



## Three new species of scathophagid flies from the Palaearctic region with a description of male *Hexamitocera martineki* (Diptera, Scathophagidae)

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**Abstract.** Three new species from the Palaearctic region are described, *Conisternum moceki* sp. n. (Turkey), *Scathophaga jizerensis* sp. n. (Czech Republic) and *Hexamitocera vockerothi* sp. n. (Albania). The description of male *Hexamitocera martineki* ŠIFNER, 2003 from the Czech Republic is added. Differential diagnoses of the all mentioned species are given and important diagnostic characters are figured.

■ Diptera, Scathophagidae, *Scathophaga*, *Conisternum*, *Hexamitocera*, taxonomy, new species, Palaearctic region.

### INTRODUCTION

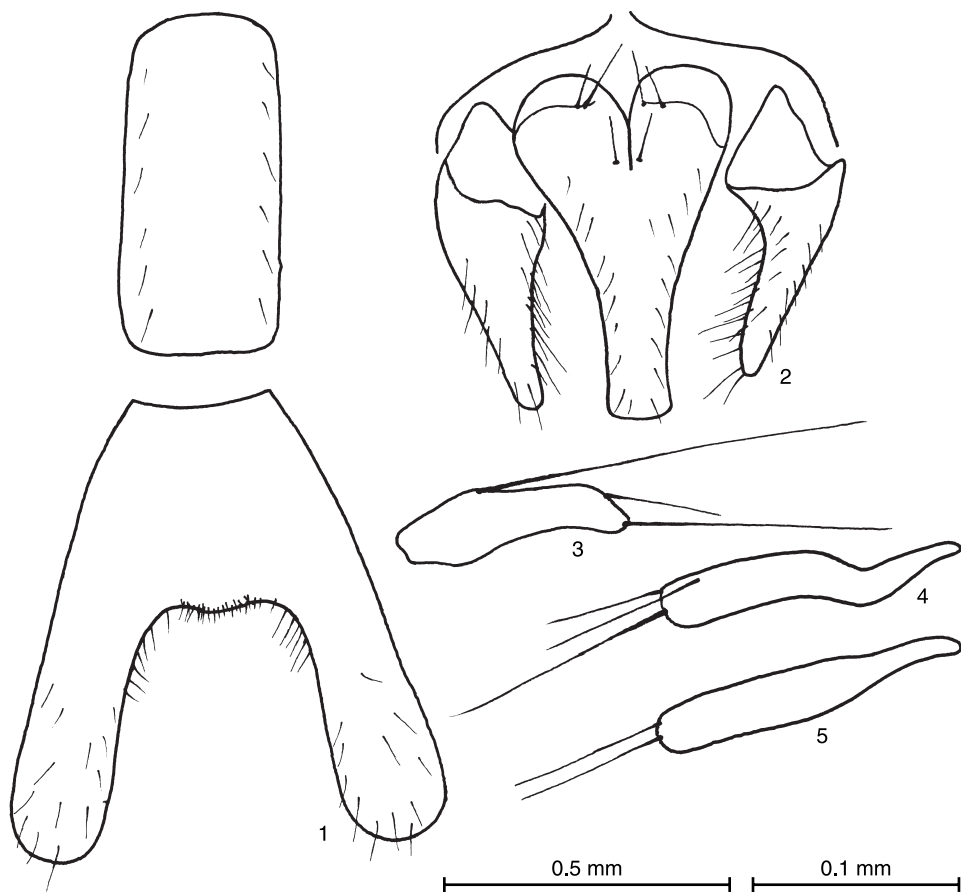
The genus *Conisternum* BECKER, 1894 ( type species *Scathophaga obscura* FALLÉN, 1819 – by orig. des.) is represented by 11 species from the Palaearctic region (cf. Šifner 1981 and 2003 a, b) including *C. infumatum* BECKER, 1907 from Tibet (basin of Yantze river, single male – holotype, the deposit unknown) and *C. moceki* sp. n. from Turkey. The genus *Scathophaga* MEIGEN, 1803 (type species *Musca merdaria* FABRICIUS, 1794 – by mon. des., = *Musca stercoraria* LINNAEUS, 1758) comprises more than 30 Palaearctic spp. including one apterous species *Scathophaga exalata* OZEROV, 1996) from Kurile Islands; references: Gorodkov (1986), Ozerov (1996) and Šifner (2000 a). *S. jizerensis* sp. n. elevates the total sum of spp. of the genus in the Czech Republic to 10 species (compare Šifner 2003 b). The monotypy of the genus *Hexamitocera* BECKER ( type species *Cordylura loxocerata* FALLÉN, 1819 – by orig. des.) with North European species *H. loxocerata* FALLÉN, 1819 (see Gorodkov, 1986) was repealed by the description of *H. martineki* ŠIFNER, 2003 (female; the description of male is added below) from the Czech Republic and *H. vockerothi* sp. n. from Albania. Czech localities are complemented by codes of grid mapping according to Zelený (1972).

