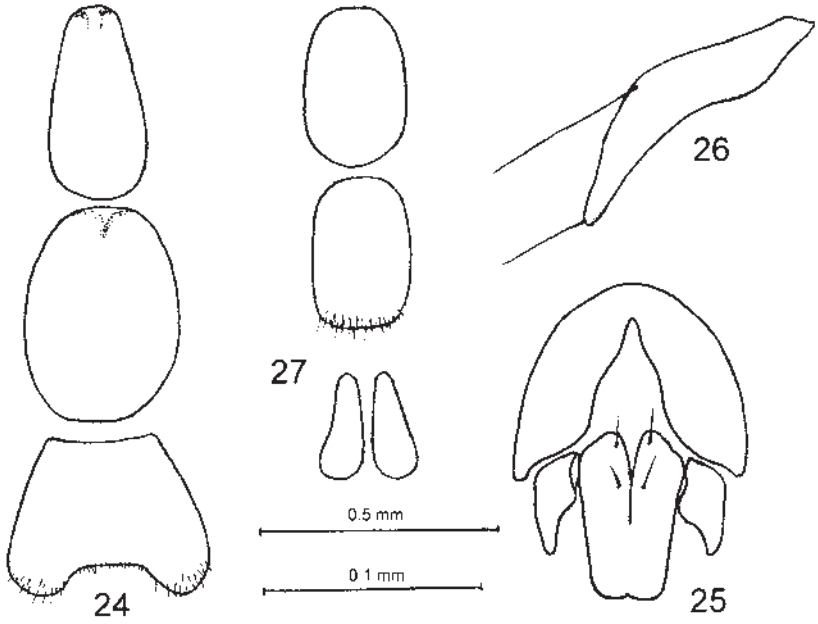
Figs 16–19. *Coniosternum obscurum* (Fallén, 1819): 16 – male abdominal sternites 3 to 5; 17 – male cerci and surstyli (caudal view); 18 – left praegonite; 19 – female abdominal sternites 6 to 8. Scale bars: 0.5 mm (Figs 16, 17, 19); 0.1 mm (Fig. 18).

Obr. 16–19. *Coniosternum obscurum* (Fallén, 1819): 16 – samčí abdominální sternity 3 až 5; 17 – samčí cerci a surstyli (kaudální pohled); 18 – levý praegonit; 19 – samičí abdominální sternity 6 až 8. Měřítka: 0,5 mm (obr. 16, 17, 19); 0,1 mm (obr. 18).

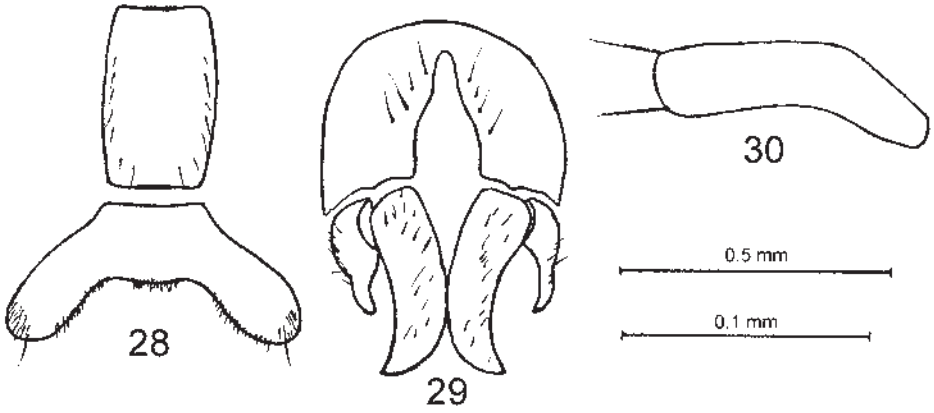


Figs 20–23. *Coniosternum mihalyii* Šifner, 1975: 20 – male abdominal sternites 3 to 5; 21 – male cerci and surstyli (caudal view); 22 – left praegonite; 23 – female abdominal sternites 6 to 8. Scale bars: 0.5 mm (Figs 20, 21, 23); 0.1 mm (Fig. 22).

