

**NEOPAROECUS SIMPLICIPES YAROM, 1991 (DIPTERA, LAUXANIIDAE)
AND HOMONEURA CONSOBRINA (ZETTERSTEDT, 1847)
NEW TO SLOVAKIA**

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SEMELBAUER, M. 2015. *Neoparoecus simplicipes* Yarom, 1991 (Diptera, Lauxaniidae) and *Homoneura consobrina* (Zetterstedt, 1847) new to Slovakia. *Entomofauna carpathica*, 27(1): 57-62.

Abstract: *Neoparoecus simplicipes* Yarom, 1991 is recorded as new to Slovak fauna from the locality Tematínske kopce hills, Podunajská nížina lowland and Malé Karpaty hills. *Homoneura consobrina* is recorded for the first time for Slovakia from Muránska Planina hills. Drawings of male terminalia of both species are provided, as well as adult photo of *Neoparoecus simplicipes*. Short description of both species is provided as well.

Key words: Diptera, Lauxaniidae, *Neoparoecus simplicipes*, *Homoneura consobrina*, Slovakia

Two species are introduced as new to the territory of Slovakia: *Neoparoecus simplicipes* Yarom, 1991 and *Homoneura consobrina* (Zetterstedt, 1847).

***Neoparoecus simplicipes* Yarom, 1991**

Species of genus *Neoparoecus* Özdkmen & Merz, 2006 are typical lauxaniid flies. They can be recognized according to thickened arista densely covered with black rays, though some species of *Sapromyza* have this character indicated as well (SHATALKIN 2000). The genus *Neoparoecus* has five known species. Four of them occur in central Asia or Near East. Only one species extends to Europe (*N. simplicipes*, Fig. 1) and one is exclusively



Figure 1. Adult male of *Neoparoecus simplicipes*.

Note the thickened black arista, yellow antenna and absence of black comb spines on hind tibia and basitarsus. Author: M. Kozánek.

European (*N. signatipes* (Loew, 1856)) (SHATALKIN 2000). Record of *Neoparoecus* from Slovakia is very poor: species *N. signatipes* is known from single locality near Trenčín (Slavnica) (MARTÍNEK 1986).

Altogether, 9 specimens of genus *Neoparoecus* were found in the private collection of Milan Kozánek. Specimens were determined with the key of SHATALKIN (2000) together with its English translation (SCHACHT et al. 2004). They were also compared to description of *N. signatipes* in PAPP's key (1979). The specimens clearly belong to species *Neoparoecus simplices*. It must be noted that one specimen was erroneously determined as *Neoparoecus signatipes* in SEMELBAUER & KOZÁNEK (2009). *N. simplices* is the only species of *Neoparoecus* with completely yellow third antennal segment. In contrast to *N. simplices*, *N. signatipes* has developed dark spot at base of anterior orbital setae and, as indicated by its name, comb of strong black spinules on inner side of apical part of male hind tibia and hind basitarsus (SHATALKIN 2000).

One male of *N. simplices* was collected in Tematínske kopce hills, Lúka (7373) on 23–30.5.1999 by Malaise trap (leg. M. Kozánek and L. Roller). Second male was caught in Devínska Kobyla (7868) on 9.7.1994 by Malaise trap (leg. M. Kozánek). Three males and four females were caught in Ivanka pri Dunaji (7869) by Malaise trap (leg. M. Kozánek) from 17.5.1992 to 21.6.1992.

