

HETERONYCHIA CULLOTTORUM SP. N. – A NEXT UNDESCRIBED SPECIES OF FLESH-FLIES FROM SICILY (DIPTERA, SARCOPHAGIDAE)

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Abstract

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Heteronychia cullottorum sp. n. is described from Sicily (Pizzo San Angelo, Gibilmana, Madonie, 1081 m a.s.l.). The new species is related to *Heteronychia obvia* Povolný, 2004. The most important habitual and especially male genitalia differences are discussed and the species-specific characters are figured.

flesh-flies, Sarcophagidae, Sicily, sp.n., taxonomy, distribution

During the eight collecting trip to Sicily (including Aeolian Islands) (May 21st – June 12th, 2004) I devoted the forenoon of June 12th to a mass capture of flesh-fly males in the hilltop of Pizzo San Angelo (Gibilmana in Madonie Mts. near Palermo at 1081 m a. s. l.), the highest formation of mesothermophilic association *Erico arboreae-Quercetum ilicis* – see also Cullotta (2003). The males were swept from prominent rocks and stones between 10.30 – 15.30 h and 307 individuals were collected. Their study revealed a. o. a species of *Heteronychia*, of which I originally thought to be *Heteronychia obvia* Povolný, 2004. A detailed study showed that it is, in real fact, a different species of the genus *Heteronychia* Brauer & Bergensstamm, 1889. Regardless of the fact that this species rich genus was not yet revised, I decided to describe it as new to introduce it into literature and to differentiate it from its possible relatives, especially from *Heteronychia obvia*. I discuss the most important habitual and especially male genitalia characters. These species-specific genitalia characters are figured and com-

pared (partly also with some other species of *Heteronychia*) to enable the identification of the new taxon.

Heteronychia cullottorum sp. n.

Material: Holotype ♂, 12. vi. 2004, Sicilia, Pizzo San Angelo (Gibilmana, Madonie Mts., 1081 m), D. Povolný lgt., coll. Moravian Museum Brno.

Head. Rather broad (as broad as metathorax) and with frons only moderately protruding. Head at narrowest part about 0.31, at vertex 0.43 and at antennal base about 0.41 of head width; vitta frontalis rather prolonged and widening nearly 2.5 times frontoventrally; frons middle nearly same broad as one parafacial; third antennomere nearly same long as second; arista only moderately shorter than 2nd and 3rd antennomere together, its basal third moderately inflated and, with the exception of its terminal part, with thin and fine but distinct hairs; parafacial at antennal base about 0.48, gena about 0.33 of head length; palpus rather long and slender, moderately curved and apically clavate; postorbital bristles (*pob*) three rows,

*)The final version was prepared by F. Gregor and R. Rozkošný.

3 distinct ocellar bristles (*ocb*) present; internal vertical bristles (*vti*) very long and distinct, external vertical bristles (*vte*) rather weak; postorbital bristles (*pob*) present; reclinate frontoorbital bristle (*rfro*) very distinct; 9 pairs of frontal bristles (*fr*) strong, last two (on parafacial) strong; up to 14 parafacial bristles (*pfcl*) near foremargin of eye rather delicate, but distinct and the middle ones exceeding the width of parafacial; gena finely haired, facial ridge and oral margin with strong bristles.

Thorax. Acrostichal bristles (*acr*) not differentiated, only 1 weak prescutellar present, dorsocentral bristles (*dc*) 3+3; intraalar bristles (*ial*) 2, supraalar bristles (*sal*) 1-2; humeral bristles (*hb*) 2 and rather strong; notopleural bristles (*npl*) 2; scutellum without dorsoscutellars (*ds*), but with 1 pair apicoscutellars (*as*) and with especially distinctive lateroscutellars (*es*); all femora with distinct bristles and hairs, 3rd tibia (*t₃*) with 2 very strong and 3 weak anterodorsals (*ad*), 3 anteroventrals (*av*) of uneven length and 2 strong posterodorsal bristles (*pd*).

Wing. Costal spine short but strong; R_1 without distinct bristles basally, section of R_{4+5} setulose between radialnode and anterior crossvein in proximal half; ratio between 3rd and 5th costal section as 1: 0.8; *m-cu* vein distinctly curved.

Abdomen. 3rd abdominal tergite without mediomarginal bristles; 5th sternite was not dissected to avoid possible abdominal damage.

Body colouration. Generally as usual in most species of the tribe Sarcophagini, but the longitudinal black stripes on thorax are especially expressive on the fore edge of prothorax. The usual silvery lustre of parafacial, gena and on frontal somewhat whitish. Postabdominal tube (7th + 8th segment) lustrous black, epandrium bright reddish, cercus, paraphallus and gonites black. Body length approximately 11.0 mm.