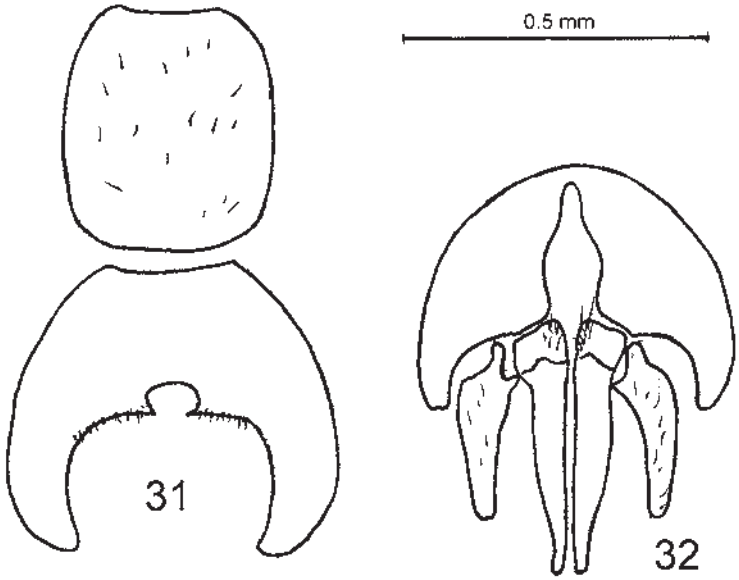
Obr. 20–23. *Coniosternum mihalyii* Šifner, 1975: 20 – samčí abdominální sternity 3 až 5; 21 – samčí cerci a surstyli (kaudální pohled); 22 – levý praegonit; 23 – samičí abdominální sternity 6 až 8. Měřítka: 0,5 mm (obr. 20, 21, 23); 0,1 mm (obr. 22).



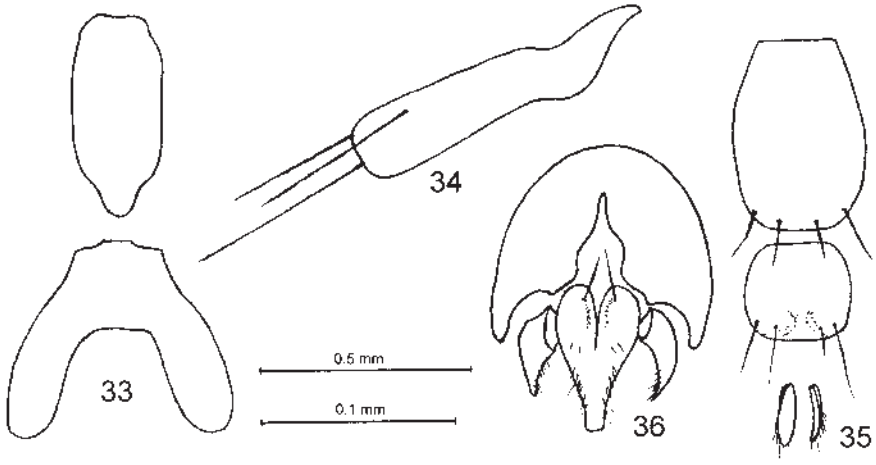
Figs 24–27. *Coniosternum kaszabi* Šifner, 1975: 24 – male abdominal sternites 3 to 5; 25 – male cerci and surstyli (caudal view); 26 – left praegonite; 27 – female abdominal sternites 6 to 8. Scale bars: 0.5 mm (Figs 24, 25, 27); 0.1 mm (Fig. 26).
Obr. 24–27. *Coniosternum kaszabi* Šifner, 1975: 24 – samčí abdominální sternity 3 až 5; 25 – samčí cerci a surstyli (kaudální pohled); 26 – levý praegonit; 27 – samičí abdominální sternity 6 až 8. Měřítka: 0,5 mm (obr. 24, 25, 27); 0,1 mm (obr. 26).



