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## A new species of *Idiocera* (*Euptilostena*) (Diptera, Limoniidae) from Slovakia and Romania

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**Abstract:** *Idiocera* (*Euptilostena*) *paulsi* sp. n. is described from Slovakia and Romania. *I. (E.) jucunda* (Loew, 1873) is redescribed. Based on a study of relevant type specimens, *I. (E.) pseudojucunda* (Pierre, 1924) is proposed as a new junior synonym of *I. (E.) jucunda*. A lectotype of the latter is designated. Male and female terminalia are illustrated for both species, *I. (E.) paulsi* sp. n. and *I. (E.) jucunda*.

**Key words:** Diptera, Limoniidae, *Idiocera* (*Euptilostena*), new species, redescription, lectotype designation, new synonymy, male and female terminalia, distribution.

### Introduction

The subgenus *Euptilostena* Alexander, 1938 is among groups weakly characterised taxonomically. Worldwide, it is unusually poor in species, comprising about ten catalogue names, being absent from the Afrotropical and Australian/Oceanian Regions. It only differs distinctly from the nominotypical subgenus *Idiocera* Dale, 1842 by the presence of a supernumerary cross-vein between R<sub>4</sub> and R<sub>5</sub>, a character possibly subject to parallelism. Males of European *Euptilostena* have the terminalia with two gonostyli (mostly three in *Idiocera* s. str.), and all parts of the hypopygium very long and slender, but this may not be true for extra-European species.

*Idiocera* (*Euptilostena*) *jucunda* (Loew, 1873) has been known to be locally distributed in C and S Europe (cf. SAVCHENKO et al., 1992), and exclusively associated with sandy or gravelly banks of streams, especially in mountainous areas. BANGERTER (1946), in a paper decisive for recognition of *I. (E.) jucunda*, provided a redescription and figures of the wing and the male terminalia, and commented on the biology of the species. *I. (E.) jucunda* was considered rare, often found in teneral state, but recent collections at light yielded full-coloured specimens in a quantity unusual for daytime catches. Because of its distinctiveness shown in the wing venation and, to a certain degree, in the wing pattern, *I. (E.) jucunda* has commonly been identified by external characters in the belief no related species may come into question (at least the senior author did so).

The only other European *Euptilostena* species, *I. (E.) pseudojucunda* (Pierre, 1924), known from the single female holotype and based on an inadequate description, has actually been admitted as identical with *I. (E.) jucunda*, although not formally established as such.

The junior author collected a *Euptilostena* species in the Romanian Carpathians, extremely similar to *I. (E.) jucunda* in general appearance, yet distinctly different from it in various details of the structure of the male terminalia. Subsequently, the senior author discovered this species in his older material from Slovakia, mostly collected together with *I. (E.) jucunda*, as was the case with the Romanian specimens. Considering the fact that the type of *I. (E.) pseudojucunda* is a female, we paid attention to the female terminalia of both species at our disposal. Surprisingly, we found significant differences even in females.

Both the male type of *I. (E.) jucunda*, here designated as the lectotype, and the female holotype of *I. (E.) pseudojucunda* were examined. The terminalia of the latter specimen were dissected and thoroughly examined for a possibility of a third species. The examination revealed unambiguously that *I. (E.) pseudojucunda* is a junior synonym of *I. (E.) jucunda*. Hence, a new species is described herewith, and a redescription of *I. (E.) jucunda* is given, with an emphasis on the structure of the male and female terminalia.

Material examined is deposited in the following institutions and collections: Collection of J. Stary, Olomouc, Czech Republic (JSO); collection of L. Ujvárosi, Cluj, Romania (LUC); Muséum d'histoire naturelle,

Neuchâtel, Switzerland (MHNN); Muséum national d'histoire naturelle, Paris, France (MNHN); Naturhistorisches Museum, Vienna, Austria (NHMW); Slezské Zemské Muzeum, Opava, Czech Republic (SMOC); Zoologisches Forschungsinstitut und Museum Alexander Koenig, Bonn, Germany (ZFMK); Museum für Naturkunde der Humboldt-Universität, Berlin, Germany (ZMHB).

Colour characters are described from dry-mounted, full-coloured specimens. Unless otherwise stated in the Material examined sections, specimens under study are dry-mounted and were collected by netting.

*Idiocera (Euptilostena) paulsi* sp. n. (Figs 1–3)

*Idiocera (Euptilostena) jucunda*: Savchenko, 1982: 298, Fig. 143/1 (female terminalia) [not redescription of male (p. 300), nor figures of wing and male terminalia (Figs 142/1, 144a, b)].

