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Revision of European species of the genus *Rhabdomastix* (Diptera: Limoniidae). Part 1: Introduction and subgenus *Lurdia* subgen. n.*

JAROSLAV STARÝ

Department of Zoology and Anthropology, Faculty of Science of the Palacký University, tř. Svobody 26, 771 46 Olomouc, Czech Republic; e-mail: stary@prfnw.upol.cz

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Abstract. The first part of a revision of the European species of the genus *Rhabdomastix* Skuse, 1890 is presented. The history of taxonomic research on *Rhabdomastix* is reviewed, relationships of the genus are discussed, and the subgeneric classification outlined and re-assessed. A new subgenus, *Lurdia* subgen. n., is established for species centred around *R. lurida* (Loew, 1873), and *Palaeogonomyia* Meunier, 1899 and *Sacandaga* Alexander, 1911, previously considered subgenera, are synonymized with *Rhabdomastix*. A revision of the European species of *Lurdia* subgen. n. is presented. Two species are redescribed, *Rhabdomastix (Lurdia) lurida* (Loew, 1873) and *R.* (*L.*) *inclinata* Edwards, 1938, and the lectotype of the former is designated. Descriptions are provided of seven species, viz. *R.* (*L.*) *mendli* sp. n. (Switzerland, Germany, Italy), *R.* (*L.*) *sublurida* sp. n. (Czech Republic, Slovakia), *R.* (*L.*) *furva* sp. n. (Slovakia), *R.* (*L.*) *loewi* sp. n. (Switzerland, Germany, Austria, Italy), *R.* (*L.*) *robusta* sp. n. (Czech Republic, Slovakia), *R.* (*L.*) *falcata* sp. n. (Switzerland, Germany, Bulgaria) and *R.* (*L.*) *tatrica* sp. n. (Slovakia). Male and female terminalia are illustrated for all the species (except female *falcata*), and a key to species is appended.

INTRODUCTION

The genus *Rhabdomastix* Skuse, 1890 is one of several highly uniform and taxonomically extremely difficult groups in the family Limoniidae. This uniformity is shown not only in external characters, but also in the structure of the male terminalia, a complex normally highly species-specific in Limoniidae. The genus is worldwide in distribution and according to the recent catalogues (Alexander, 1965; Alexander & Alexander, 1970, 1973; Hutson, 1980; Oosterbroek, 1989; Savchenko et al., 1992) includes 106 species and subspecies. Except for those distributed in Europe, the preponderance of the species were described by Alexander, and are recorded from all zoogeographic regions, with no special species concentration. *Rhabdomastix* is slightly more numerous in the Palaearctic (27 species), followed by the Nearctic (26 species). It should be noted that only three species are known from the Afrotropical Region and that of the sixteen Australian/Oceanian species-group taxa, eleven occur in New Zealand. The numbers cited above, however, indicate inadequate knowledge rather than the actual richness of the faunas.

Rhabdomastix was related to various subgroups of what is currently the subfamily Chioneinae (tribe Eriopterini of most North American authors), depending on whether the wing venation or the size of the meron were believed to be of primary importance. The subgeneric classification has gradually developed into a concept of three subgenera, viz. *Rhabdomastix* s. str., *Palaeogonomyia* Meunier, 1899 and *Sacandaga* Alexander, 1911, based exclusively on the length of the male antennae. In the present revision, a new subgenus, *Lurdia* subgen. n., is established for species centred around *Rhabdomastix lurida* (Loew, 1873), and *Palaeogonomyia* and *Sacandaga* are synonymized with *Rhabdomastix*. Hence, European *Rhabdomastix* species are classified here in two subgenera, *Lurdia* subgen. n. and *Rhabdomastix* s. str.

As may be suspected in a group as uniform as *Rhabdomastix*, many species have remained unnamed even in Europe. Within the two subgenera, as defined below, species are mainly distinguished on the basis of structural details of the male terminalia. These features, however slight and variable, can on acquaintance be used to separate species. They should, however, be considered in association with external characters. Once the nature of the difference is recognised, species limits become more evident.

In Europe, *Rhabdomastix* species are locally restricted to margins of brooks and larger streams, including natural lowland rivers, because they are closely associated with sandy or gravely banks. More extensive shorelines developed as bars on inner side of meanders, and overgrown with scattered, low vegetation, is a habitat particularly suitable for *Rhabdomastix*, as it is for some other chioneine Limoniidae. Some species may be observed sitting or crawling about on plants or on the ground (cf. also Edwards, 1938: 113), but are rarely seen flying. Aggregations sometimes occur below branches of nearby trees, around shrubs or above vegetation.

This paper represents the first instalment of a revision of European species of the genus *Rhabdomastix*. The history of the taxonomic research on this genus is reviewed,

* In memory of Jaroslav Martinovský (27 January 1938 – 26 November 2001)

relationships of *Rhabdomastix* are briefly discussed and the subgeneric classification is outlined and re-assessed. A revision is presented of the European species of the subgenus *Lurdia* subgen. n. In Part 2, European species of the nominotypical subgenus *Rhabdomastix* s. str. will be treated.

The morphological terminology adopted here essentially follows McAlpine (1981), except for notation of the wing veins, which is in accordance with Hennig (1954) (cf. Fig. 4). Some special terms, mostly pertaining to genital structures, are referred to in figures (Figs 7–9) and/or referenced in the text.

The following acronyms of museums and collections are used in the text: BMNH – The Natural History Museum [formerly British Museum (Natural History)], London, England, U.K. JSO – Collection of J. Starý, Olomouc, Czech Republic. MHNN – Muséum d'histoire naturelle, Neuchâtel, Switzerland. NHMW – Naturhistorisches Museum, Vienna, Austria. SMOC – Slezské zemské muzeum, Opava, Czech Republic. USNM – National Museum of Natural History, Smithsonian Institution, Washington, D.C., U.S.A. ZMAN – Zoological Museum, Amsterdam, The Netherlands. ZMHB – Museum für Naturkunde der Humboldt-Universität, Berlin, Germany.

Numbers in brackets following Czech and Slovak localities in Material examined sections refer to grid references as defined by Zelený (1972).

Colour characters of species are described from dry-mounted specimens. Unless otherwise stated in the sections Material examined, the material under study is dry-mounted and collected by netting. Some specimens were dried after preservation in ethanol and mounted on points in the course of the study.

