

Two new European species of *Rhamphomyia* subgenus *Lundstroemiella*
(Diptera: Empididae)

Dva nové evropské druhy rodu *Rhamphomyia* podrodu *Lundstroemiella*
(Diptera: Empididae)

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Abstract. *Rhamphomyia* (*Lundstroemiella*) *sellaensis* sp. n. and *R. (L.) olympiana* sp. n. are described. Female of *R. (L.) freyi* Barták, 1985 is described. Lectotypes of *R. (L.) hybotina* (Zetterstedt, 1838) and *R. (L.) tenuicornis* (Zetterstedt, 1838) are designated and the synonymy of these two taxa is confirmed. A key to the European species of the *Rhamphomyia* Meigen, 1822 subgenus *Lundstroemiella* Frey, 1922 is presented.

INTRODUCTION

The Palaearctic species of the *Rhamphomyia* Meigen, 1822 subgenus *Lundstroemiella* Frey, 1922 were revised by Barták (1985) but no Zetterstedt's types were available at that time. Part of the Zetterstedt's type material was recently discovered in the collection of the Museum of Zoology, Lund University (Sweden) and it is treated in this paper. In addition to that, two species new to science are described below. Consequently, a revised key to all European species is presented. Abbreviations follow Barták (1982, 1985).

TAXONOMY

Rhamphomyia (*Lundstroemiella*) *olympiana* sp. n.

(Fig. 1)

Male. Head brownish black. Eyes narrowly separated, upper ommatidia distinctly smaller than lower ones. Frons lustrous, very narrow, just above antennae about as broad as diameter of one ommatidium, in the upper portion as broad as lower ocellus, covered with 6-8 hairs which are slightly longer than frons is broad. Ocellar bristles dark, about 2/3 as long as frons, accompanied with 2-4 additional much smaller hairs. Face pruinose, narrow, slightly narrower than frons. Occiput almost completely lustrous, with dark hairs on the upper part and pale hairs below. Antennae black, both basal segments lighter than the rest of antennae. Ratio of antennal segments (in 0.01 mm scale) = 15 : 9 : 29 : 9. Labrum yellow with brownish apex, polished, as long as head is high. Palpi yellow, with 2-3 hairs, preapical bristle dark.

Thorax blackish brown, mesonotum lustrous including humeri, notopleura and scutellum. Pleura pruinose except for a small polished area in posterior part of metapleura and anterior part of pteropleura. All bristles and hairs pale except one strong dark notopleural bristle. Pronotal "collar" with a few fine hairs, prosternum and propleura bare. Very fine, almost uniserial ac are about 1/3 as long as the distance between rows of ac and dc, dc uniserial, very fine, about half as