**Diagnosis.** General body colouration greyish brown. Prescutum with two dark brown longitudinal stripes. Pleuron conspicuously patterned with whitish yellow. Wing patterned with dark brown spots and seams. Fork  $M_{1+2}-M_3$  without any spot. Male terminalia with dorsal lobe of gonocoxite narrowed to simple tip and with dorsal gonostylus provided with upright dorsal spine shortly beyond mid-length. Female terminalia with broad membranous blade, rounded at apex, arising from outer base of hypogynial valve and reaching to its mid-length. Body length 6–6.5 mm, wing length 6–7.5 mm.

**Description.** Head greyish brown, frons paler around eyes, with dark brown spot in middle. Antenna brown, of moderate length, reaching to about base of wing. Flagellomeres oval, narrowed towards apex of antenna. Verticils slightly exceeding length of their respective flagellomeres.

Thorax generally greyish brown. Pronotum greyish brown, yellowed laterally. Prescutum with heavy grey pruinosity and with two sharply defined, dark brown longitudinal stripes; sides of prescutum slightly paler; pale yellow spot just before prescutal pit; humeral region pale yellow. Scutum grey, with continuation of prescutal stripes on lobes, with little-distinct median darkening, and with yellowed area above base of wing. Scutellum greyish brown, paler at posterior margin. Postscutellum greyish brown, yellowed anteriorly on sides. Pattern on pleuron generally consisting of two broad, whitish yellow longitudinal stripes, upper one, somewhat broken, along prescutal suture, lower one, continuous, originating on fore coxa and passing just above mid and hind coxae. Wing hyaline, patterned with sharply defined dark brown spots and seams (in full-coloured specimens) distributed as follows: three spots at anterior margin, viz. at origin of  $R_s$ , over tip of  $R_1$  (stigma; most extensive spot, rather quadrangu-

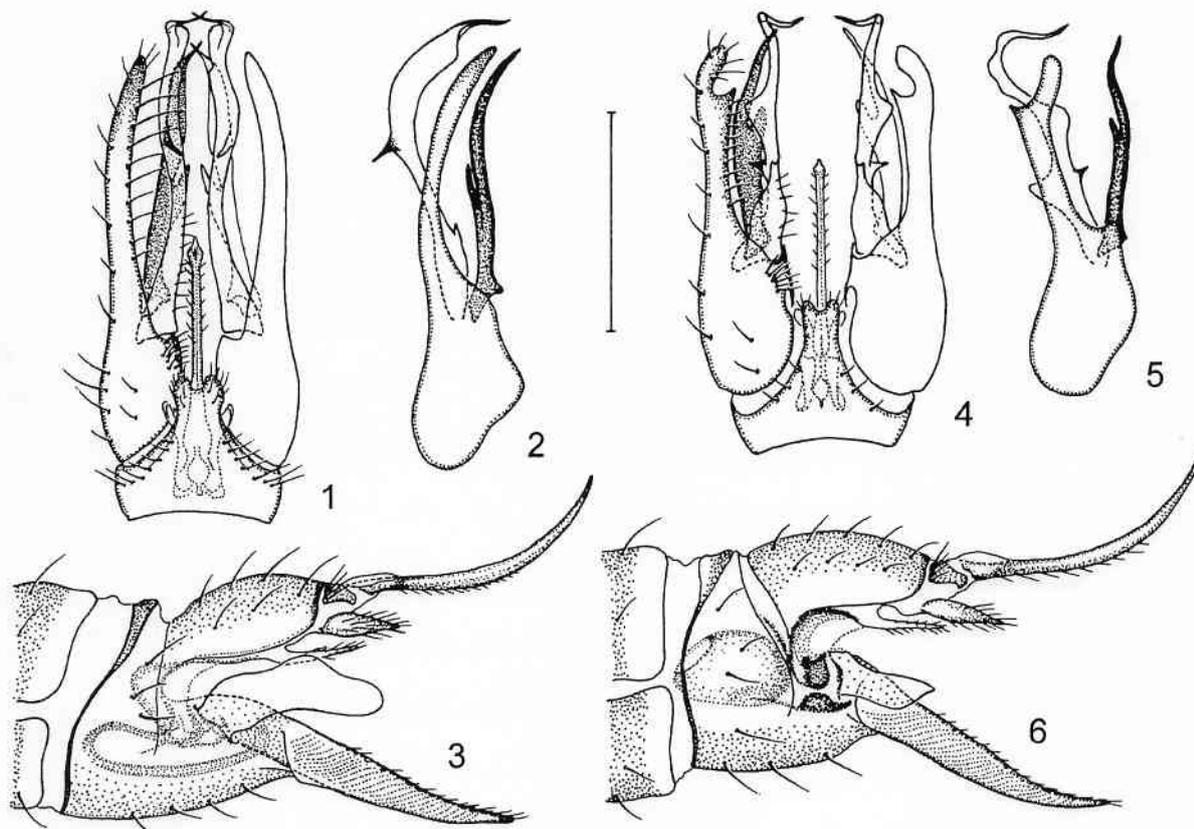
lar) and at tip of  $R_4$ . The latter often connected with spot or seam on supernumerary cross-vein between  $R_4$  and  $R_5$ . Wing margin between  $R_4$  and  $R_5$  slightly darkened. All other (sub)vertical venational elements likewise seamed, namely basal deflection of  $R_5$ , r-m, basal deflection of  $M_{1+2+3}$  (in part) and m-cu. Fork  $M_{1+2}-M_3$  without any spot. Wing venation typical for *Euptilostena*, with supernumerary cross-vein between  $R_4$  and  $R_5$ . Stem of halter whitish yellow, knob infuscated. Coxae brown, patterned with yellow. Rest of legs yellowish brown to yellow, femora without any conspicuous apical darkening.