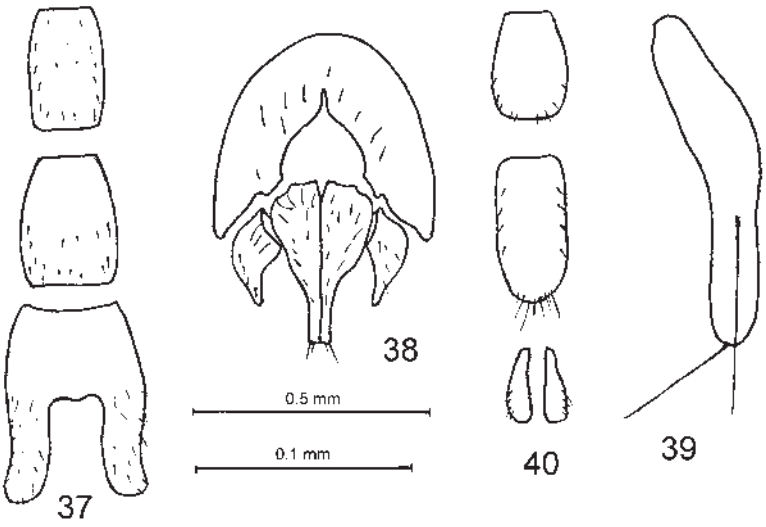
Figs 28–30. *Coniosternum nigrohirtum* Czerny, 1909: 28 – male abdominal sternites 4 to 5; 29 – male cerci and surstyli (caudal view); 30 – left praegonite. Scale bars: 0.5 mm (Figs 28, 29); 0.1 mm (Fig. 30).
Obr. 28–30. *Coniosternum nigrohirtum* Czerny, 1909: 28 – samčí abdominální sternity 4 až 5; 29 – samčí cerci a surstyli (kaudální pohled); 30 – levý praegonit. Měřítka: 0,5 mm (obr. 28, 29); 0,1 mm (obr. 30).



Figs 31–32. *Coniosternum infumatum* Becker, 1907: 31 –male abdominal sternites 4 to 5; 32 – male cerci and surstyli (caudal view). Scale bar: 0.5 mm (Figs 31, 32). (Accordind to Ozerov & Krivosheina 2011b).
Obr. 31–32. *Coniosternum infumatum* Becker, 1907: 31 – samčí abdominální sternity 4 až 5; 32 – samčí cerci a surstyli (kaudální pohled). Měřítko: 0,5 mm (obr. 31, 32). (Podle Ozerov & Krivosheina 2011b).

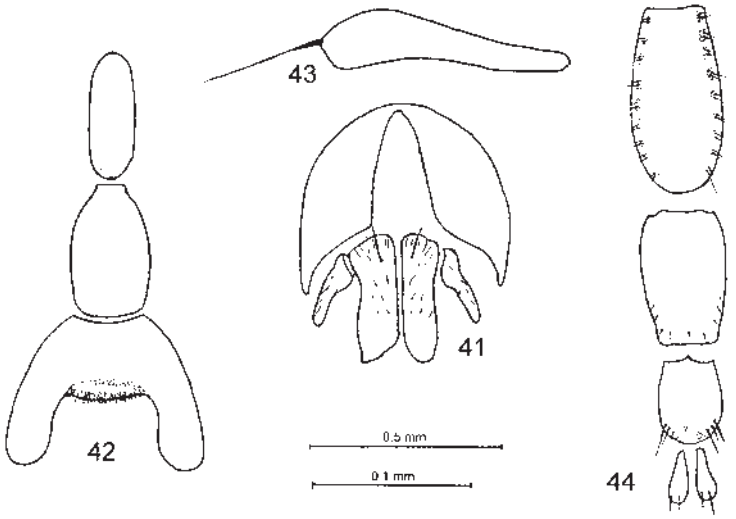


Figs 33–36. *Coniosternum nelsoni* Šifner, 2003: 33 – male abdominal sternites 4 to 5; 34 – left praegonite; 35 – male cerci and surstyli (caudal view); 36 – female abdominal sternites 6 to 8. Scale bars: 0.5 mm (Figs 33, 35, 37); 0.1 mm (Fig. 34).
Obr. 33–36. *Coniosternum nelsoni* Šifner, 2003: 33 – samčí abdominální sternity 4 až 5; 34 – levý praegonit; 35 – samčí cerci a surstyli (kaudální pohled); 36 – samičí abdominální sternity 6 až 8. Měřítka: 0,5 mm (obr. 33, 35, 37); 0,1 mm (obr. 34).