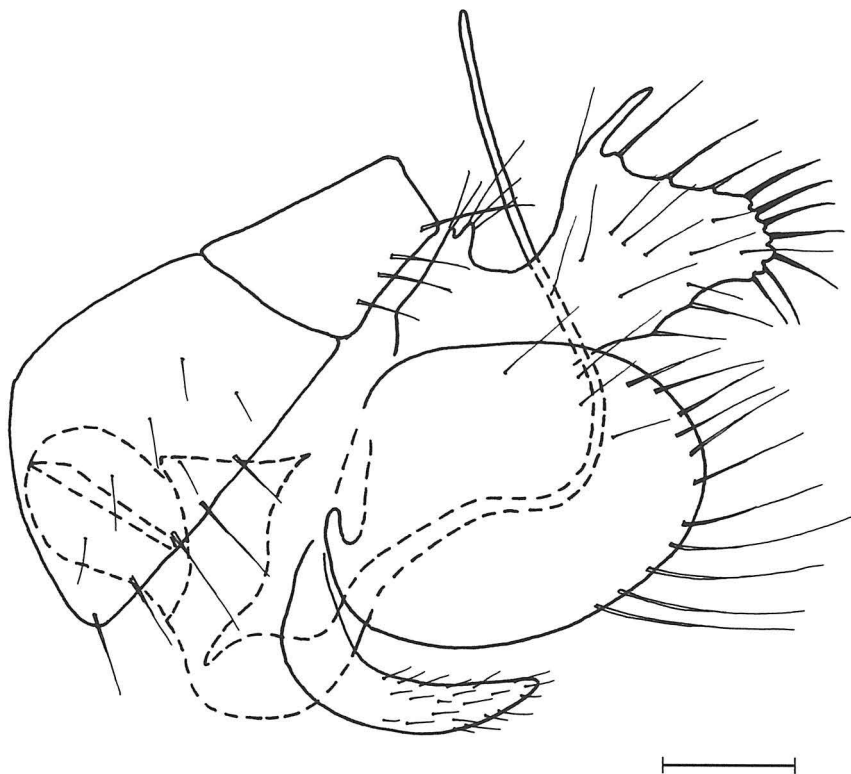


Fig. 1. *Rhamphomyia* (*Lundstroemiella*) *olympiana* sp. n. Male genitalia. Scale = 0.1 mm.
Obr. 1. *Rhamphomyia* (*Lundstroemiella*) *olympiana* sp. n. Samčí genitálie. Měřítka = 0,1 mm.

long as the distance between rows of ac and dc, prescutellar dc not differentiated. 1 long and 4-5 smaller h, ih absent, 1 very small ph, 1 long ntpl and a few additional hairs, 4-6 hairs also in front part of notopleura. 1 small sa, 1 pa and an additional hair, 2 long and 2 smaller sc. Coxae yellow, pruinose, distal parts of middle and hind coxae lustrous. Legs yellow, apices of hind tibia and hind femur and all tarsi blackish brown, bristles and hairs pale, dark in darker parts of legs. No bristle in "comb" at apex of hind tibia. Front femur with pv hairs up to as long as the vertical diameter of femur. Front tibia with irregularly arranged pd hairs about 3 times as long as the diameter of tibia. Middle femur with anterior and av rows of dark bristles about as long as the vertical diam-

eter of femur, pv are slightly shorter. Middle tibia sparsely covered with upright standing hairs as long as the diameter of tibia, and with 1 basal and 1 subapical pd bristle twice as long as the diameter of tibia. Hind femur densely covered with irregularly arranged pale av and pv hairs which are slightly longer than the vertical diameter of femur. Hind tibia with upright standing ventral hairs perpendicular to tibia, these hairs are about as long as the diameter of tibia, 4-5 pd hairs at midlength of tibia are distinctly longer. Basitarsus of fore leg with short hairs. Basitarsus of hind leg about as thick as the apex of hind tibia. Wings clear, stigma brown, costal bristle absent. Veins brown, vein A absent in apical part, ax angle obtuse, about 140°. Cell D short (M2: D = 1.7-1.8). Halter yellow, squama yellow with pale "fringes".

Abdomen blackish brown, entirely lustrous including the first tergum. All bristles and hairs pale. Bristles on posterior margin of terga 2 to 6 about 1/3 as long as the length of the respective tergum; very long on tergum 1. Other hairs very fine, short and sparse. Genitalia (Fig. 1) with rounded lateral lamella, dorsal lamella with tooth-like process near base in addition to peculiar finger-like process on its dorsal side near base. Hypandrium similar to that of *R. sphenoptera*.

Female very similar to male except the following characters: frons and face slightly broader, face lustrous; legs much shorter haired, anterior bristles on middle femur absent; abdominal segment 8 and the following pruinose, abdominal hairs shorter than in male.

Length: body 3.4-4.7 mm, wing 3.3-3.8 mm.