HISTORICAL REVIEW

Skuse (1890) erected the genus *Rhabdomastix* to receive a new species, *R. ostensackeni* Skuse, 1890, from Australia (N.S.W.), based mainly on the wing venation and long male antennae, "nearly twice the length of the entire body" (Skuse, 1890: 828). Alexander (1911) described the genus *Sacandaga* Alexander, 1911 for a new species, *S. flava* Alexander, 1911, from the U.S.A. (New York), now known to be widely distributed in eastern North America (cf. Alexander, 1965), in which the male antennae are quite short, about twice as long as the head (cf. Alexander, 1911, Fig. 1). At that time, Alexander may have not noticed the similarity in the wing venation of his species and that of *R. ostensackeni*. Shortly after, however, Alexander (1912) commenting on *S. flava* again, considered *Rhabdomastix* and *Sacandaga* closely related, as, in addition to their wing venation, they are similar in the structure of the male terminalia. He even claimed *Sacandaga* might well be a subgenus of *Rhabdomastix*. Short diagnoses were given of the two taxa in the same paper (Alexander, 1912), with one of the distinguishing characters, listed as the first and evidently regarded as the most significant, being the length of the male antennae. Alexander (1914a) described the first Neotropical *Rhabdomastix*, *R. illudens* Alexander, 1914, from Bolivia, a species of quite bizarre appearance, in which the male antennae are extremely long, "between four and five times as long as the body", and "fore and middle trochanters long and slender" (Alexander, 1914a: 210). He classified the species in "*Rhabdomastix (Rhabdomastix)*", which indicated that, first, he had accepted his already announced (Alexander, 1912) lowering in rank of *Sacandaga* and that, second, of the two possibilities available, the subgenera *Rhabdomastix* s. str. and *Sacandaga*, he chose the former for his species. Subsequently, Alexander established several dozen *Rhabdomastix* species from all zoogeographic regions, mostly classified in the above two subgenera, based again mainly on the length of the male antennae. However, in examining the world fauna he was faced with species highly diverse in the length of their antennae. Hence, the subgeneric criterion was quite arbitrarily set by him as antennae longer than the body in *Rhabdomastix* s. str. and shorter than the body in *Sacandaga* (cf. Alexander, 1929). The matter became still more confused when in his comprehensive treatment of the Baltic amber craneflies, Alexander (1931) introduced another subgenus in *Rhabdomastix*, *Palaeogonomyia* Meunier, 1899, for species in which the male antennae are "a little shorter than the body" (Alexander, 1931: 111), establishing the Lower Oligocene *Gonomyia pulcherrima* Meunier, 1906 as the type species of the subgenus by subsequent designation. Shortly after, Alexander (1932) assigned, with some doubts, his new species, *R. omeina* Alexander, 1932, from China (Szechwan = Sichuan), in which the male antennae are "about two-thirds the length of wing" (Alexander, 1932: 395), to the subgenus *Palaeogonomyia* as the first (and actually the last) recent species.

The fact that a new species, *R. margarita* Alexander, 1940, from the U.S.A. (Tennessee), in which the male antennae are "elongate, only a little shorter than the entire body" (Alexander, 1940b: 639), was not placed in a subgenus and classified simply as *Rhabdomastix*, indicates uncertainty about the limits of the subgenera within the genus. Only in discussing this species was *Palaeogonomyia* mentioned as a possible subgenus; this idea, however, was immediately followed by a note indicating a preference "to drop these various subgeneric groups" (Alexander, 1940b: 640). Yet subsequently, Alexander, in describing further species, still distinguished between *Rhabdomastix* s. str. and *Sacandaga*, just leaving some species unplaced as to the subgenus.

The classification of *Rhabdomastix* in three subgenera, *Rhabdomastix* s. str., *Palaeogonomyia* and *Sacandaga*, based on the length of male antennae, was revived by Savchenko (1976, 1982, 1989) who (Savchenko, 1976) affirmed the European *R. hirticornis* (Lackschewitz, 1940) as *Palaeogonomyia*, and described another species in this subgenus, *R. leucophaea* Savchenko, 1976, from Transcaucasia (Azerbaijan). Thus, this classificatory concept passed into the Catalogue of Palaearctic Diptera (Savchenko et al., 1992).

RELATIONSHIPS OF *RHABDOMASTIX*

Because of its wing venation, especially the lack of R_2 (= cross-vein r) and the oblique to vertical position of R_3 (cf. Figs 4–6), *Rhabdomastix* was placed originally close to *Gonomyia* Meigen, 1818 (cf. e.g. Alexander, 1911, 1919). Later, it was believed to have affinities with *Erioptera* and related genera distinguished by a large meron, so Alexander (e.g. 1947b) ascribed it to his subtribe Eriopteraria represented, e.g., by *Erioptera* Meigen, 1803, *Ormosia* Rondani, 1856, *Molophilus* Curtis, 1833 and others. At the same time he suggested *Rhabdomastix* is related to the mostly tropical genera *Atarba* Osten Sacken, 1869 and *Ischnothrix* Bigot, 1888, commonly placed in the Limnophilinae (= Hexatominae; a tribe in Alexander's concept), subsequently united in the single genus, *Atarba* (cf. Alexander, 1948) and recently placed in the Chioneinae (= Eriopterinae, Eriopterini) (Starý, 1992; Theischinger, 1994). Edwards (1938) characterized *Rhabdomastix* as a genus connecting the "*Gonomyia*" and "*Erioptera* groups" in his tribe Eriopterini. Savchenko (1982, 1989) and Savchenko et al. (1992) classified this genus in the tribe Gonomyiini (mis-spelt Gonomyini by Savchenko, 1982 and 1989).

However, there are some reasons for revising the above concepts. A few apomorphies, such as a medially divided male tergite 9 and peculiarities in the structure of the male terminalia, suggest that *Rhabdomastix*, possibly together with *Atarba*, could be placed in the tribe Chioneini (= Cladurini), as delimited by Savchenko (1982) (see also the subtribe Cladurariа in the sense of Alexander, 1947a, and other papers). A large meron and three sclerotized spermathecae in females may support this, although the latter feature is not an apomorphy. In any case, the structure of the male terminalia in *Rhabdomastix* is strikingly similar in general plan to that in *Neolimnophila* Alexander, 1920, sharing many details, including presence and position of slender elements variously referred to as parameres or interbases in the descriptive literature (see below under *Rhabdomastix*). Closer study is necessary to elucidate the relationships of *Rhabdomastix*.