Male genitalia (Figs 1-2). Cercus in lateral view rather thick with short apical part tapering towards a moderately curved but rather obtuse tip; proximal part (third) of cercus slender and narrowed; upper edge centrally moderately convex but without indication of a keel; surstylus comparatively small, subtriangular with obtuse tips, its posterior edge finely and rather long and fine haired, paraphallus with comparatively slender and moderately sigmoid basiphallus – a rather parallell-sided tube; caudal part of paraphallus (paraphallus proper) stout, its ventral membranous part distinctly inflated with finely folded proximal part; its sclerotized paired ventral lobe projects to form a slender and rather elongate caudoventral ledge with acute tip; apical plate protrudes to form a comparatively short, trifold and acute tip, stilet arises from ventral lobe, is rather slender and long but without serration; both pairs of apophyses rather slender, posterior apophysis (postgonite) with a slender sickle-sha-

ped, acute tip; posterior apophysis (praegonite) nearly same long, slender parallell-sided with curved base and obtusely rounded tip.

Derivatio nominis: The new species is named in honour of my young friend S. Cullotta, studying recently forest types on Sicily (cf. Cullotta, 2003).

Differential diagnosis

Correspondingly to my long-term investigations in the flesh flies of Sicily, the following 9 species of the genus *Heteronychia* were collected: *H. consanguinea* (Rondani, 1860), *Heteronychia fugitiva* Povolný, 2000, *H. minima* (Rondani, 1862), *H. nanula* Povolný, 1999, *H. obvia* Povolný, 2004, *H. pandellei* (Rohdendorf, 1937), *H. penicillata* (Villeneuve, 1907), *H. siciliana* (Enderlein, 1927) and *H. volcanoetnica* Povolný, 2002.

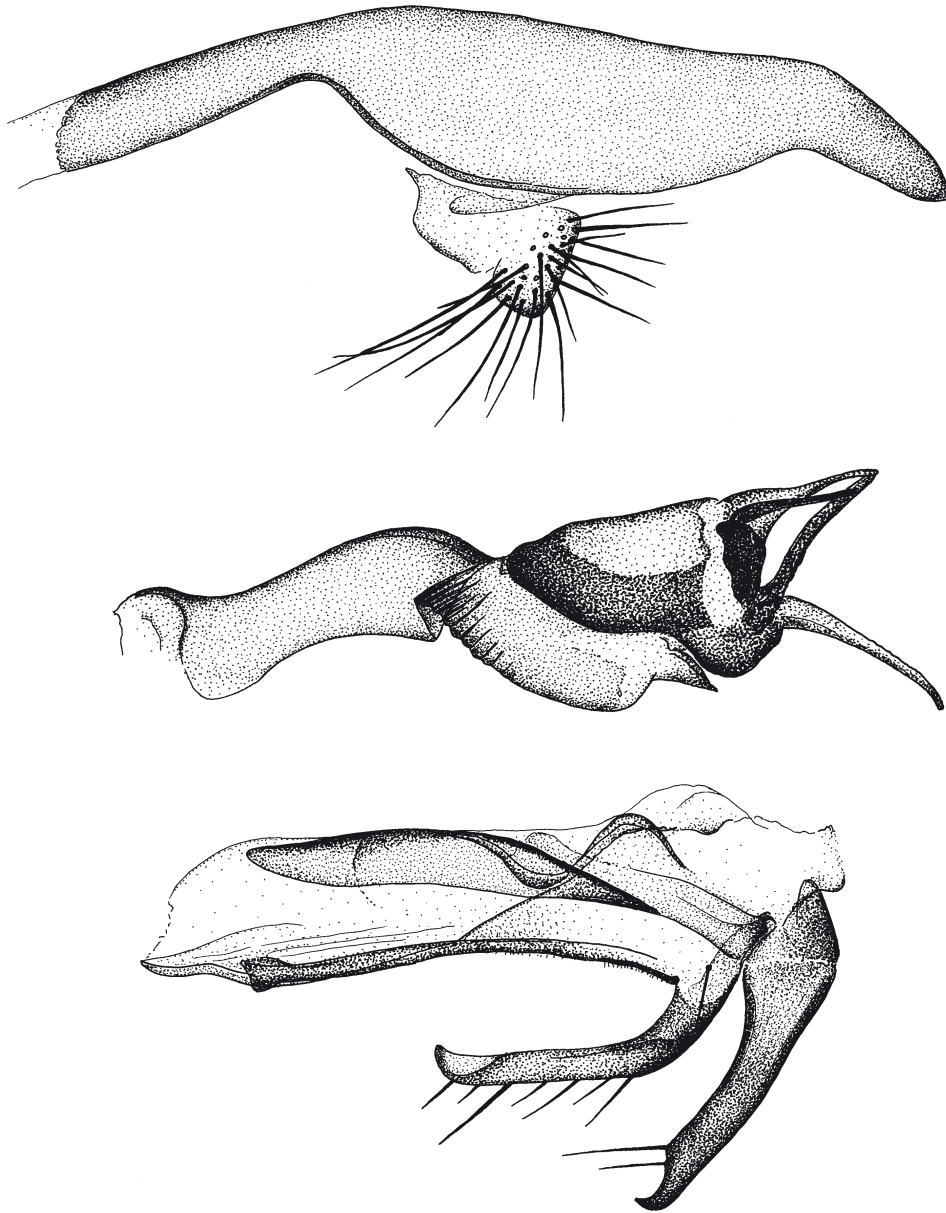
Heteronychia cullottorum sp. n. seems to be closely related especially to *H. consanguinea* and *H. obvia* but the male genitalia characters (females are unknown) of these three comparatively little known taxa are apparently species-specific. The distiphallus of *H. cullottorum* (Fig. 1) has the upper edge more straight and tapering towards a slender trifid tip, the striking stilet is long and slender. The basiphallus tube seems to be slenderer and more curved (the upper edge more concave) and both pairs of gonites are rather different from those of *H. consanguinea*, more slender, less robust and more delicate compared also with *H. obvia* (see Povolný, 2004, Figs 5 and 8).