Differential diagnosis. *Rhamphomyia olympiana* sp. n. is very similar to *R. (Lundstroemiella) sphenoptera* Loew, 1873. However, male genitalia are different. Dorsal lamella in *R. olympiana* sp. n. is narrowed apically, armed with a long dorsal process, whereas it is downcurved apically and without dorsal process in *R. sphenoptera*; lateral lamella is rounded in *R. olympiana* sp. n. but more elongate in *R. sphenoptera* (compare Barták 1985: fig. 15). Females of *R. olympiana* sp. n. and *R. sphenoptera* remain so far undistinguishable.

Derivatio nominis. Named after the type locality (Mt. Olympos).

Holotype male: Pieria, Mt. Olympos, 4 km E Prioni, 21.vi.1982, R. Danielsson leg., deposited in the Museum of Zoology, Lund University (Sweden).

Paratypes: 2 males and 1 female, same data as holotype; 2 females, same locality, but 21.vi.1982, deposited in Museum of Zoology, Lund University, and private collection of the author.

Distribution. Greece (Mt. Olympos).

Rhamphomyia (Lundstroemiella) sellaensis sp. n.

(Fig. 2)

Male. Head brown. Eyes separated on frons, upper ommatidia smaller than the lower ones. Frons lustrous, 1.5 times as long as broad, covered with 4-5 hairs on each side. Ocellar triangle pruinose, ocellar hairs very short, about as long as the distance between upper ocelli, and with two pairs of additional hairs. Occiput pruinose, in upper part just behind ocelli lustrous and covered with dark hairs above and pale hairs below. Antennae brown, ratio of antennal segments (in 0.01 mm scale) = 7 : 7 : 44 : 5. Labrum yellowish brown, polished, 1.6 times as long as head is high. Palpi brown, with a long preapical bristle.

Thorax brown, pruinose, mesonotum lustrous including humeri, all bristles and hairs pale. 4-6 hairs form pronotal "collar", 1-2 small hairs on sides of prosternum, propleura and apical part

of prosternum bare. Very fine, almost uniserial, ac are half as long as the distance between the rows of ac and dc. Uniserial dc are of the same length and thickness as ac, ending in 2 slightly larger prescutellar pairs. One h and a few additional hairs, ih very short, 1 short ph, 1 long ntpl plus 1-2 additional hairs, further 3-4 hairs are in front part of notopleura, 0-1 small sa, pra absent, 1 pa, 4 sc. Coxae yellow, pruinose, pale haired. Legs yellow to brownish yellow, hairs both pale and