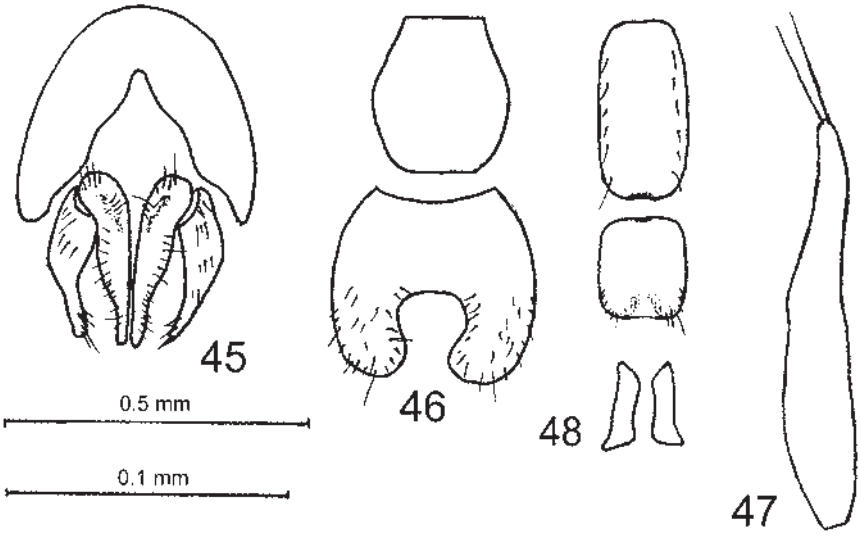
Figs 37–40. *Coniosternum fluviale* (Rondani, 1867). 37 – male abdominal sternites 3 to 5; 38 – male cerci and surstyli (caudal view); 39 – left praegonite; 40 – female abdominal sternites 6 to 8. Scale bars: 0.5 mm (Figs 37, 38, 40); 0.1 mm (Fig. 39).

Obr. 37–40. *Coniosternum fluviale* (Rondani, 1867). 37 – samčí abdominální sternity 3 až 5; 38 – samčí cerci a surstyli (kaudální pohled); 39 – levý praegonit; 40 – samičí abdominální sternity 6 až 8. Měřítka: 0,5 mm (obr. 37, 38, 40); 0,1 mm (obr. 39).

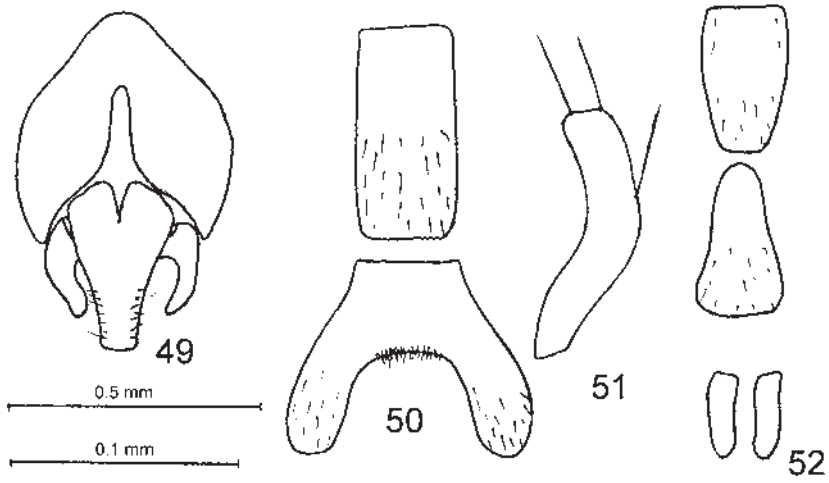


Figs 41–44. *Coniosternum decipiens* (Haliday, 1832). 41 – male cerci and surstyli (caudal view); 42 –male abdominal sternites 3 to 5; 43 – left praegonite; 44 – female abdominal sternites 5 to 8. Scale bars: 0.5 mm (Figs 41, 42, 44); 0.1 mm (Fig. 43).