Abdomen brown to (in females) dark brown, abdominal segments with sharp, pale yellow, narrow seams at posterior margins.

Male terminalia (Figs 1, 2). Tergite 9 very short and rather small in relation to gonocoxite, conspicuously produced posteriorly, with bilobed, moderately emarginate median portion. Gonocoxite with dorsal lobe exceedingly elongate and slender, about twice as long as body of gonocoxite, narrowed into simple, somewhat pigmented tip. Dorsal gonostylus very long, evenly arched downwards, reaching slightly beyond tip of gonocoxal lobe, generally slender, gradually tapered from base to about mid-length, then flattened and dilated laterally, abruptly drawn out into thin point bent inwardly. Minute depressed ventral spine near base of dorsal gonostylus and another one, longer, upright and darkly pigmented, dorsal in position, shortly beyond mid-length (Fig. 2). A few setae at inner margin of dorsal gonostylus in proximal half. Ventral gonostylus of general shape as in many other *Idiocera* Dale and *Ellipteroides* Becker, but modified, very long, reaching slightly beyond tip of gonocoxal lobe, yet a bit shorter than dorsal gonostylus, slender and darkly pigmented, somewhat undulated, with short depressed projection at inner margin shortly before mid-length, then parallel-sided, tapered into thin point before apex. Aedeagus rather long, reaching to about one fourth of length of gonocoxal lobe, slender in dorsal view, flattened and somewhat broader laterally, claw-shaped at apex in lateral view.

Female terminalia (Fig. 3) with cercus very slender, nearly parallel-sided, considerably upturned, subacute at tip. Hypogynial valve likewise rather slender, distinctive by conspicuous membranous blade, rather broad and rounded at apex, arising from outer base of hypogynial valve and reaching to about its mid-length. Internal structures in lateral view as in Fig. 3, rather pale, appearing as strongly sinuous and variously twisted membranous bands.

**Material examined.** **Holotype** – male: Slovakia, Belianske Tatry Mts, Tatranská Kotlina, Kardolina (49°14' N, 20°20' E), 23.VI.1975, leg. J. Starý (SMOC). The specimen is glued onto a triangular cardboard point, with only left mid leg and apex of right antenna missing; apex of abdomen cut off. Terminalia dissected and placed in a sealed plastic



Figs 1-6. *Idiocera (Euptilostena) paulsi* sp. n. (male - holotype, female - paratype, Slovakia, Tatranská Kotlina). Male terminalia: 1 - general view, dorsal; 2 - gonocoxite with gonostyli, lateral; 3 - female terminalia, general view, lateral. *Idiocera (Euptilostena) jucunda* (Loew, 1873) (male - Slovakia, Tatranská Kotlina; female - Czech Republic, Vyšní Lhoty). Male terminalia: 4 - general view, dorsal; 5 - gonocoxite with gonostyli, lateral; 6 - female terminalia, general view, lateral. Scale 0.5 mm.