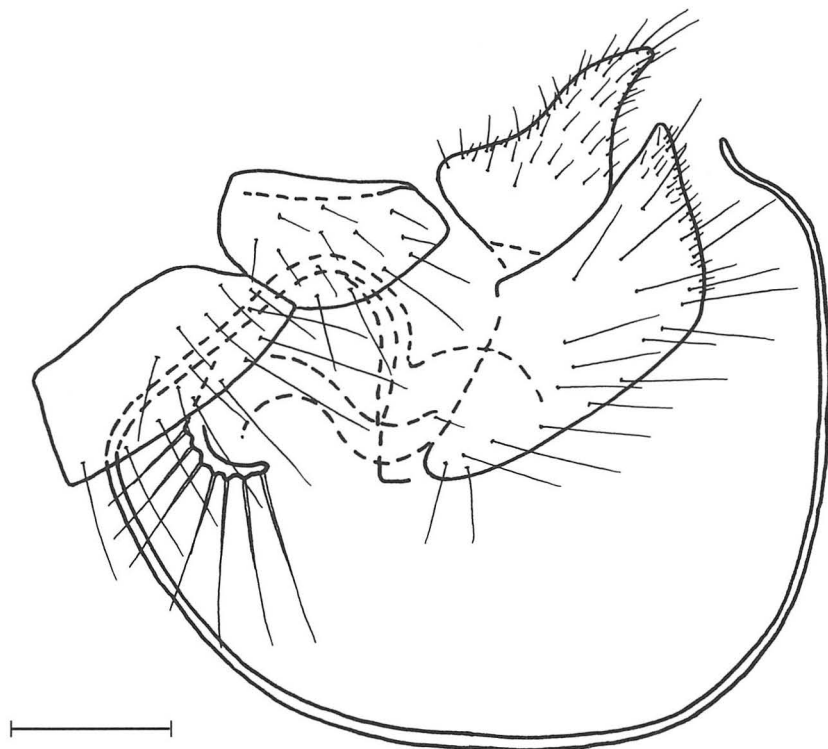


Fig. 2. *Rhamphomyia* (*Lundstroemiella*) *sellaensis* sp. n. Male genitalia. Scale = 0.2 mm.

Obr. 2. *Rhamphomyia* (*Lundstroemiella*) *sellaensis* sp. n. Samčí genitálie. Měřítka = 0,2 mm.

dark. No bristle in "comb" at apex of hind tibia. Legs covered with only short hairs, without bristles. All basitarsi short haired, hind basitarsus about as broad as the apex of hind tibia. Wings clear, stigma hyaline, costal bristle very short. Veins yellowish brown, vein A absent in apical third, ax angle very obtuse, about 130° . Halter yellow, squama yellow with pale fringes.

Abdomen blackish brown, lustrous, only the first tergum, apex of lateral lamella and dorsal lamella pruinose. Bristles on posterior margin of tergum 2 about $2/3$ as long as the tergum, on segments 3 and 4 about half as long, on the following terga shorter. Other abdominal hairs short.

Female. Similar to male with the exception of the following characters: abdomen lustrous, tergum 1, both terga and sterna on segments 7-8 and cercal complex pruinose. Abdominal bristles shorter than in male.

Length: body 3.2-3.7 mm, wing 3.2-3.5 mm.

Differential diagnosis. *R. (Lundstroemiella) sellaensis* sp. n. is similar to *R. (Lundstroemiella) hybotina* (Zetterstedt, 1838). However, the 1st abdominal tergum is pruinose in *R. sellaensis* sp. n. (lustrous in *R. hybotina*) and the posthumeral seta is inserted in lustrous part of mesonotum (in pruinose part in *R. hybotina*). Moreover, the male lateral genital lamella is slightly broadened apically in *R. sellaensis* sp. n. (Fig. 2) and the phallus is much longer than in *R. hybotina*. Female abdominal segments 7 and 8 are pruinose in *R. sellaensis* sp. n. but lustrous in *R. hybotina*.

Derivatio nominis. Named after the type locality (Sella).

Holotype male: Sella-Joch, 14.vii.1958, E. Lindner leg., deposited in State Museum of Natural Sciences, Stuttgart (Germany).

Paratypes: 1 male, same data as the holotype; 1 female, Passo Sella, 8.viii.1988, M. Barták leg. Paratypes deposited in private collection of the author.

Distribution. Italian Alps.

Rhamphomyia (Lundstroemiella) freyi Barták, 1985

Rhamphomyia (Lundstroemiella) freyi Barták, 1985: 25.

The species was described on the basis of one male specimen from Maiella (Italian Alps).

Description of female (only the characters differing from those in male are given). Head: face a little broader than in male, ratio of antennal segments (in 0.01 mm scale) = 11 : 7 : 50 : 6. Labrum 1.7-1.8 times as long as head is high.

Abdomen brown, with narrow yellow stripes along hind margins of terga 2-5. Bristles on posterior margin of tergum 2 half as long as the tergum, on the following less than 1/4 as long as the particular terga. Segments 7 and 8 mostly lustrous.

Material examined: Maiella, 24.vii.1917, 2 males; Acquasanta (probably Acquasanta Terme); 15. viii. 99 1 male; same locality, 18. viii. 94, 2 males; all M. Bezzi leg., coll. Museo Civico, Milano. Mt. Terminillo, 2000 m, 4.viii.1988, 9 males, 2 females, M. Barták leg. et coll.