SUBGENERIC CLASSIFICATION OF *RHABDOMASTIX*

In his more recent papers, Alexander assigned only those species to *Rhabdomastix* s. str. that were distinguished by exceedingly long antennae and modified trochanters, as represented by the Bolivian *R. illudens*, already mentioned and discussed further below. Such species were said to be the "typical *Rhabdomastix*". However, the type species of *Rhabdomastix*, the Australian *R. ostensackeni*, indicates something else. I have examined a specimen of the latter species from the Alexander collection (USNM) [1 ♂, "Eukey, S. Q. / Jan. 1934. / F. E. Wilson", "Rhabdomastix osten-sackeni / Det. C. P. Alexander 193..." (last numeral of the year hand-written and illegible)], kindly loaned by H. B. Williams (USNM). The specimen fits very well the original, detailed description (Skuse, 1890: 828–829), including the structure of the male antennae, which are nearly twice as long as the body. An examination of the antennae, wing venation, male terminalia, etc., revealed unambiguously that *R. ostensackeni* is as closely related to the European *R. hirticornis*, as two species from such remote regions may be. In any case, the two species are, in my opinion, clearly consubgeneric. Similarly, *R. hirticornis*, except for the length of the male antennae, does not differ in any other essential character from other European *Rhabdomastix* species, and they definitely are consubgeneric with the type species of *Sacandaga*, the Nearctic *R. flava*. The figures of the type species of *Palaeogonomyia*, the fossil *Gonomyia pulcherrima* (cf. Alexander, 1931, Figs 149, 150, 154, 156), also do not show any essential differences. R_3 is somewhat oblique in *G. pulcherrima* (cf. Alexander, 1931, Fig. 149), suggesting the condition in *Lurdia* subgen. n. (see below), but some other venational features, such as the length of Sc_1 and the shape of the discal cell, clearly indicate that *Palaeogonomyia* cannot be identical with the latter. The position of R_3 varies from vertical to oblique even in recent species of *Rhabdomastix* s. str. (sometimes even within a single species).

Consequently, *Rhabdomastix* Skuse, 1890, *Palaeogonomyia* Meunier, 1899 and *Sacandaga* Alexander, 1911 are considered here to be subjective synonyms. The length of male antennae often is highly variable within genera and subgenera of the chioneine Limoniidae, and this character cannot constitute a reason for separation at this level.

On the other hand, the so-called *lurida* group, previously assigned to the subgenus *Sacandaga*, is described here as a new subgenus, *Lurdia* subgen. n.

Edwards (1938) described *Rhabdomastix inclinata* Edwards, 1938 from Great Britain, and having examined some of Loew's type specimens stressed its close relationship with *Gonomyia lurida* Loew, 1873, described from Germany. Somewhat later, Lackschewitz (1940) classified the latter species in *Rhabdomastix* (*Sacandaga*) and listed additional limited material from Austria and northern Italy. *Rhabdomastix lurida* has since been recorded also from other European countries (cf. Savchenko et al., 1992). Alexander (1940a) described *R. luridoides* Alexander, 1940, from northern Korea, classifying it in the subgenus *Sacandaga* and stating it was allied to the western Palaearctic *R. lurida* and *R. inclinata*. Here, for the first time, the "*lurida* group" denoted this species cluster. More recently, *R. luridoides* was recorded also from the Russian Far East (Savchenko et al., 1992). Alexander (1940a) specified some characters uniting the group, and mentioned another species from western North America. This species was described subsequently (Alexander, 1943) from the U.S.A. (Wyoming) as *R. neolurida* Alexander, 1943, and a subspecies was established at the same time, *R. neolurida setigera* Alexander, 1943, from the U.S.A. (Colorado). The species was later recorded from an additional U.S. state (Alaska) and from Canada (Alberta, British Columbia), and the subspecies elevated to full specific rank and recorded from Oregon (Alexander, 1954, 1965). Another subspecies, *R. neolurida flaviventris* Alexander, 1964,

from the U.S.A. (California), was added by Alexander (1964), possibly also a valid species. The close relationship of this group of six species-group taxa was known. As follows from the diagnosis below, this group differs considerably from *Rhabdomastix* s. str. in a number of both external and genital characters, which together justify proposing a new subgenus. In addition, the two subgenera differ in larval characteristics (cf. Hynes, 1969; Podeniene, 2001).

Apart from *Lurdia* subgen. n. and *Rhabdomastix* s. str., which will be defined and their European species revised consecutively, there are two other morphologically significant groups within the genus *Rhabdomastix* that should be mentioned.

(1) Species centred around the Bolivian *R. illudens* (see under Historical review and in this section above) are among the most curious Limoniidae due to the enormous length of their male antennae. Although far beyond the scope of this paper, the group is mentioned here because of its exceptional morphology and to give a better insight into the classificatory changes presented. The group may be characterized by the following features, as specified in the relevant literature and confirmed by a specimen I examined of an unidentified species near *R. isabella* Alexander, 1927 (1♂, "Venezuela - Rio Negro / NP Tamá (Tachiva) / 16.06.1987 / leg. T. Pyrez"), which was kindly provided by Dr. W. Krzemiński (Kraków):

Male antenna extremely long, from three to five times as long as body. Scape enormously enlarged, barrel-shaped. Pedicel small, very short. First flagellomere subequal to, to longer than second; following flagellomeres progressively lengthened and more slender towards apex of antenna, distal ones very long. Subterminal flagellomere longest, subequal in length to entire body; terminal flagellomere quite minute. (Alexander did not specify the number of antennal segments; I counted 13 flagellomeres in the specimen I examined, including the minute terminal one). Wing venation much as in *Rhabdomastix* s. str., with R_3 short, rather erect, sometimes virtually vertical in position, with discal cell hexagonal and with distal sections of M_{1+2} and M_3 strongly arched. Legs with fore and mid trochanters slender, conspicuously elongate (about twice as long as coxae, or more, in the specimen I examined). Male terminalia usual for *Rhabdomastix* s. str.

The group comprises about eleven Neotropical and Oriental species, and one from the southern Nearctic, viz. *R. nuttingi* Alexander, 1950, from the southern U.S.A. (Arizona), all classified in the subgenus *Rhabdomastix* s. str. The status of this extralimital group cannot be solved in detail in this paper. In any case, it should be emphasized that the group is cladistically closer to *Rhabdomastix* s. str. than is *Lurdia* subgen. n., and is here considered a highly apomorphic offshoot of *Rhabdomastix* s. str., but not deserving of subgeneric status.