tube with glycerine, pinned with the specimen. **Paratypes** (15 ♂♂, 4 ♀♀): **Slovakia**: Belianske Tatry Mts, Tatranská Kotlina, Belá valley (49°14' N, 20°20' E), 750 m a.s.l., 31.VII.1974, 1 ♀; 19.VI.1977, 1 ♀; 22.VI.1977, 1 ♂, leg. J. Starý; Poľana Mts, Čierny Potok (48°41' N, 19°33' E), 700 m a.s.l., 7.VII.2000, 1 ♀, leg. J. Starý; at light (all JSO). **Romania**: Eastern Carpathians, Rodna Mts, Sesuri, Bistrita Aurie River (47°38' N, 24°44' E), 800 m a.s.l., 26.VII.2003, 13 ♂♂, 1 ♀; Călimani Mts, Toplița, Toplița brook (46°59' N, 25°24' E), 1000 m a.s.l., 29.VII.2003, 1 ♂, all leg. L. Ujvárosi; at light (LUC; in ethanol; 1 ♂, in JSO, dried from ethanol).

**Etymology.** The new species is named after Stefan Pauls (Forschungsstation für Mittelgebirge, Biebergemünd, Germany), a Trichoptera researcher, who supported financially the collecting trip in the Rodna Mts, Romania, and was of substantial help to the junior author during her investigations. A noun in genitive singular.

**Remarks.** In general appearance, the new species is practically identical with *I. (E.) jucunda*, the only comparable species, differing from it, as so far detected, in that it lacks the spot at the fork  $M_{1+2}-M_3$  of the wing. In the structure of the male terminalia, however, *I. (E.)*

*paulsi* sp. n. is very distinctive, especially by a simple apex of the dorsal lobe of the gonocoxite and by the shape and curvature of the dorsal gonostylus (cf. Figs 2 and 5). Both the gonocoxal lobe and the dorsal gonostylus are very long, considerably protruding from the hypopygium, so that they are well observable even on dried specimens. Other distinctions in the structure of the male terminalia, compared to *I. (E.) jucunda*, are evident from Figs 1-2, and are also mentioned in the redescription of the latter species. Female terminalia of *I. (E.) paulsi* sp. n. are highly distinctive, possessing a large membranous blade, arising from the outer base of the hypogynial valve (Fig. 3). This structure, so far not observed within the family, is essential for recognition of the species, being likewise easily detectable even on dried specimens without dissection of the genitalia.

SAVCHENKO (1982, Fig. 143/1) illustrated the female terminalia of *I. (E.) paulsi* sp. n. under *I. (E.) jucunda*. He did not record the latter species from Ukraine, and the illustrated female almost certainly was sent to him by the senior author from Tatranská Kotlina in Slovakia, where both species treated here were collected at one site.

**Distribution:** Slovakia, Romania.



*Idiocera (Euptilostena) jucunda* (Loew, 1873)  
(Figs 4–6)

*Gonomyia jucunda* Loew, 1873: 54 (description).

*Gonomyia jucunda*: Kuntze, 1914: 370 (diagnosis in key), Fig. 18 (wing); Pierre, 1924a: 108 (diagnosis, key), Fig. 406 (wing) [not *jucunda*; see below]; Pierre, 1924b: 81 (note), Fig. 13 (wing) [not *jucunda*; see below]; Bangerter, 1946: 184 (redescription, faun. record, biology), Figs A–C (male terminalia), D (wing).

*Gonomyia (Ptilostena) jucunda*: Lackschewitz, 1940: 51 (faun. record, key), Text-Fig. 7 (wing) [incorrect type nominated; see below]

*Idiocera (Euptilostena) jucunda*: Savchenko, 1982: 300 (redescription, key), Figs 142/1 (wing), 144a, b (male terminalia) [Fig. 143/1 (female terminalia) belongs to *I. (E.) paulsi* sp. n.]; Krzemiński, 1984: 506 (diagnosis), Figs 183 (wing), 184–185 (male terminalia).

*Gonomyia pseudojucunda*: Pierre, 1924b: 81 (description), Figs 14 (wing), 15 (female terminalia). – **syn. n.**

**Redescription.** In general appearance much resembling *I. (E.) paulsi* sp. n., only differing from it by spot at fork  $M_{1+2}$ – $M_3$  of wing [this spot lacking in *I. (E.) paulsi* sp. n.]. Body length 4.5–7.5 mm, wing length 4.5–7 mm.