### SYSTEMATIC PART

#### *Conisternum moceki* sp. n.

(Figs 1–3)

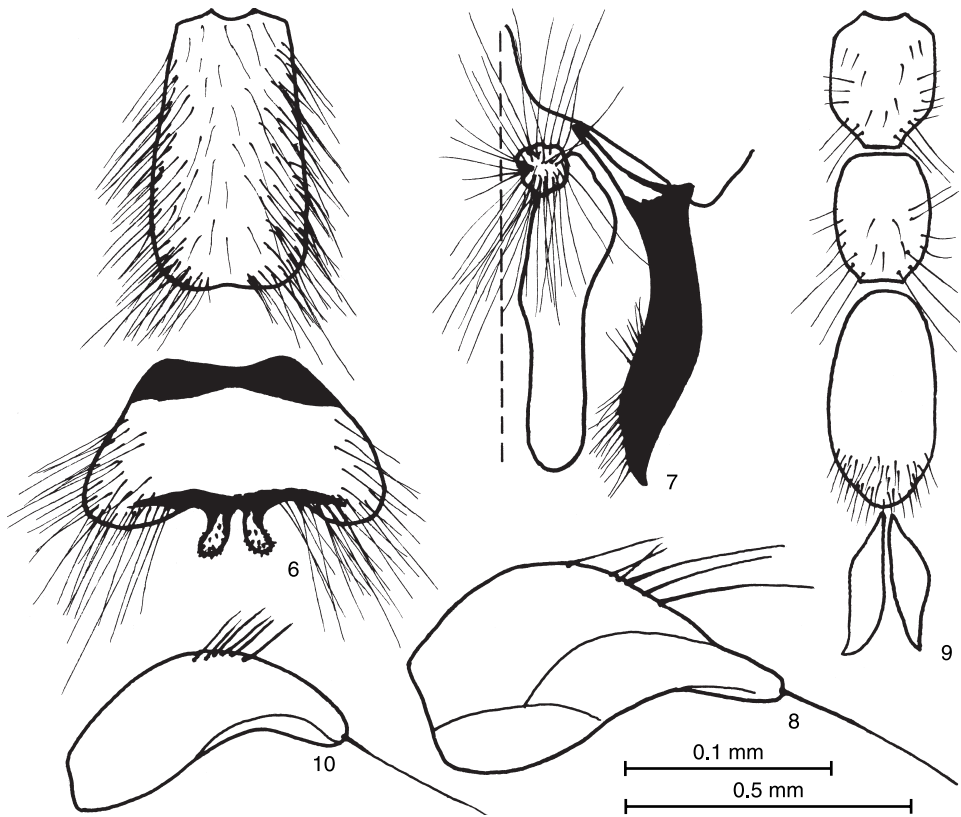
**Holotype:** male, Turcia centr., Tüz Golu lake, 60 km NW of Askaray, steppe and bank of lake, 13. 5. 1996, B. Mocek leg. (in coll. Regional Museum of Eastern Bohemia, Hradec Králové, Czech Republic.