(2) Alexander (1914b) transferred "*Goniomyia*" (*Empeda*) *caudata* Lundbeck, 1898, described from a single female collected in Greenland, to *Rhabdomastix* and classified it in the subgenus *Sacandaga*, listing additional material from Canada (British Columbia). Later (Alexander, 1916), he considered the British Columbian specimens to be distinct from *R. caudata* and described a new species, *R. monticola* Alexander, 1916. Subsequently, Alexander named further species, viz. *R. subcaudata* Alexander, 1927, from Canada (Alberta), *R. subarctica* Alexander, 1933, from Canada (Quebec), and *R. leptodoma* Alexander, 1943, from the U.S.A. (Colorado), all classified in the subgenus *Sacandaga* and assigned to the group around *R. caudata*. Additional records of *R. caudata, R. monticola, R. subcaudata* and *R. leptodoma* were published by Alexander (1965), those of *R. caudata* in detail by Mannheims & Theowald (1971). In Europe, Lackschewitz (1933), revising Siebke's collection, examined three of the four females described as *Limnobia parva* Siebke, 1863 from Norway. He classified the species in "*Gonomyia* (*Rhabdomastix*)", and synonymized it with *G.* (*R.*) *schistacea* (Schummel, 1829), often listed in the literature at that time, but now considered a doubtful species. Edwards (1938) recorded *Rhabdomastix parva* from Great Britain, but this was a misinterpretation (cf. Tjeder, 1967). Tjeder (1964b) examined one of the syntypes of *R. parva*, designated it as the lectotype and presented a redescription with detailed illustrations of the female terminalia. The species, as presently known, is restricted to northern Europe, and recorded from Norway, Sweden, Finland and Iceland (Savchenko et al., 1992). The group may be recognized mainly on wing characters, as described below, based on the relevant literature and material of *R. parva* (5 ♀, "2.7.1985 Norwegen / 15 km N Tynset / hygropetrische Stellen / H. Mendl leg.") kindly provided by Dr. H. Mendl (Kempten/Allgäu):

Wing venation somewhat reminiscent of *Cheilotrichia* (*Empeda*). Sc_1 ending about opposite fork of Rs. Sc_2 sometimes atrophied. R_2 preserved, although sometimes less distinct than other veins. R_3 short, more or less oblique, but not as erect as in *Rhabdomastix* s. str. Discal cell small, pentagonal. Distal sections of M_{1+2} and M_3 only slightly arched. Wing with stigma distinct in *R. monticola, R. subcaudata, R. subarctica* and *R. leptodoma*, lacking in *R. parva*.

So far only the above six species are known to belong to this group, which is boreal in distribution. Based on the above wing characters, the group is closer to *Lurdia* subgen. n. than to *Rhabdomastix* s. str., differing from both in that R_2 is more or less preserved. This represents a plesiomorphic state. Further distinctions, may be found in the structure of the male and female terminalia. Unfortunately, only a single illustration of the male hypopygium is available (*R. leptodoma*: Alexander, 1943, Fig. 26). According to this, the outer gonostylus is smooth, bidentate at apex, whereas it is densely spinulose and simple at apex in other *Rhabdomastix*. The so-called interbases are present in *R. leptodoma* as pale rods, but the aedeagal complex is not detailed in the figure. The female terminalia share distinct, sclerotized spermathecae with other *Rhabdomastix*, a clear plesiomorphic character, but other internal structures, such as the infra-anal (supravaginal) plate and genital fork (vaginal apodeme) are markedly different (cf. Tjeder, 1964b, Fig. 4). Although the group is related to *Rhabdomastix*, its rank and position remain in question. Therefore, *R. parva* is omitted from the present revision, mainly because only females are known.

Genus *Rhabdomastix* Skuse, 1890

Rhabdomastix Skuse, 1890: 828 (as genus). Type species: *Rhabdomastix ostensackeni* Skuse, 1890; monotypy. – Alexander, 1912: 71 (as genus, diagnosis); Alexander, 1931: 111 (as genus, fossil species); Edwards, 1938: 112 (as genus, diagnosis, synonymy with *Sacandaga*, British species, key); Lackschewitz, 1940: 55 (as subgenus of *Gonomyia*, European species); Alexander, 1947b: 318 (as genus, Neotropical species); Alexander, 1965: 76 (as genus, Nearctic catalogue); Hynes, 1969: 229 (as genus, North American species, larvae and pupae); Alexander & Alexander, 1970: 154 (as genus, Neotropical catalogue); Alexander & Alexander, 1973: 207 (as genus, Oriental catalogue); Hutson, 1980: 85 (as genus, Afrotropical catalogue); Savchenko, 1982: 269 (as genus, diagnosis, Ukrainian species, key); Oosterbroek & Jonas, 1986: 164 (as genus, Australian/Oceanian catalogue); Oosterbroek, 1989: 111 (as genus, Australasian/Oceanian

catalogue); Savchenko. 1989 (as genus, diagnosis, U.S.S.R. species); Savchenko et al., 1992: 314 (as genus, Palaearctic catalogue).

Palaeogonomyia Meunier, 1899: 359 (as genus). Type species: *Gonomyia pulcherrima* Meunier, 1906 (fossil); subsequent designation by Alexander, 1931: 112. – Alexander, 1931: 111 (as subgenus of *Rhabdomastix*, diagnosis, fossil species, designation of type species, key); Savchenko, 1982: 274 (as subgenus of *Rhabdomastix*, diagnosis); Savchenko, 1989: 262 (as subgenus of *Rhabdomastix*, diagnosis, U.S.S.R. species); Savchenko et al., 1992: 314 (as subgenus of *Rhabdomastix*, Palaearctic catalogue). – **syn. nov.**

Sacandaga Alexander, 1911: 349 (as genus). Type species: *Sacandaga flava* Alexander, 1911; monotypy. – Alexander, 1912: 71 (tentatively placed as subgenus of *Rhabdomastix*, diagnosis); Edwards, 1938: 112 (synonymy with *Rhabdomastix*); Lackschewitz, 1940: 56 (rank uncertain, European species); Alexander, 1947b: 318 (as subgenus of *Rhabdomastix*, diagnosis, Neotropical species); Alexander, 1965: 47 (as subgenus of *Rhabdomastix*, Nearctic catalogue); Alexander & Alexander, 1970: 155 (as subgenus of *Rhabdomastix*, Neotropical catalogue); Alexander & Alexander, 1973: 208 (as subgenus of *Rhabdomastix*, Oriental catalogue); Hutson, 1980: 85 (as subgenus of *Rhabdomastix*, Afrotropical catalogue); Savchenko, 1982: 276 (as subgenus of *Rhabdomastix*, diagnosis, Ukrainian species, key); Oosterbroek & Jonas, 1986: 164 (as subgenus of *Rhabdomastix*, Australian /Oceanian catalogue); Oosterbroek, 1989: 111 (as subgenus of *Rhabdomastix*, Australasian/Oceanian catalogue); Savchenko, 1989: 264 (as subgenus of *Rhabdomastix*, diagnosis, U.S.S.R. species); Savchenko et al., 1992: 315 (as subgenus of *Rhabdomastix*, Palaearctic catalogue).

Lurdia **subgen. n.**, see below as subgenus.

Diagnosis. Small to medium-sized species. Head. Male antenna 16-segmented, of variable length, from very short, about twice as long as head, to notably long, nearly twice as long as body. Flagellomeres variously shaped according to length of antenna, oval, spindle-shaped or moderately elongate, decreasing in size towards apex of short antenna, or cylindrical, rather long, subequal in length, with terminal flagellomere of long antenna very small.