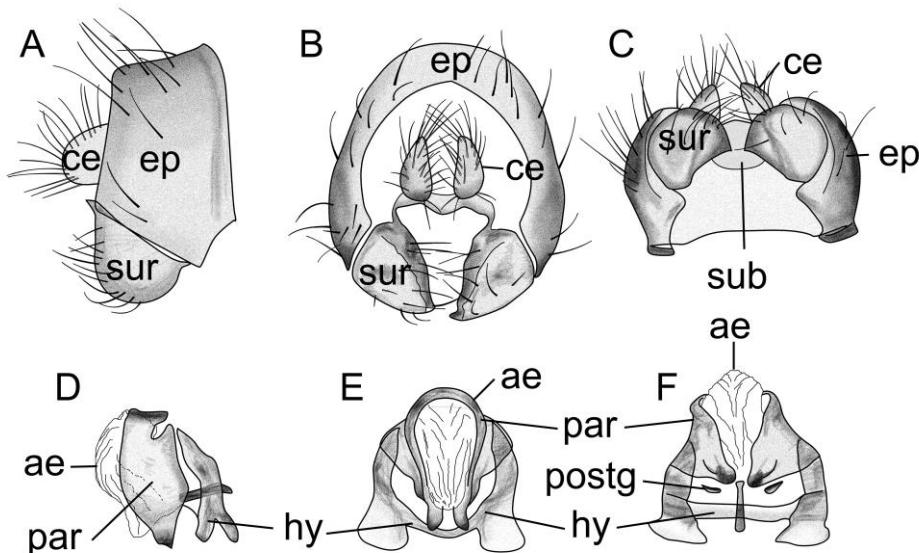


Figure 2. Male terminalia of *Neoparoecus simplices*. A–C – epandrium, lateral, posterior and ventral view; D–F – genital complex in lateral, posterior and ventral view; ae, aedeagus; ce, cerci; ep, epandrium; hy, hypandrium; par, paramers; ph, phalapodeme; postg, postgonites; sub, subepandrium; sur, surstyly.

Description. Medium sized fly (5–5.5 mm), yellowish, only arista, ocellar triangle, palpy and fore tarsus brown; 1+3 dorsocentral (*dc*) setae, 4 rows of acrostichal setae. Terminalia (Fig. 2). Epandrium cylindrical; surstyly rounded from lateral view, apically with sharp incurved tip; subepandrium oval; hypandrium circular, ventrally with two flattened apodemes; membranous aedeagus is surrounded by sclerotised sheath (possibly modified parameres), two small sclerites (possibly postgonites) visible near the base of aedeagus; phalapodeme short.

As far as *N. signatipes* was introduced to our territory several years before the description of *N. simplices*, it would be desirable to revise all other finds of *N. signatipes* (MARTINEK 1986).

***Homoneura consobrina* (Zetterstedt, 1847)**

Homoneura van der Wulp 1891 is a species rich genus distributed all over the world except of the Neotropics and New Zealand (SHATALKIN 2000). Slovak species can be easily recognized according to costal spinules reaching the vein R₄₊₅ and comb spines present on anteroventral side of fore femur (SHATALKIN 2000). *Homoneura consobrina* (Zetterstedt, 1847) is a rare species distributed mainly in Central Europe, but it was recorded also from Italy and Sweden (MERZ 2015). A single male was found in private collection of Milan Kozánek designated by Bernhard Merz as *H. consobrina*. The male was caught in Muránska Planina National Park, near village Tisovec, locality "Paseky" (7385) on 29.6.2001 by Malaise trap (leg. L. Vidlička). Specimen was re-determined with the key of SHATALKIN (2000) and PAPP (1979).

The specimen is externally apparently similar to *H. thalhammeri* Papp, 1978 and *H. patelliformis* (Becker, 1895). According to MERZ (2002), the keys of both PAPP (1979) and SHATALKIN (2000) are not useful in determining this species. E.g. key of SHATALKIN (2000) suppose 1+2 *dc* setae in couplet 73 leading through couplet 74 to *H. consobrina*. However, key of PAPP (1979) allows presence of fore pair of *dc* setae directly on the suture. This makes distinction 1+2 vs. 0+3 a very weak character. In practice, it is almost impossible to decide whether the fore pair of *dc* lies before or behind the suture, especially when the suture is not well developed (a common situation in *H. thalhammeri* and *H. patelliformis*). Our specimen has the fore pair of *dc* slightly behind the suture. PAPP (1979) states broad surstyly as one of distinctive characters, what supports identity of the specimen as *H. consobrina*.