Figs 1–5. *Coniosternum moceki* sp. n., paratypes: (1) 4<sup>th</sup> and 5<sup>th</sup> abdominal sternites of male; (2) surstyli and cerci of male; (3) praegonite of male. *Coniosternum nelsoni* ŠIFNER (paratype): (4) praegonite of male. *Coniosternum jezeki* ŠIFNER (paratype): (5) praegonite of male. Scale 0.5 mm: Figs 1, 2. Scale 0.1 mm: Figs 3, 4, 5.

Paratype: male, identical data (in coll. Šifner).

**Description:** Body length 6 mm, dark in primary colour. Head: totally dark and grey dusted including the face, orbits and genae, frontal vitta and only parafacials partly brown, scapus, pedicellus and first flagellomere black, arista bare and thickened only basally, palpi yellowish-brown, lower part of genae and palpi with yellowish hairs, vibrissal callus with one vibrissa together with 5 shorter bristles. Thorax: chaetotaxy standard with two intraalar bristles, acrostichal bristles very rare and in distal part of mesonotum multinumerous, basal and apical scutellar bristles in equal size, discal scutellar bristles likewise distinct but shorter. Wings hyaline, cross-vein r-m only slightly darkened, all femora yellowish-brown apically. Abdomen: male – 4<sup>th</sup> sternite rectangular, back part of 5<sup>th</sup> sternite between both lobes with distinct short bristles, the lobes very long, narrowed and only slightly broadened apically (Fig. 1), cerci fused and narrowed apically, surstyli reaching practically up to the end of cerci and haired interiorly (Fig. 2), praegonite 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. 3).



Figs 6–10. *Scathophaga jizerensis* sp. n., paratypes: (6) 4<sup>th</sup> and 5<sup>th</sup> abdominal sternites of male; (7) surstyli and cerci of male; (8) praegonite of male; (9) 6<sup>th</sup>–8<sup>th</sup> abdominal sternites of female. *Scathophaga suilla* (FABRICIUS): (10) praegonite of male. Scale 0.5 mm: Figs 6, 7, 9. Scale 0.1 mm: Figs 8, 10.

Female unknown.

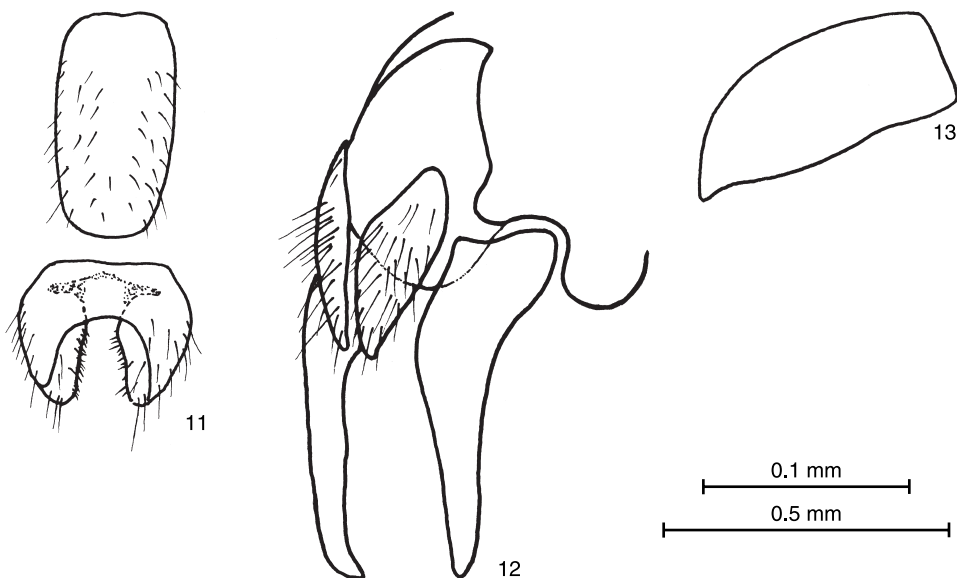
Differential diagnosis: *Coniosternum moceki* sp. n. differs from the related species *C. nelsoni* ŠIFNER, 2003 and *C. jezeki* ŠIFNER, 1981 by the following characters: *C. moceki* sp. n. – surstyli long, praegonite with one apical bristle, one preapical and one very long dorsal bristle (Fig. 3); *C. nelsoni* – surstyli short, praegonite with two apical bristles and one subapical on inner side of the praegonite (Fig. 4); *C. jezeki* – surstyli very short, praegonite with two apical bristles (Fig. 5).