Distribution. Italian Alps.

Rhamphomyia (Lundstroemiella) hybotina (Zetterstedt, 1838) (Fig. 3)

Rhamphomyia hybotina Zetterstedt, 1838: 571.

Rhamphomyia tenuicornis Zetterstedt, 1838: 571.

R. hybotina was described from "Hab. in Lapponia Suecia rarius; ad Lycksele et in Stöttingsfjellet Lappon. Umensis 1-16. Aug. capta; in inferalpinis Nordlandiae, ex. gr. in Raschstind, ad Lyngen et in insula Hacksten prope Schiervoe 26.-28. Jul. in copula lecta. (Lapponia)." I have examined four conspecific syntype specimens from Lund: one female from Lycksele, one female from Raschstind and two specimens (male and female) on one pin from Hacksten. The male from Hacksten labelled "*R. hybotina* o Hack. xxx" (xxx = illegible notice) is

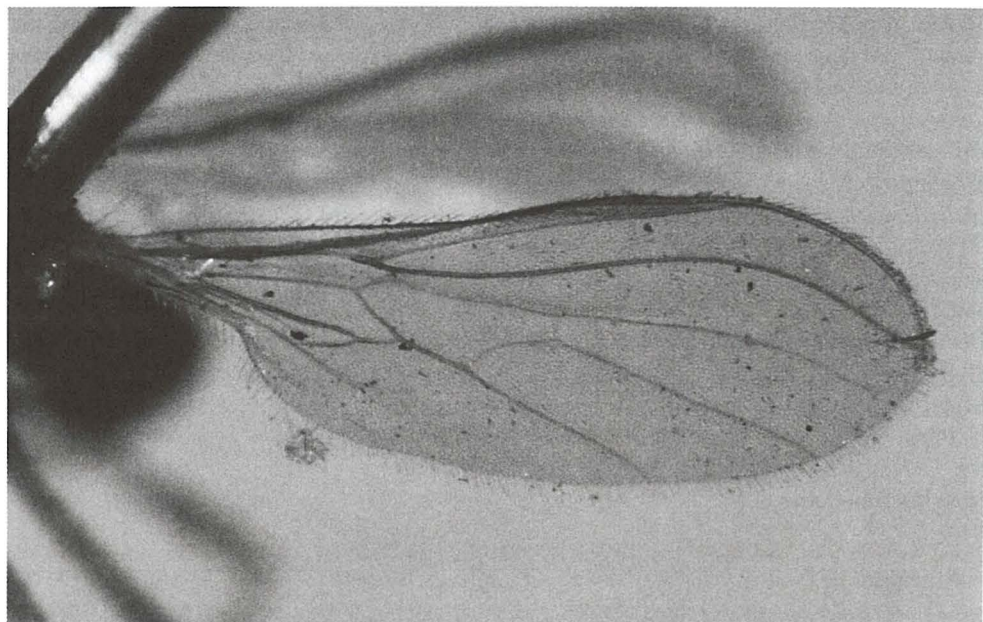


Fig. 3. *Rhamphomyia* (*Lundstroemiella*) *tenuicornis*. Wing of the lectotype.

Fig. 3. *Rhamphomyia* (*Lundstroemiella*) *tenuicornis*. Křídlo lektotypu.

herewith designated as the lectotype of *R. hybotina*. It is well preserved (the female on the same pin is heavily mouldy), with wings rolled up and only last tarsomere of right hind leg missing.