Thorax. Anterior pits, as termed so by Edwards (1938: 112), positioned just near anterior margin of prescutum. Pleuron bare, with meron solid and large, widely separating mid and hind coxae. Wing hyaline, sometimes variously tinged, stigma and other wing pattern lacking in European species. Wing venation (cf. Figs 4–6): Sc_1 ending from shortly beyond origin of Rs to shortly before fork of Rs. Sc_2 slightly preserved near tip of Sc_1, or entirely lacking. R_2 (= cross-vein r) always lacking. R_3 short, considerably shifted distally, rather short and straight, from oblique to vertical. Discal cell comparatively small, pentagonal or hexagonal, with m-cu attached at its mid-length. Legs with mid and hind coxae separate, corresponding to enlarged meron, and with fore and mid trochanters slightly lengthened, subequal in length to coxae. Male tarsal claws comparatively long, about half length of last tarsomere, arolium distinct.

Abdomen. Male terminalia: Segment 9, forming so-called basal ring, interrupted in middle of its dorsal side. Gonocoxite simple, cylindrical. Outer gonostylus arched, heavily sclerotized and darkly pigmented, densely spinulose, especially at outer margin, terminating in curved apical spine, exceptionally blunt, without spine. Inner gonostylus fleshy, mostly pale, setose, generally conical, narrowed distally. Distinct interbase present, generally slender, rod-like or sword-like, variously shaped at apex, usually crossing its counterpart above aedeagal complex. Parameres short and membranous, fused to each other to produce a shelf below aedeagus. Female terminalia with cercus comparatively long and slender; internal structures distinguished by two or three distinct, sclerotized and darkly pigmented spermathecae.

Discussion. Generally, the above diagnosis is intended to cover European species, but it may well fit other *Rhabdomastix*, except for groups (1) and (2) as defined above (Subgeneric classification of *Rhabdomastix*).

The male terminalia of *Rhabdomastix* are characterized by possessing a pair of slender elements attached to the dorsal inner base of the gonocoxites and usually crossing each other above the aedeagal complex (cf. Fig. 7, ib). These normally were referred to as the parameres (gonapophyses) in the descriptive literature. However, Alexander (1943) was not certain whether they were homologous with the parameres of other Limoniidae and preferred to call them interbases. The latter term is used here. The term paramere is reserved for a different structure, more intimately related to the aedeagus (cf. Figs 7–8, ib, pm).

The following combination of characters appears to be significant for distinguishing the genus: Anterior pits situated just near anterior margin of prescutum; pleuron with meron large, widely separating mid and hind coxae; wing venation with R_2 entirely lacking, R_3 short, shifted distally, from oblique to vertical, and with m-cu attached at mid-length of discal cell; male terminalia with a pair of slender, usually crossed interbases; female terminalia with distinct spermathecae (2–3).

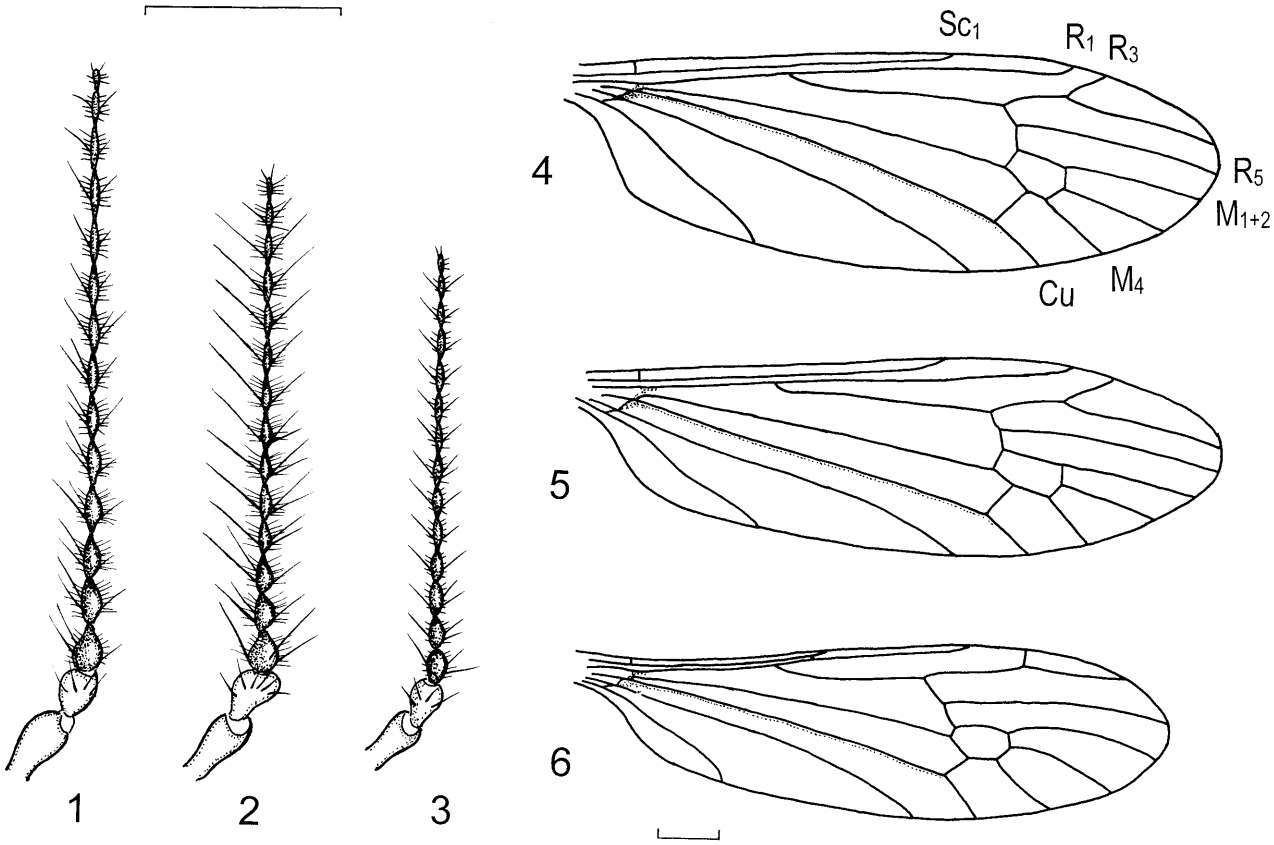
Distribution. Worldwide.

Subgenus *Lurdia* subgen. n.

Type species. *Gonomyia lurida* Loew, 1873; present designation.