Derivatio nominis: The name of this species is dedicated to my colleague and first collector, Czech entomologist Dr. B. Mocek (Regional Museum of Eastern Bohemia, Hradec Králové, Czech Republic).

***Scathophaga jizerensis* sp. n.**

(Figs 6–9)

Holotype: male, Czech Republic, Bohemia bor., 5157 Protected Landscape Area Jizerské hory Mts, NNR, Peat bog of Jizera river, 5. 6.–14. 8. 2002, Vonička et Preisler leg. Allotype: female, identical data; paratypes: 8 males, 8 females, identical data (all in coll. Šifner).

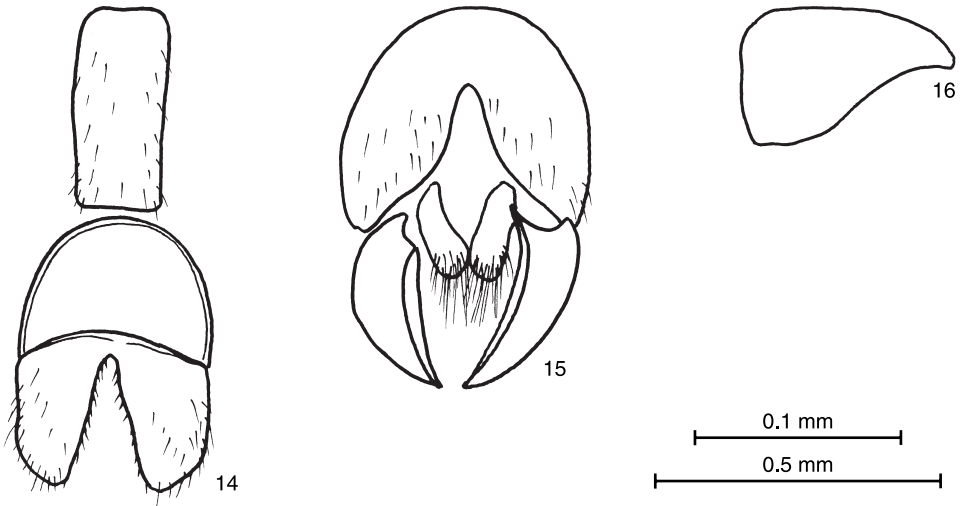


Figs 11–13. *Hexamitocera vockerothi* sp. n., holotype: (11) 4<sup>th</sup> and 5<sup>th</sup> abdominal sternite of male; (12) surstyli and cerci of male; (13) praegonite of male. Scale 0.5 mm: Figs 11, 12. Scale 0.1 mm: Fig. 13.

**Description:** Body length 5–7 mm, brown to dark-brown and grey dusted in primary colour. Head: orbital bristles 3, frontal bristles 4, frontal vitta brown to dark-brown, orbits in upper half dark-brown. Parafacials, face brown and yellowish dusted, genae darkened. Scapus, pedicellus and first flagellomere brown to dark-brown, in apical half slightly enlarged; arista plumose and black, vibrissal callus with two vibrissae together with 2–3 short bristles, palpi yellow-brown to dark-brown. Thorax: chaetotaxy standard, acrostichal bristles distinct with prescutellars long, all legs brown, all femora without distinct bristles and only covered with short and dense hairs. Wings hyaline, both cross-veins distinctly darkened sometime in a dark oval spot. Abdomen: male – 4<sup>th</sup> sternite more or less rectangular, proximally distinctly concave and slightly enlarged caudally, with long hairs laterally, lobes of 5<sup>th</sup> sternite distinct and narrow with very short bristles (Fig. 6), cerci and surstyli equal in size, upper part of cerci with very long hairs (Fig. 7), praegonite with long apical bristle and dorsally with a set of six bristles from which the fore three are distinctly longer (Fig. 8); female – 7<sup>th</sup> sternite long, oval and distinctly bristled only caudally, 6<sup>th</sup> and 5<sup>th</sup> sternites with three pairs of distinct bristles latero-caudally (Fig. 9).