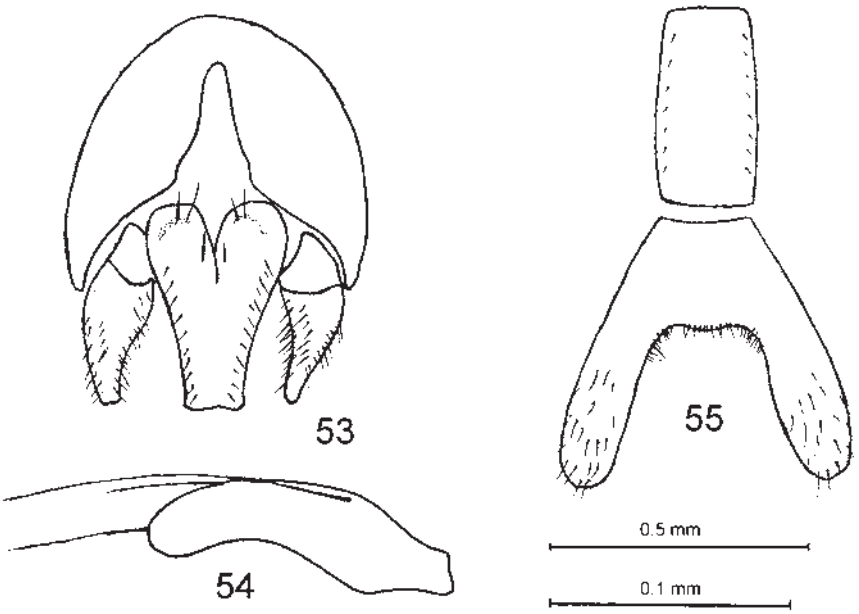
Obr. 41–44. *Coniosternum decipiens* (Haliday, 1832). 41 – samčí cerci a surstyli (kaudální pohled); 42 – samčí abdominální sternity 3 až 5; 43 – levý praegonit; 44 – samičí abdominální sternity 5 až 8. Měřítka: 0,5 mm (obr. 41, 42, 44); 0,1 mm (obr. 43).



Figs 45–48. *Coniosternum lapponicum* Ringdahl, 1920. 45 – male cerci and surstyli (caudal view); 46 – male abdominal sternites 4 to 5; 47 – left praegonite; 48 – female abdominal sternites 6 to 8. Scale bars: 0.5 mm (Figs 45, 46, 48); 0.1 mm (Fig. 47).
Obr. 45–48. *Coniosternum lapponicum* Ringdahl, 1920. 45 – samčí cerci a surstyli (kaudální pohled); 46 – samčí abdominální sternity 4 až 5; 47 – left praegonite; 48 – samičí abdominální sternity 6 až 8. Měřítka: 0,5 mm (obr. 45, 46, 48); 0,1 mm (obr. 47).



Figs 49–52. *Coniosternum milani* Šifner, 1981. 49 – male cerci and surstyli (caudal view); 50 – male abdominal sternites 4 to 5; 51 – left praegonite; 52 – female abdominal sternites 6 to 8. Scale bars: 0.5 mm (Figs 49, 50, 52), 0.1 mm (Fig. 51).
Obr. 49–52. *Coniosternum milani* Šifner, 1981. 49 – samčí cerci a surstyli (kaudální pohled); 50 – samčí abdominální sternity 4 až 5; 51 – levý praegonit; 52 – samičí abdominální sternity 6 až 8. Měřítka: 0,5 mm (obr. 49, 50, 52), 0,1 mm (obr. 51).



Figs 53–55. *Coniosternum moceki* Šifner, 2004. 53 – male cerci and surstyli (caudal view); 54 – left praegonite; 55 – male abdominal sternites 4 to 5. Scale bars: 0.5 mm (Figs 53, 55); 0.1 mm (Fig. 54).
Obr. 53–55. *Coniosternum moceki* Šifner, 2004. 53 – samčí cerci a surstyli (kaudální pohled); 54 – levý praegonit; 55 – samčí abdominální sternity 4 až 5. Měřítka: 0,5 mm (obr. 53, 55); 0,1 mm (obr. 54).



Fig. 56. *Coniosternum kovari* sp. nov., ♂, holotype, with missing abdomen. (Photo: M. Tkoč).
Obr. 56. *Coniosternum kovari* sp. nov., ♂, holotypus, bez zadečku. (Foto: M. Tkoč).

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SOUHRN

V této práci je popsán nový druh palearktické výkalnice (Diptera: Scathophagidae), *Coniosternum kovari* sp. nov., původem z Tadžikistánu. Nová kombinace, *Coniosternum albidohirtum* (Becker, 1909), comb. nov., je navržena pro druh *Scathophaga albidohirta*. Je vytvořen klíč k odlišení rodů *Coniosternum* Becker, 1894, *Scathophaga* Meigen, 1803 a *Scatomyza* Fallén, 1810, a klíč k determinaci všech palearktických druhů rodu *Coniosternum* a důležité znaky jsou ilustrovány.