Male terminalia (Figs 4–5) generally shorter than those of *I. (E.) paulsi* sp. n. Produced median portion of tergite 9 longer and narrower. Dorsal lobe of gonocoxite shorter and stouter, emarginate at apex, with subterminal inner spine. Dorsal gonostylus profoundly different from that of *I. (E.) paulsi* sp. n. in curvature and configuration of various teeth and spines, rather broad at base, with darkly pigmented ventral spine opposite large, broad dorsal tooth at about one third of its length; another rounded ventral extension at about two thirds of length of dorsal gonostylus. Distal portion of dorsal gonostylus strongly curved downwards and gradually tapered into pointed tip. A few setae at inner margin of dorsal gonostylus in proximal third. Ventral gonostylus generally similar to that of *I. (E.) paulsi* sp. n., but shorter, with inner projection shorter and stouter, situated distinctly beyond mid-length of ventral gonostylus. Aedeagus slightly longer and distinctly more slender.

Female terminalia (Fig. 6) similar externally to those of *I. (E.) paulsi* sp. n. Membraneous blade at outer base of hypogynial valve much shorter, less than one third of length of hypogynial valve, tapered into subacute tip before apex. Internal structure in lateral view as in Fig. 6, consisting of a complex of darkly pigmented plates and rods. Large, inflated sac-like structure (shown in Fig. 6) sometimes present within tergite 8 proximally of complex described above.

**Material examined.** *Gonomyia jucunda*: In describing the species, LOEW (1873) did not specify the number of specimens, he only stated “Vaterland: Galizien, im Juli von Herrn Dekan Grzegorzek gefangen.” (LOEW, 1873:

55). In such cases, a lectotype should be designated, although it seems a single specimen was available for description (cf. Recommendation 73F of ICZN, 1999). Interestingly, however, an indicative sentence was found in the description itself: “Die zweite Längsader ... ist an dieser plötzlichen Beugung oft mit einem kurzen rücklaufenden Aste versehen; ...” (LOEW, 1873: 55). When LOEW wrote that the Rs vein often had a so-called spur at its bend, then he must have had, in our opinion, more than one specimen. Two candidates for types were examined, and these are conspecific. One, severely damaged (without head, legs and right wing), deposited in NHMW, was nominated as a type by LACKSCHEWITZ (1940) and listed by him as “Süd-Polen (Galizien), Gabori, 8.VIII.1874, ♂ (Grzegorzek)” (LACKSCHEWITZ, 1940: 51). The specimen is generally labelled as stated by LACKSCHEWITZ (1940), the locality should, however, read “Gaboń”, a village in the vicinity of Nowy Sącz [Neu-Sande(t)z] where GRZEGORZEK collected his material (cf. GRZEGORZEK, 1872). [LACKSCHEWITZ read the locality “Gabori”, having confused the long-sign on the n with the dot on the i.] The date of the collection is not only a year after LOEW’s (1873) description, but even the month is different. It is irrelevant to speculate about whether the date was written in error; the specimen is considered here a non-type. The other specimen, from ZMHB, is labelled “Gaj 30.7.72”. Gaj, another village in the region, is a well-known locality in the Polish literature. Although GRZEGORZEK’s name is not given on the label, the hand-writing is clearly the same as on the label of the former specimen. The date of the collection coincides with the circumstances of the description, although specimens collected earlier might well have also been available to LOEW. Therefore, this specimen is designated here as the lectotype. **Lectotype** ♂ (present designation): Poland, Gaj nr. Nowy Sącz (49°36’ N, 20°40’ E), 30.VII.1872, leg. W. Grzegorzek (ZMHB), labelled “Gaj 30.7.72.” (hand-written), “*jucunda* Lw.” (hand-written), “8995” (printed), “Zool. Mus. Berlin” (printed). Labelled as lectotype (“Lectotype / *Gonomyia / jucunda* Loew ♂ / J. Starý & L. Ujvárosi 2004”, printed red label) and identified as *Idiocera (Euptilostena) jucunda*. The specimen is pinned, with all three left legs and the apex of the left antenna missing. Terminalia are intact (dissection not necessary for species recognition). The lectotype is designated here to maintain the current usage of the name for the species redescribed above.

*Gonomyia pseudojucunda*: PIERRE (1924b) stated at the end of the description of the species: “Une ♀ capturée dans les monts de la Lozère, par M. Lhomme 18.VI.22. Types dans ma collection.” (PIERRE, 1924b: 82). The clear statement of a single female is in contradiction with the plural form “types”. Nevertheless, the specimen listed below is treated as the holotype, and the “types” is considered a lapsus in a phrase many times repeated in that paper. **Holotype** ♀ (monotypy): France, Lozère Mts 18.VI.1922, leg. M. Lhomme (MNHN), labelled “Lozère 18.6.22” (hand-written), “TYPE” (printed, red letters), “*Gonomyia pseudojucunda* / Pierre / C. Pierre det. 1923” (printed), “Museum Paris” (printed). Labelled as holotype (“Holotype / *Gonomyia / pseudojucunda* Pierre ♀ / J. Starý 2004”, printed red label) and identified as *Idiocera (Euptilostena) jucunda*. The specimen is pinned, with only right fore and left mid legs attached; apex of the abdomen cut off. Terminalia dissected and placed in a sealed plastic tube with glycerine, pinned with the specimen.