**Differential diagnosis:** *Scathophaga jizerensis* sp. n. is very similar to *Scathophaga suilla* (FABRICIUS, 1794) and differs in the following characters: *S. jizerensis* sp. n. – 4<sup>th</sup> abdominal sternite of male rectangular and concave proximally, cerci and surstyli almost equal in size, praegonite with one apical bristle and with a set of bristles dorsally vary in length (Fig. 8), 7<sup>th</sup> abdominal sternite of female oval and bristled caudally. *S. suilla* – 4<sup>th</sup> abdominal sternite of male oval and straight proximally, surstyli longer than cerci, praegonite with one apical bristle and with a set of bristles equal in size (Fig. 10), 7<sup>th</sup> abdominal sternite of female divided into two separate sclerites.

**Derivation nominis:** The name of this species is derived from the name of Jizera river.



Figs 14–16. *Hexamitocera martineki* ŠIFNER, 2003: (14) 4th and 5th abdominal sternites of male; (15) surstyli and cerci of male; (16) praegonite of male. Scale 0.5 mm: Figs 14, 15. Scale 0.1 mm: Fig. 16.

***Hexamitocera vockerothi* sp. n.**

(Figs 11–13)

**Holotype:** male, Albania borealis, Prokletije Mts, Boge, 1500 m a. s. l., meadow, Fage-tum, 17.6. 1994, B. Mocek leg. (in coll. Regional Museum of Eastern Bohemia, Hradec Králové, Czech Republic).

**Description:** Body length 5 mm, black, shiny in primary colour. Head: back part and orbits black shiny, frons very projected, frontal vitta, face and genae yellowish-brown, orbital bristles 3, frontal bristles 4, one weak vibrissa. Genae with one short bristle, scapus dark, pedicellus dark and partly slightly brown, first flagellomere dark, four time longer than wide and reaching to base of vibrissal callus, arista bare and thickened basally, palpi yellow and shorter than proboscis. Thorax: chaetotaxy standard with two humeral and katepisternal bristles (upper bristle is weak), all legs yellow, third femora with black fine bristles in postventral position, all tarsomeres only slightly darkened. Abdomen: male – 4<sup>th</sup> sternite rectangular and bristled laterally, lobes of 5<sup>th</sup> sternite convoluted and medially distinctly bristled (Fig. 11), cerci short with long hairlike bristles, surstyli totally bare, long, narrowed apically, slightly curved and pointed (Fig. 12), praegonite large and slightly pointed apically, without bristles (Fig. 13).

Female unknown.

**Differential diagnosis:** see below.

**Derivatio nominis:** The name of this species is dedicated to Prof. Dr. J. R. Vockeroth (E. C. O. R. C., Central Exp. Farm, Ottawa, Canada).

***Hexamitocera martineki* ŠIFNER, 2003**

(Figs 14–16)

**Male:** The chaetotaxy identical with female, excluding the upper katepisternal bristle, which is very weak. All tarsomeres yellowish. Abdomen – 4<sup>th</sup> sternite rectangular, lobes of 5<sup>th</sup> sternite wide, with short distinct bristles medially, both sclerites covered with short

and weak hairs (Fig. 14), cerci short, long haired caudally, surstyli wide basally, narrowed apically and pointed (Fig. 15), praegonite wide basally, pointed apically, without bristles (Fig. 16).

**Differential diagnosis:** *Hexamitocera martineki* ŠIFNER differs from the species *H. vockerothi* sp. n. in the following characters: *H. martineki* – palpi and proboscis in equal size, surstyli short and wide, only narrowed apically and pointed, *H. vockerothi* sp. n – palpi shorter than proboscis, surstyli long, narrow and pointed apically.

**Locality:** CZ 5167 Protected Landscape Area Jizerské hory Mts, Souš, Černá Desná river, 4. 5. 1999, J. Preisler leg.

## ACKNOWLEDGEMENTS

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