R. tenuicornis was described from "Hab. in Nordlandia rarissime; in insula Hacksten prope Schiervoe in graminosis unicum individuum d. 23. Jul. inveni. (Lapponia; Jemtlandia, Gottlandia rariss.)." It was later sunk as a synonym of *R. hybotina* by Zetterstedt (see Collin 1961). Since then, nobody has revised the syntypic specimen(s?), and even Collin (1961: 442) was unable to find the material in Zetterstedt's collection. There is one male (apparently syntypic) specimen deposited at the Museum of Zoology, Lund University, and labelled "*R. tenuicornis* xxx Hack." (xxx = illegible notice). The specimen possesses slightly developed pruinose stripes between humeri and mesonotum but this may be due to the interaction of surface microchetae with body liquids. The vein R_{4+5} is peculiarly curved (Fig. 3), the character being stressed in the original description („nervo tertio longitudinali reliquis magis curvato“). However, I consider it to be within the boundaries of the intraspecific variability. Male genitalia are identical with *R. hybotina* and I therefore consider both species conspecific. The specimen is herewith designated as the lectotype of *R. tenuicornis*. It is well preserved, only the mesonotum is heavily damaged by a relatively thick pin.

KEY TO THE EUROPEAN SPECIES OF THE RHAMPHOMYIA SUBGENUS LUNDSTROEMIELLA

- 1 Mesonotum pruinose. 2
 - Mesonotum lustrous, at least in central area. 8
- 2 (1) Bristles ac and dc conspicuous, black, very long in male, short in female. Number of scutellar bristles 6-10, or abdomen pruinose. 3
 - Bristles ac and dc inconspicuous, pale and short in both sexes. Always 4 scutellar bristles. Abdomen lustrous. 4
- 3 (2) Frons lustrous. Male face very narrow, about as broad at middle as diameter of 1-2 ommatidia. Female abdomen lustrous. *R. (L.) longefilata* Strobl, 1906
 - Frons pruinose. Male face much broader, about as broad at middle as 6 ommatidia combined. Female abdomen pruinose. *R. (L.) granadensis* Chvála, 1981
- 4 (2) Occiput lustrous in upper portion. Discal cell almost as long as apical section of vein M2. *R. (L.) dalmatica* Oldenberg, 1927
 - Occiput entirely pruinose. Discal cell much shorter than apical section of vein M2. 5
- 5 (4) Ax angle slightly obtuse, about 90-110°. Basitarsus of hind leg swollen, about twice as thick as the second hind tarsomere. Humeral calli pruinose. Male hypandrium with long bristles. Female frons pruinose. *R. (L.) tumiditarsis* Oldenberg, 1917
 - Ax angle very obtuse, 130-140°. Basitarsus of hind leg not so strongly swollen. Humeral calli lustrous or pruinose. Male hypandrium with long bristles or with minute hairs only. Female frons lustrous at least in dorsal half. 6
- 6 (5) Humeral calli lustrous, at least on apex. Male hypandrium covered with long bristles. *R. (L.) australis* Frey, 1922
 - Humeral calli entirely pruinose. Male hypandrium covered with minute, inconspicuous hairs only. 7
- 7 (6) Frons entirely lustrous. Bristles ac and dc inconspicuous, much shorter than the distance between rows of ac and dc. Upper occipital bristles very short. Abdomen with very short, inconspicuous hairs. *R. (L.) rupestris* Oldenberg, 1927
 - Frons pruinose in ventral third. Bristles ac and dc conspicuous, about as long as the distance between rows of ac and dc. Upper occipital bristles about as long as the distance between upper ocelli. Abdomen with conspicuous pubescence, discal hairs about as long as 1/3 of segments. *R. (L.) nigripes* Strobl, 1898
- 8 (1) Occiput lustrous at least in uppermost corner just behind ocelli. Male phallus long, exposed or short, rather thick and hidden. 9
 - Occiput entirely pruinose. Phallus long, exposed. 16
- 9 (8) Scutellum at least partly lustrous. Occiput lustrous to various extent. 10
 - Scutellum entirely pruinose. Occiput lustrous in dorsal third only, ventral two thirds pruinose. 14
- 10 (9) Pleura with lustrous spot occupying hind part of mesopleura and front part of pteropleura. 11
 - Pleura uniformly pruinose. 12
- 11 (10) Male dorsal lamella with distal part curved ventrad and without a long dorsal projection. Female undistinguishable. *R. (L.) sphenoptera* Loew, 1873
 - Male dorsal lamella with narrowed straight distal part and a long projection dorsally (Fig. 1). Female undistinguishable. *R. (L.) olympiana* sp. n.
- 12 (10) Humeri and sides of mesonotum broadly pruinose. Apical pair of scutellar bristles widely separated, inserted closer to margin of scutellum than to each other. *R. (L.) magellensis* Bezzi in Frey, 1922
 - Humeri and sides of mesonotum lustrous. Apical pair of scutellar bristles inserted closer together. 13
- 13 (12) Palpi and coxae yellow. Male phallus very short, hypandrium covered with very long bristles. *R. (L.) freyi* Barták, 1985
 - Palpi and coxae black. Male phallus long, hypandrium covered with minute hairs only. *R. (L.) aterrima* Frey, 1922
- 14 (9) Antennal style very short, inconspicuous, shorter than the width of the 3rd antennal segment just before apex. Humeral calli pruinose. *R. (L.) brevistylata* Oldenberg, 1927
 - Antennal style longer than the width of the 3rd antennal segment just before apex. Humeral calli at least anteriorly lustrous. 15
- 15 (14) The first abdominal tergum lustrous. Mesonotum with a pruinose stripe, which divides lustrous humerus from lustrous disc of mesonotum. Posthumeral seta inserted in the pruinose part of mesonotum. Male lateral genital lamella narrowed apically. Female abdominal segments 7 and 8 lustrous. *R. (L.) hybotina* (Zetterstedt, 1838)
 - The first abdominal tergum pruinose. Mesonotum without a pruinose stripe. Posthumeral seta inserted in the lustrous part of mesonotum. Male lateral genital lamella slightly broadened apically (Fig. 2). Female abdominal segments 7 and 8 pruinose. *R. (L.) sellaensis* sp. n.
- 16 (8) Humeral calli lustrous at least on a narrow stripe from apex towards posthumeral bristle. Male hypandrium with a few (2-5) bristles only. Female occiput with black bristles above and abdominal terga 7-8 at least partly lustrous. *R. (L.) strobli* Barták, 1985