Diagnosis. Predominantly medium-sized species. Head. Male antenna (cf. Figs 1–3) dark, of medium length, subequal to or slightly shorter than combined length of head and thorax. Male flagellomeres, especially proximal ones, mostly more or less spindle-shaped, narrowed at each end, decreasing in breadth towards apex of antenna. First flagellomere pear-shaped, distal ones elongate, terminal one shorter than penultimate. Setae on antenna well differentiated into long, stiff verticils and shorter, delicate, rather dense, suberect pubescence. Female antenna with flagellomeres oval to elongate. Palpus with terminal segment distinctly longer than penultimate.

Thorax. Wing venation (cf. Figs 4–5): Sc_1 long, ending shortly before fork of Rs. Sc_2 lacking. R_3 oblique, from one third to one fourth length of R_4, forming with R_4 angle of about 45 degrees. Discal cell generally pentagonal, with proximal section of M_{3+4} (forming lower side of



Figs 1–3. Male antenna. 1 – *Rhabdomastix* (*Lurdia*) *sublurida* sp. n. (paratype, Czech Republic: Karlov); 2 – *R.* (*L.*) *robusta* sp. n. (paratype, Czech Republic: Branná); 3 – *R.* (*L.*) *falcata* sp. n. (paratype, Switzerland: Il Fuorn).

Figs 4–6. Male wing. 4 – *R.* (*L.*) *sublurida* sp. n. (paratype, Czech Republic: Karlov); 5 – *R.* (*L.*) *robusta* sp. n. (paratype, Czech Republic: Branná); 6 – *R.* (s. str.) *subparva* Starý, 1971 (Czech Republic: Vyšní Lhoty). Scale bars = 0.5 mm.

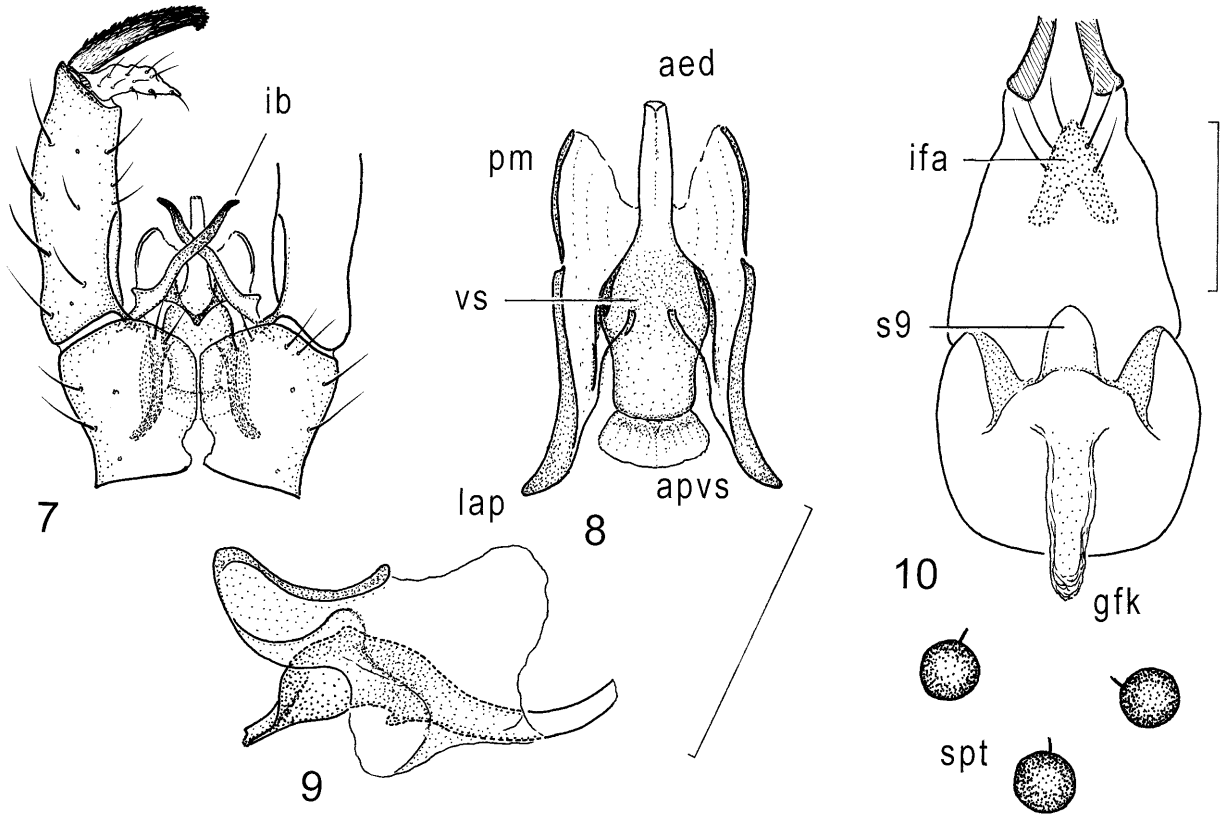
discal cell) only slightly angled near mid-length, at attachment of m-cu. Distal sections of M_{1+2} and M_3 (outside distal cell) nearly straight.

Abdomen. Male terminalia (cf. Figs 7–9 and others): Segment 9 broadened posteriorly, excised medially at posterior margin dorsally, less so ventrally. Gonostyli generally longer than those in *Rhabdomastix* s. str., inner one sometimes tending to be flattened and darkened. Interbase sclerotized and blackened distally, sword-like or spine-like, curved, acute at tip, connected to its counterpart through membraneous V-shaped strip at about one third length. Female terminalia (cf. Figs 10, 18 and others) with cercus and hypogynial valve considerably elongate, the former very slender, about twice length of tergite 10, slightly upturned and pointed at apex. Spermathecae three in number, spherical, darkly pigmented, subequal in size and shape.

Etymology. The name of this new subgenus, *Lurdia*, is an anagram of *lurida* (type species); gender feminine.

Included species. *Rhabdomastix (Lurdia) falcata* sp. n. (Switzerland, Germany, Bulgaria), *R.* (*L.*) *furva* sp. n. (Slovakia), *R. inclinata* Edwards, 1938 (Great Britain, Czech Republic, Slovakia), *R.* (*Lurdia*) *loewi* sp. n. (Switzerland, Germany Austria, Italy), *Gonomyia lurida* Loew, 1873 (Switzerland, Germany, Italy, Bulgaria), *Rhabdomastix* (*Sacandaga*) *luridoides* Alexander, 1940 (northern Korea, Russian Far East), *R.* (*Lurdia*) *mendli* sp. n. (Switzerland, Germany, Italy), *R.* (*Sacandaga*) *neolurida* Alexander, 1943 (Canada: Alberta, British Columbia; U.S.A.: Alaska, Wyoming), *R.* (*S.*) *neolurida flaviventris* Alexander, 1964 (U.S.A.: California), *R.* (*Lurdia*) *robusta* sp. n. (Czech Republic, Slovakia), *R.* (*Sacandaga*) *setigera* Alexander, 1943 (U.S.A.: Colorado, Oregon), *R.* (*Lurdia*) *sublurida* sp. n. (Czech Republic, Slovakia), *R.* (*L.*) *tatrica* sp. n. (Slovakia).