**Other material examined** (85 ♂♂, 65 ♀♀). **Switzerland:** Canton Bern: Berner Oberland, Sense-Gebiet (46°53' N, 7°20' E), VI.1943, 1 ♀, leg. H. Bangertter (ZFMK; in ethanol) [a specimen available to BANGERTER (1946), listed by MENDEL (1979)]. Canton Ticino: Cadenazzo (46°09' N, 8°57' E), 203 m a.s.l., 16.VII.–16.IX.1979, 1 ♂, 2 ♀♀, leg. C. Dufour et W. Geiger; Malaise light trap; Gordevio (46°13' N, 8°45' E), early IX.1980, 1 ♂, leg. L. Rezbanyai; Gordola (46°15' N, 8°51' E), early VIII.1980, 1 ♂, leg. L. Rezbanyai. Canton St. Gallen: St. Gallen – Ost, Schaugenbädli (47°26' N, 9°24' E), 590 m a.s.l., 21.–27.VII.1980, 1 ♂, leg. R. Müller; light trap. Canton Graubünden: P. Nat., Zernez, Cluozza (46°40' N, 10°07' E), 14.VII.1993, 1 ♂, leg. W. Geiger (all MHNN; in ethanol). **Germany:** Bayern: Kreuzthal (47°43' N, 10°11' E), 26.VI.–24.VIII.1972, 4 ♀♀; Obergünzburg (47°51' N, 10°25' E), 9.–16.VIII.1974, 2 ♂♂, all leg. H. Mendl; at light; Aybühlweg/Kempton (shop window) (47°43' N, 10°19' E), 22.VI.–5.VII.1971, 1 ♂, 1 ♀, leg. H. Mendl (all ZFMK; in ethanol) [in part listed by MENDEL, 1977]. **Poland:** Gaboń nr. Nowy Sącz (49°36' N, 20°40' E), 8.VIII.1874, 1 ♂, leg. W. Grzegorzek (NHMW) [listed by KUNTZE (1914); listed as type by LACKSCHEWITZ (1940); terminalia mounted in Canada balsam between celluloid slides, pinned with the specimen; a label “non-type J. Starý 2004” added]. **Czech Republic:** Moravia: Vyšní Lhoty, Morávka shores (49°38' N, 18°27' E), 8.VI.1995, 1 ♂, leg. J. Starý [listed by STARÝ (1996)], 12.VII.1999, 2 ♂♂ (at light), 9.V.2000, 8 ♂♂, 2 ♀♀, 24.V.2000, 4 ♀♀, 27.VI.2001, 2 ♂♂, 6 ♀♀ (at light), 4.VI.2002, 1 ♀, 29.V.2003, 3 ♀♀ (at light), leg. J. Starý; Moravskoslezské Beskydy Mts, Košařiska (49°35' N, 18°41' E), 28.VI.2001, 1 ♂, leg. J. Starý; at light (all JSO). **Slovakia:** Beňadovo, Múthanka shores (49°25' N, 19°20' E), 7.VII.1988, 1 ♀, leg. J. Starý; Oravská Polhora (49°31' N, 19°23' E), 5.VII.1983, 1 ♂, 1 ♀; Západné Tatry Mts, Oravice, Tichá dolina valley (49°18' N, 19°45' E), 20.VIII.1976, 1 ♂, 14.VI.1977, 1 ♂, 22.VII.1977, 1 ♀, all leg. V. Elsner; at light, 800–850 m a.s.l., 12.VI.2000, 1 ♂, leg. J. Starý (all JSO); Belianske Tatry Mts, Tatranská Kotlina, Belá valley (49°14' N, 20°20' E), 750 m a.s.l., 30.VII.1974, 1 ♀, 22.VI.1975, 2 ♂♂, 23.VI.1975, 3 ♂♂, 5 ♀♀, 14.VII.1975, 3 ♂♂, 5 ♀♀, 15.VII.1975, 6 ♂♂, 16.VII.1975, 1 ♂, 1 ♀, 18.VI.1977, 8 ♂♂, 4 ♀♀, 19.VI.1977, 1 ♀, 25.VI.1977, 2 ♂♂, 4.VII.1978, 1 ♂, 1 ♀, 8.VII.1978, 1 ♀, all leg. J. Starý (1 ♂, dry-mounted, and 4 ♂♂, 1 ♀, in ethanol, in ZFMK; rest, dry-mounted, in JSO); Snina, Cirocha shores (48°59' N, 22°14' E), 2.VI.1984, 2 ♂♂, 1 ♀, 4.VI.1984, 1 ♀, 1.VI.1985, 1 ♀, 8.VI.1985, 2 ♂♂; Bukovské Hills, Ruské, Cirocha shores (49°06' N, 22°21' E), 7.VI.1985, 1 ♂, 1 ♀; Krivé, Zbojský brook (48°59' N, 22°27' E), 17.VI.1991, 1 ♂, all leg. J. Starý (all JSO) [in part listed by STARÝ (1981, 1995)]. **Austria:** Niederösterreich: Lunz am See (47°51' N, 15°03' E), 4.V.1970, 1 ♀, leg. H. Malicky; light trap; Lehen, Ganz (48°13' N 15°16' E), 8.VII.1973, 2 ♂♂, 2 ♀♀, leg. H. Rausch et P. Ressler; at light. Oberösterreich: Grossraming (47°52' N, 14°33' E), 7.–21.VII.1983, 2 ♂♂, 1 ♀, leg. H. Malicky (all ZFMK; in ethanol). **Slovenia:** Ljubljana (46°03' N, 14°33' E), 17.–20.V.1971, 1 ♂, leg. I. Sivec (ZFMK; in ethanol) [listed by MENDEL (1984)]. **Romania:** Eastern Carpathians, Rodna Mts, Sesuri, Bistrita Aurie River (47°38' N, 24°44' E), 800 m a.s.l., 26.VII.2003, 1 ♂, 1 ♀; Nemira Mts, Ojtuz, Ojtuz valley (45°49' N, 26°20' E), 750 m a.s.l., 9.VII.2001, 7 ♂♂; Ciuc Depression, Ciuceu (46°24' N, 25°44' E), 630 m a.s.l., 15.VII.2001, 1 ♂; Călimani Mts, Toplița, Toplița stream (46°59' N, 25°24'