H. consobrina is very closely related to *H. thalhammeri* (Merz, 2002). As far as safe distinction of these two species is not easy, I provide a brief description and comparison of both species. Differences can be found on male terminalia, e.g. the surstyly are broader in *H. consobrina*. A number of slight differences can be found on the aedeagus.

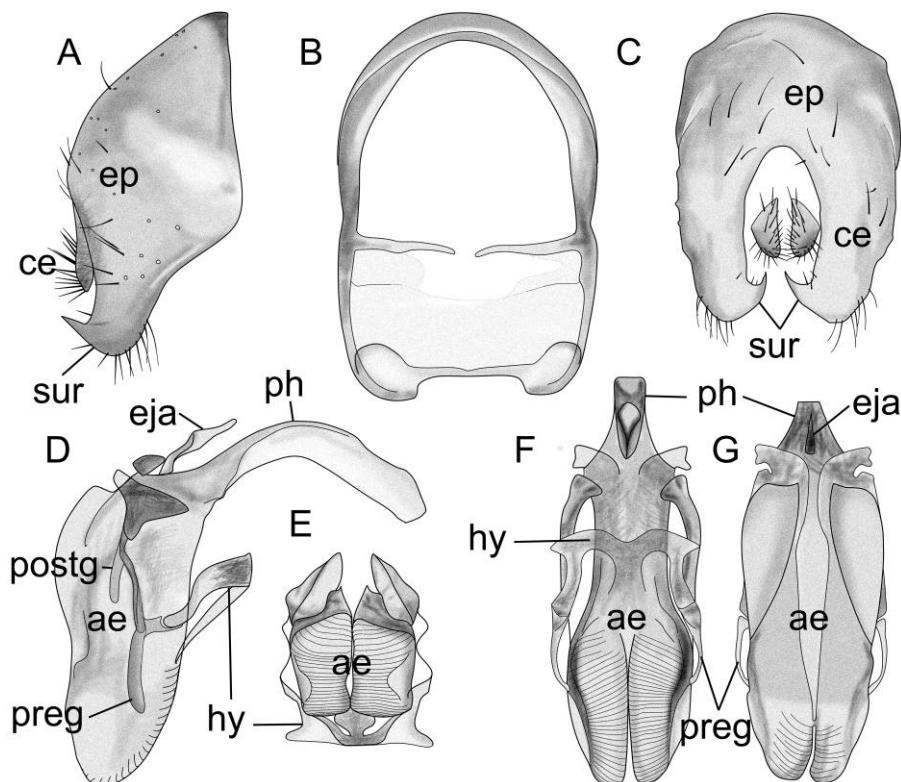


Figure 3. Male terminalia of *Homoneura consobrina*. A – epandrium in lateral view; B – protandrium, posterior view; C – epandrium, posterior view; D–F – genital complex in lateral, kaudal, ventral and dorsal view; ae, aedeagus; ej, ejaculatory apodeme; ce, cerci; ep, epandrium; preg, pregonites; postg, postgonites; hy, hypandrium; ph, phalapodeme; sur, surstyly.

***Homoneura consobrina* species group.** Yellowish robust flies, 3.5–4 mm in length; arista pubescent; frons convex; wings hyaline; 3 pairs of *dc* setae, the fore pair very close to transversal suture; 4–6 irregular rows of acrostichal setae; hypopygium strongly developed, ventrally rectangular with paired swelling; epandrium with lateral stripe of weakened cuticle and fusing with surstyly, surstyly distally pointing and upcurved; cerci simple, covered by short hairs; subepandrium not developed; aedeagus stout, ventrally and distally covered by fine transversal striae, gonites slender, un conspicuous, hypandrium medially fusing with the aedeagus, phallapodeme strongly developed and arched; ejaculatory apodeme slender, adjacent to the base of phallapodeme.