Discussion. The new subgenus is a well-defined, taxonomically compact and clearly monophyletic group distinguished by numerous external and genital characters. The most obvious external character, or character set, differentiating *Lurdia* subgen. n. from *Rhabdomastix* s. str., is the wing venation (cf. Figs 4–5 and 6). In the former subgenus, Sc_1 is long, R_3 is oblique, from one third to one fourth the length of R_4, the discal cell is generally pentagonal and the distal sections of M_{1+2} and M_3 are nearly straight. In the latter subgenus, Sc_1 is distinctly shorter, R_3 is mostly subvertical and very short, one fifth the length of R_4 or even less in European species, the discal cell is distinctly hexagonal and the distal sections of M_{1+2} and M_3 are considerably arched. Superficially, the venation of the new subgenus is similar to that of the nominotypical subgenus of *Gonomyia* Meigen, 1818, especially in the length and position of R_3 combined with the lack of R_2, it



Figs 7–10. *Rhabdomastix* (*Lurdia*) *lurida* (Loew, 1873) (♂, ♀: Germany: Birksau). 7–9 – male terminalia, general view, dorsal (7), aedeagal complex, dorsal (8) and lateral (9); 10 – female terminalia, internal structures, ventral. Scale bars = 0.25 mm. aed – aedeagus; apvs – apodeme of vesica; gfk – genital fork (vaginal apodeme); ib – interbase; ifa – infra-anal (supravaginal) plate; lap – lateral (parameral) apodeme; pm – paramere; spt – spermathecae; s9 – sternum 9; vs – vesica.

differs in that the cross-vein m-cu is attached near mid-length of the discal cell (retracted, in *Gonomyia* s. str., to the base of the discal cell or even proximal to it).

The male and female terminalia are of the same general type in both subgenera. The males of *Lurdia* subgen. n. differ from those of the other subgenus in that segment 9 is broadened posteriorly and excised medially on posterior margin of its dorsal side (cf. Fig. 7) (generally cylindrical, without any excision in *Rhabdomastix* s. str.). Although tergite 9 is interrupted medially in both subgenera, the interruption is somewhat less evident in *Lurdia* subgen. n., the two parts of the tergite being mostly nearly contiguous and rather firmly connected to each other by a narrow membranous zone or line that may be indistinct against the generally pale colour of that region or the segment. In *Rhabdomastix* s. str., segment 9 often is largely and evenly darkened, and the interruption is wider, hence well evident. Interbases are sclerotized and blackened distally in *Lurdia* subgen. n., sword-like, curved and acute at tip, connected to each other through a membraneous strip (cf. Fig. 7) (pale, membranous rods in *Rhabdomastix* s. str., mostly dilated into variously shaped blades at apex, not interconnected). Female terminalia of *Lurdia* subgen. n. have the cerci and valves considerably elongate, the former very slender, about twice the length of tergite 10 (cf. Fig. 18), whereas the cerci are distinctly shorter in *Rhabdomastix* s. str., at most slightly exceeding the length of tergite 10.

Distribution. Holarctic.

REVISION OF EUROPEAN SPECIES OF THE SUBGENUS *LURDIA* SUBGEN. N.

In this revision of European *Lurdia* species, two species are redescribed, *R.* (*L.*) *lurida* and *R.* (*L.*) *inclinata*, and the lectotype of the former is designated. Descriptions are provided of seven new species, viz. *R.* (*L.*) *mendli* sp. n., *R.* (*L.*) *sublurida* sp. n., *R.* (*L.*) *furva* sp. n., *R.* (*L.*) *loewi* sp. n., *R.* (*L.*) *robusta* sp. n., *R.* (*L.*) *falcata* sp. n. and *R.* (*L.*) *tatrica* sp. n.

Generally, in fresh material or in dry-mounted specimens, two types of colouration may be distinguished on the pleura of European *Lurdia* species, orange-yellow to yellowish brown (*lurida*, *mendli*, *sublurida*, *falcata, tatrica*), or various hues of brown, suffused with grey pruinosity (*inclinata*, *furva*, *loewi*, *robusta*). This distinction is useful as the first step in identification. However, in material preserved in ethanol the colouration rapidly unifies into various hues of yellow (according to the stage of maceration), regardless of the original tinge. No substantial infraspecific variation in body colouration, geographical, sexual or individual was observed.

Although the male terminalia in this subgenus are relatively uniform, they are nevertheless species-specific,

whereas the female terminalia are less distinctive. Internal structures of the female terminalia are here illustrated for each species (except *falcata*). Distinctions that may be inferred from the figures (cf. Fig. 10 and other relevant figures), such as those showing the outline of the infra-anal (supravaginal) plate and the number of setae on its posterior margin, and the shape of the sternum 9 (termed fused valvae of 9th sternum by Tjeder, 1964a) and the genital fork (vaginal apodeme), including adjacent structures, are not sufficiently elucidated. These structures may vary to a certain degree and warrant further study. So far, the only useful genital feature in females appears to be the size of the spermathecae combined with the length of sclerotized parts of the ducts.

In general, the distribution of *Lurdia* species in Europe is inadequately known. Literature records of the two species, *R.* (*L.*) *lurida* and *R.* (*L.*) *inclinata* (summarized by Savchenko et al., 1992) are few and largely suspect because of the seven new species.

All European *Lurdia* species are presumed to be restricted to, or at least to prefer, mountainous areas (least so perhaps *inclinata*). The material studied suggests a marked difference in the species composition in the Alps and some other, more southerly situated European mountains on the one hand, and more northern mountainous territories within the Czech Republic and Slovakia, on the other. Complete substitution of species occurs in the two regions. Four species, viz. *lurida*, *mendli*, *loewi* and *falcata*, occur in the Alps and south of there, while five species, viz. *inclinata*, *sublurida*, *furva*, *robusta* and *tatrica*, occur north of the Alps. Surprisingly, all the four Alpine species occur syntopically at Birksau, Allgovian Alps, Germany. The restriction to mountains may account for the great deal of vicariance within European *Lurdia* species.

KEY TO EUROPEAN SPECIES OF THE SUBGENUS *LURDIA* SUBGEN. N.