The distiphallus of *H. consanguinea* is very robust with a comparatively short tip, the stilet is very short and poorly visible, the basiphallus tube is comparatively stout, not very curved, the praegonite is short and comparatively slender, the postgonite is distinctly stouter and regardless of several curved edges with an obtusely rounded tip (cf. Povolný, 2003). *H. consanguinea* and *H. cullottorum* show, however, rather similar cercus, but the cercus tip in *H. cullottorum* appears to be more prolongate and the proximal part of cercus is comparatively longer than in *H. consanguinea*. The distiphallus of *H. obvia* is distinctly shorter than the elongate tube of the basiphallus, strongly sclerotized with a very short terminal spine and a medium length stilet, showing a comparatively short curved ledge of the caudoventral lobe. Both pairs of gonites show a specific shape, the longer praegonite having a curved and acute tip and the postgonite being distinctly shorter. The next rather striking character is the longitudinal keel arising dorsally from the distal half of the cercus dorsal edge (see Fig. 5 and full colour Fig. 8 in Povolný, 2004).

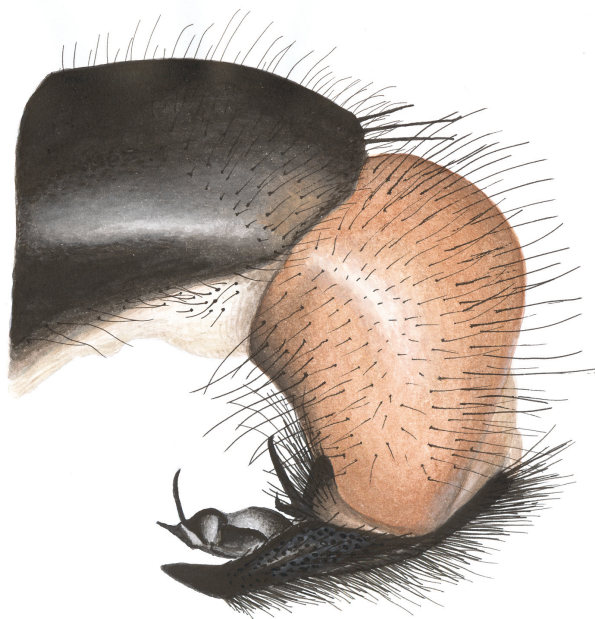
Regardless of such endemic taxa of the genus *Heteronychia* (s. l.) as *H. volcanoetnica* (discovered, meanwhile, also in the main Island of Lipari) and *H. fugi-*

tiva there exist at least three additional possibly endemic species of *Heteronychia* known from Sicily now: *H. nanula*, *H. obvia* and *H. cullottorum* sp. n. A detailed study of habitual and of male genitalia morphology show unambiguous specific characters of these externally similar species. *H. consanguinea* seems to

be rather holomediterranean with its population densities increasing especially in the eastern Balkan Peninsula and southern Ukrainian Black Sea countries, whereas *H. pandellei* and *H. siciliana* are more or less widely distributed in the western Mediterranean (see also Pape, 1996).



1: Elements of male genitalia in *Heteronychia cullottorum* sp. n.; cercus and surstylus (above); paraphallus (middle); gonites (bottom)



2: Male genitalia of *Heteronychia cullottorum* sp. n. in lateral view: tube of fused 7th and 8th tergite (lustrous black); epandrium (reddish lustrous) and cercus with surstylus, paraphallus and gonites (A. Laštůvka del.)

SOUHRN

Heteronychia cullottorum sp. n., další neznámý druh masařky ze Sicílie (Diptera, Sarcophagidae)

Během hromadného odchytu samců masařek na jednom z nejvyšších vrcholů sicilského pobřeží Madonie, viz. Pizzo San Angelo (Gibilmana), 1081 m n. m., byl dne 12. června 2004 mezi 307 jedinci nasměkán i samec neznámého druhu rodu *Heteronychia* popsán zde jako *H. cullottorum* sp. n. Tento jedinec vykazuje diskrétní druhové znaky, i když poněkud připomíná podobný druh *H. obvia* Povolný, 2004 popsán rovněž ze Sicílie, ale z jiného vrcholu (Pizzo Onofrio, Casina, 773 m n.m.). Nelze vyloučit, že jde o další případ sicilského endemismu v čeledi masařek. Popis nového druhu je doprovázen příslušnými obrázky struktur samčích genitálií.

masařky, Sarcophagidae, sp. n., taxonomie

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