E), 1000 m a.s.l., 29.VII.2003, 1 ♂; Gheorgheni Depression, Voşlobeni, Senetea brook (44°38' N, 25°36' E), 670 m a.s.l., 11.VII.2002, 1 ♂; Ciucaş Mts, Babarunca, Babarunca brook (45°33' N, 25°52' E), 930 m a.s.l., 21.VII.2004, 5 ♂♂, 9 ♀♀; Southern Carpathians, Făgăraş Mts, Valea lui Stan (45°28' N, 25°02' E), 900 m a.s.l., 6.VIII.2003, 2 ♂♂; Făgăraş Mts, Călugăreni Valley (45°28' N, 25°03' E), 6.VIII.2003, 1 ♂; Apuseni Mts, Valea Ierii, Iara Valley (46°38' N, 23°20' E), 720 m a.s.l., 25.VII.2000, 2 ♂♂, 1 ♀, all leg. L. Ujvárosi; at light (LUC; in ethanol; 2 ♂♂, 1 ♀, in JSO, dried from ethanol).

**Remarks.** Characters differentiating *I. (E.) jucunda* from *I. (E.) paulsi* sp. n. are indicated in the above description and in the discussion of the latter species. It should be stated that the male terminalia of *I. (E.) jucunda* are slightly variable in that the ventral spine of the dorsal gonostylus may be larger than illustrated (Figs 4, 5), yet not as large as probably somewhat exaggerated by BANGERTER (1946, Fig. B). Because of its smaller size, the membrane blade at the outer base of the hypogynial valve of the female is not as easily detectable on dried specimens as in *I. (E.) paulsi* sp. n. [but the female terminalia of *I. (E.) jucunda* may readily be distinguished just by this seeming absence of the blade]. The internal structures of the female terminalia may vary in pigmentation, most probably according to whether or not a specimen is teneral. Also, in teneral females, the sac-like structure in segment 8 is not detectable, which suggests that the sac may become apparent only after copulation.

Examination of the female holotype of *I. (E.) pseudojucunda* revealed unambiguously that this species is specifically identical with *I. (E.) jucunda*. What PIERRE considered to be *I. (E.) jucunda* was, based on his relevant figures (PIERRE, 1924a, Fig. 406, 1924b, Fig. 13), a species without a spot at the fork  $M_{1+2}-M_3$ . This might be *I. (E.) paulsi* sp. n., or a third species (cf. no seam on m-cu, unusually short  $A_2$ ), but, within the material examined here, *I. (E.) jucunda* only was identified west of the Carpathians.