- Humeral calli entirely pruinose. Male hypandrium with a dense fan of bristles. Female characters in another combination. 17
- 17 (16) Male dorsal genital lamella about as wide as lateral lamella in lateral view, dorsal margin slightly concave. Female abdominal terga 7 and 8 at least partly lustrous. *R. (L.) dudai* Oldenberg, 1927
- Male: dorsal genital lamella half as wide as lateral lamella in lateral view, dorsal margin straight, apex pointed. Female: abdominal terga 7 and 8 entirely pruinose. *R. (L.) kerteszi* Oldenberg, 1927

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SOUHRN

V předkládané práci jsou popsány dva nové druhy podrodu *Lundstroemiella* rodu *Rhamphomyia*, a to *R. (L.) sellaensis* sp. n. z Italských Alp a *R. (L.) olympiana* sp. n. z Řecka. Zároveň je poprvé popsána samice druhu *R. (L.) freyi* Barták, 1985. Jsou designovány lektotypy druhů *R. (L.) hybotina* (Zetterstedt, 1838) a *R. (L.) tenuicornis* (Zetterstedt, 1838) a je potvrzena jejich synonymie.

Vzhledem k morfologickým znakům obou nově popsaných druhů bylo nutné vypracovat nový klíč k určení všech evropských druhů podrodu *Lundstroemiella*. Tento klíč tvoří druhou část práce.

Vysvětlení zkratk: sety: ac = acrostichální, dc = dorsocentrální, h = humerální, ih = intra-humerální, ntpl = notopleurální, sa = supraalární, pa = postalární, sc = scutellární; pozice set na nohách: av = anteroventrální, pv = posteroventrální, pd = posterodorsální.