H. consobrina (Fig. 3) can be distinguished by broad surstyly, distinctly arched phalapodeme as long as the aedeagus; aedeagus dorsally bears two conspicuous longitudinal ribs. On the other hand, *H. thalhammeri* (Fig. 4) has narrow surstyly, the phalapodeme is almost straight and distinctly shorter than the aedeagus and the longitudinal ribs are only indicated.

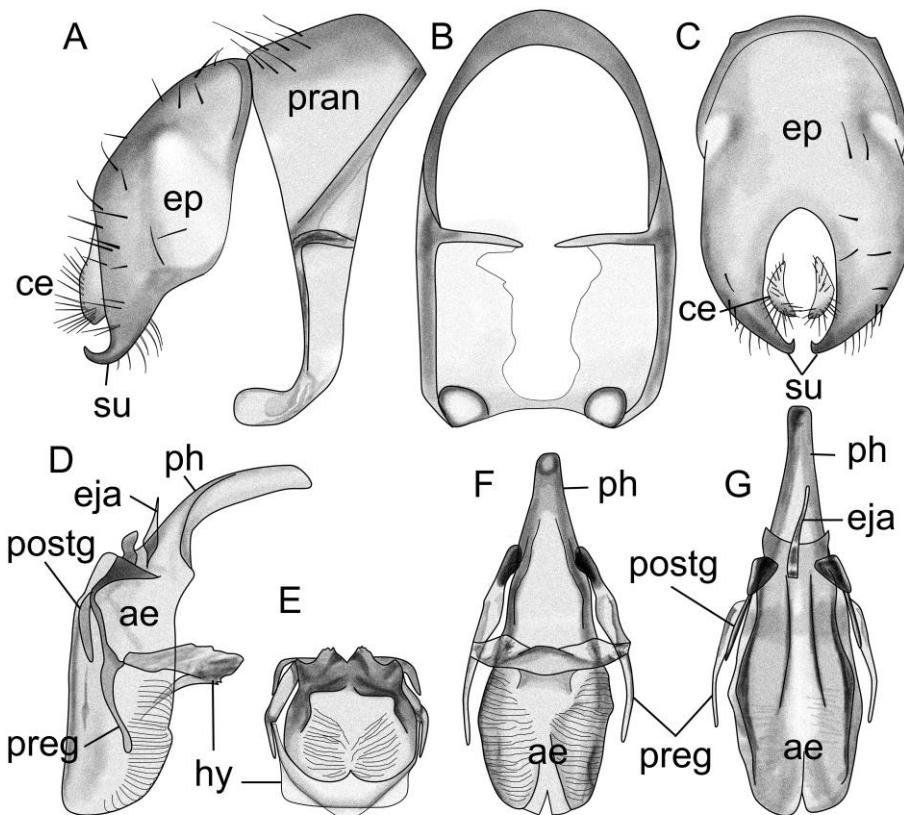


Figure 4. Male terminalia of *Homoneura thalhammeri*. A – epandrium and protandrium in lateral view; B – protandrium, posterior view; C – epandrium, posterior view; D–F – genital complex in lateral, kaudal, ventral and dorsal view; ae, aedeagus; ej, ejaculatory apodeme; ce, cerci; ep, epandrium; preg, pregonits; postg, postgonites; hy, hypandrium; ph, phalapodeme; sur, surstyly.

Actually, 74 species of lauxaniids are known from the territory of Slovak republic (DVOŘÁKOVÁ & GAIMARI 2009, DVOŘÁKOVÁ & ROHÁČEK 2009, SEMELBAUER & KOZÁNEK 2011). Seven of them were added during last six years. This indicates that the actual number of species occurring in Slovakia is still higher.

ACKNOWLEDGEMENTS

This work was funded by grant ITMS No. 26220220087 "The development of ecological methods to control chosen forest pests in vulnerable mountainous regions of Slovakia". Further I thank to Milan Kozánek for providing of his photo of *Neoparoecus simplicipes* and for access to his collection of lauxaniids.

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