**Distribution:** France, Switzerland, Germany, Poland, Czech Republic, Slovakia, Austria, Slovenia, Romania, ?Morocco (SAVCHENKO et al., 1992; modified according to the present political frontiers). The above distribution was confirmed by the material examined (based only on the holotype of *pseudojucunda* for France), except for a questionable record from Morocco by PIERRE (1924c).

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#### References

- BANGERTER, H. 1946. *Gonomyia jucunda* Loew (Dipt. Tipulidae). Mitt. Schweiz. Entomol. Ges. **20**: 184–188.
- GRZEGORZEK, W. 1872. Wykaz much (Diptera) z okolicy Sądeckiej [A list of Diptera from the vicinity of Neusandetz]. Sprawozdanie Komisji fizyograficznej c. k. Towarzystwa Naukowego Krakowskiego **6**: 28–56.
- ICZN 1999. International Code of Zoological Nomenclature. Fourth Edition. The International Trust for Zoological Nomenclature, c/o The Natural History Museum, London, xxix+306 pp.
- KRZEMIŃSKI, W. 1984. Limoniidae of Poland (Diptera, Nematocera). Part I: subfamily Eriopterinae. Acta Zool. Cracov. **27**: 437–518.
- KUNTZE, A. 1914. Bestimmungstabellen der paläarktischen Eriopterinen (Diptera Nematocera Polyneura). Anln. Naturh. Hofmus., Wien **28**: 361–388.
- LACKSCHEWITZ, P. 1940. Die paläarktischen Rhamphidiinen und Eriopterinen (Diptera) des Wiener Naturhistorischen Museums. Anln. Naturh. Mus. Wien **50** (1939): 1–67.
- LOEW, H. 1873. Beschreibungen Europäischer Dipteren. Dritter Band. H. W. Schmidt, Halle, 320 pp.
- MENDL, H. 1977. Limoniiden (Diptera Nematocera) aus dem Allgäu. I. Voralpengebiet. Mitt. Muench. Entomol. Ges. **66**: 101–125.
- MENDL, H. 1979. Revision der Limoniiden-Sammlung von Hans Bangarter im Naturhistorischen Museum zu Bern/Schweiz. I. Teil (Diptera: Nematocera). Beitr. Entomol. **29**: 343–372.
- MENDL, H. 1984. Limoniidenfänge aus Jugoslawien (Diptera Nematocera, Limoniidae). Nachrichtenbl. Bayer. Entomol. **33**: 1–15.
- PIERRE, C. 1924a. Tipulidae. In: Faune de France, 8 (Diptères). Paris, 159 pp.
- PIERRE, C. 1924b. Tipulidae nouveaux. Encycl. Entomol. (B II) Diptera. **1**: 79–93.
- PIERRE, C. 1924c. Nematocera polyneura recueillis au Maroc par M. Charles Alluaud (3<sup>e</sup> liste, 1922–1923) (Insectes Diptères). Bull. Soc. Sci. Nat. Maroc. **4**: 198–201.
- SAVCHENKO, E.N. 1982. Limoniidae: Eriopterinae. Fauna Ukraini **14** (3). Akad. Nauk Ukrainsoj SSR, Naukova Dumka, Kiev, 335 pp.
- SAVCHENKO, E.N., OOSTERBROEK, P. & STARÝ, J. 1992. Family Limoniidae, pp. 183–369. In: SOÓS, Á., PAPP, L. & OOSTERBROEK, P. (eds) Catalogue of Palaearctic Diptera 1, Hungarian Natural History Museum, Budapest.
- STARÝ, J. 1981. Nachträge und Berichtigungen zur Limoniiden-Fauna der Tschechoslowakei (Diptera) II. Acta Rerum Natur. Mus. Nat. Slov. **27**: 99–122.
- STARÝ, J. 1995. Limoniidae, pp. 21–35. In: ROHÁČEK, J., STARÝ, J., MARTINOVSKÝ, J. & VÁLA, M. (eds) Diptera of the Bukovské Hills, SAŽP – Správa CHKO a BR Východné Karpaty, Humenné.
- STARÝ, J. 1996. New records of Limoniidae and Pediciidae (Diptera) from the Czech and Slovak Republics. Čas. Slez. Muz. Opava (A) **45**: 119–124.

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