1 Pleuron orange-yellow 2
– Pleuron greyish brown 6
2 Fore femur strongly darkened distally, blackish at tip; outer gonostylus long and considerably arched (Figs 36, 39); inner gonostylus very broad, trapezoid, with tuft of setae near base (Figs 36, 39) 3
– Fore femur moderately darkened distally; outer gonostylus shorter, gently arched (Figs 7, 15, 20); inner gonostylus sparsely covered with setae (Figs 7, 15, 20) 4
3 Male antenna medium in length, with flagellomeres spindle-shaped (cf. Fig. 1); outer gonostylus considerably tapered distally into slender apical spine (Fig. 39); aedeagus medium in length (Fig. 40–41) ..... *R.* (*L.*) *tatrica* sp. n.
– Male antenna short, with flagellomeres rather oval to elongate (Fig. 3); outer gonostylus slightly tapered distally into stout apical spine (Fig. 36); aedeagus short (Figs 37–38) ..... *R.* (*L.*) *falcata* sp. n.
4 Outer gonostylus with apical spine slender, moderately curved (Fig. 15); aedeagus very broad, abruptly narrowed before apex (Figs 15–16); vesica bulbous, without apodeme (Figs 16–17); spermathecae large, with sclerotized parts of ducts short (Fig. 16) ..... *R.* (*L.*) *mendli* sp. n.
– Outer gonostylus with apical spine stout, recurved (Figs 7, 20); aedeagus slender (Figs 8–9, 21–22); vesica with short apodeme (Figs 8, 21) 5
5 Inner gonostylus pale, slender (Fig. 7); aedeagus short (Figs 8–9); spermathecae small, with sclerotized parts of ducts very short (Fig. 10) ..... *R.* (*L.*) *lurida*
– Inner gonostylus weakly darkened and a little broader (Fig. 20); aedeagus longer (Figs 21–22); spermathecae medium in size, with sclerotized parts of ducts long, exceeding spermathecal diameter (Fig. 23) ..... *R.* (*L.*) *sublurida* sp. n.
6 Male antenna with verticils on flagellomeres long, about twice length of respective segments (Fig. 2); inner gonostylus conspicuously darkened and very broad, with tuft of setae near base (Fig. 32) ..... *R.* (*L.*) *robusta* sp. n.
– Male antenna with verticils on flagellomeres shorter, slightly exceeding length of respective segments (cf. Fig. 1); inner gonostylus pale and more slender, sparsely covered with setae (Figs 11, 24, 28) 7
7 Male antenna shorter than combined length of head and thorax; inner gonostylus rather broad (Fig. 28); aedeagus long, strongly upturned (Figs 29–30); spermathecae large (Fig. 31) ..... *R.* (*L.*) *loewi* sp. n.
– Male antenna subequal to combined length of head and thorax (cf. Fig. 1); inner gonostylus slender, conical (Figs 11, 24); aedeagus short, gently upturned (Figs 12–13, 25–26); spermathecae small (Figs 14, 27) 8
8 Tergite 9 deeply excised (Fig. 11); vesica narrow (Fig. 12); spermathecae small, with sclerotized parts of ducts long, distinctly exceeding spermathecal diameter (Fig. 14) ..... *R.* (*L.*) *inclinata*
– Tergite 9 moderately excised (Fig. 24); vesica very broad (Fig. 25); spermathecae medium in size, with sclerotized parts of ducts short, about half diameter of spermatheca (Fig. 27) ..... *R.* (*L.*) *furva* sp. n.

Rhabdomastix (*Lurdia*) *lurida* (Loew, 1873)

(Figs 7–10)

Gonomyia lurida Loew, 1873: 62 (description).

Gonomyia lurida: Strobl, 1898: 296 (faun. record); Strobl, 1910: 277 (faun. record); Kertész, 1903: 300 (Palaearctic catalogue); Kuntze, 1914: 371(key), Fig. 25 (wing); Pierre, 1924: 108, 109 (diagnosis, key), Fig. 407 (wing).

Rhabdomastix lurida: Edwards, 1938: 113, 117 (key, note); Bangerter, 1943: 21 (faun. record); Bangerter, 1946: 192 (faun. record); Mannheims, 1964: 7 (faun. record); Starý & Rozkošný, 1970: 116 (faun. record, note), Fig. 70 (male terminalia) [misinterpretation, see *tatrica* for associated references]; Hartig, 1971: 134 (faun. record); Starý & Geiger, 1998: 73 (list).

Gonomyia (*Rhabdomastix*) *lurida*: Lackschewitz, 1940: 56 (alternatively as *Gonomyia* (*Sacandaga*), faun. record), Textfig. 2 (wing).

Rhabdomastix (Sacandaga) lurida: Starý, 1970: 44 (list); Mendl, 1977: 116 (faun. record); Mendl, 1979: 363 (faun. record, see Bangerter, 1943: 21); Savchenko 1982: 278 (redescription, faun. record, key), Fig. 134 (male terminalia); Erhan-Dinca & Ceianu, 1986: 89 (faun. record); Franz, 1989: 253 (faun. record); Mendl & Reusch, 1989: 434, 445 (list); Savchenko, 1989: 266 (faun. record), Fig. 133/4 (male terminalia); Savchenko et al., 1992: 316 (Palaearctic catalogue); Oosterbroek & Starý, 1995: 7 (list); Starý & Oosterbroek, 1996: 72 (faun. record); Wiedeńska, 1998: 108 (faun. record); Reusch, 1999: 58 (list); Reusch & Oosterbroek, 2000: 160 (list).

Gonomyia laeta: de Meijere 1920: 84 (diagnosis), Tab. 10, Fig. 85 (male terminalia); Pierre, 1924: 107, 108 (diagnosis, key),

Fig. 412 (male terminalia) [in both publications, the figures depict a species of *Lurdia* subgen. n.].

Diagnosis. Pleuron orange-yellow to yellowish brown. Femora darkened distally. Male antenna comparatively long, flagellomeres spindle-shaped, with verticils slightly exceeding length of respective segments. Wing moderately broad. Male terminalia with outer gonostylus gently arched and inner gonostylus pale, rather slender. Aedeagus short, vesica very broad. Female terminalia with spermathecae small and sclerotized parts of ducts very short.

Redescription. Body length 4.5–7.5 mm, wing length 4.5–7 mm.

Colour. Basic colouration orange-yellow to yellowish brown. Prescutum and other dorsal parts of thorax mostly darker, yellowed laterally. Scutellum yellow throughout. Pleuron orange-yellow to yellowish brown, somewhat shiny, restrictedly patterned with pale yellow, especially on dorsopleural membrane. Coxae and trochanters yellow to yellowish brown, fore coxa distinctly darker. Femora yellowish brown, darkened distally. Rest of legs yellowish brown. Abdomen brown.

Head. Male antenna subequal to combined length of head and thorax. Flagellomeres generally spindle-shaped, longest verticils slightly exceeding length of respective segments, pubescence dense, distinct, suberect.

Thorax. Wing moderately broad. Wing venation as for subgenus.

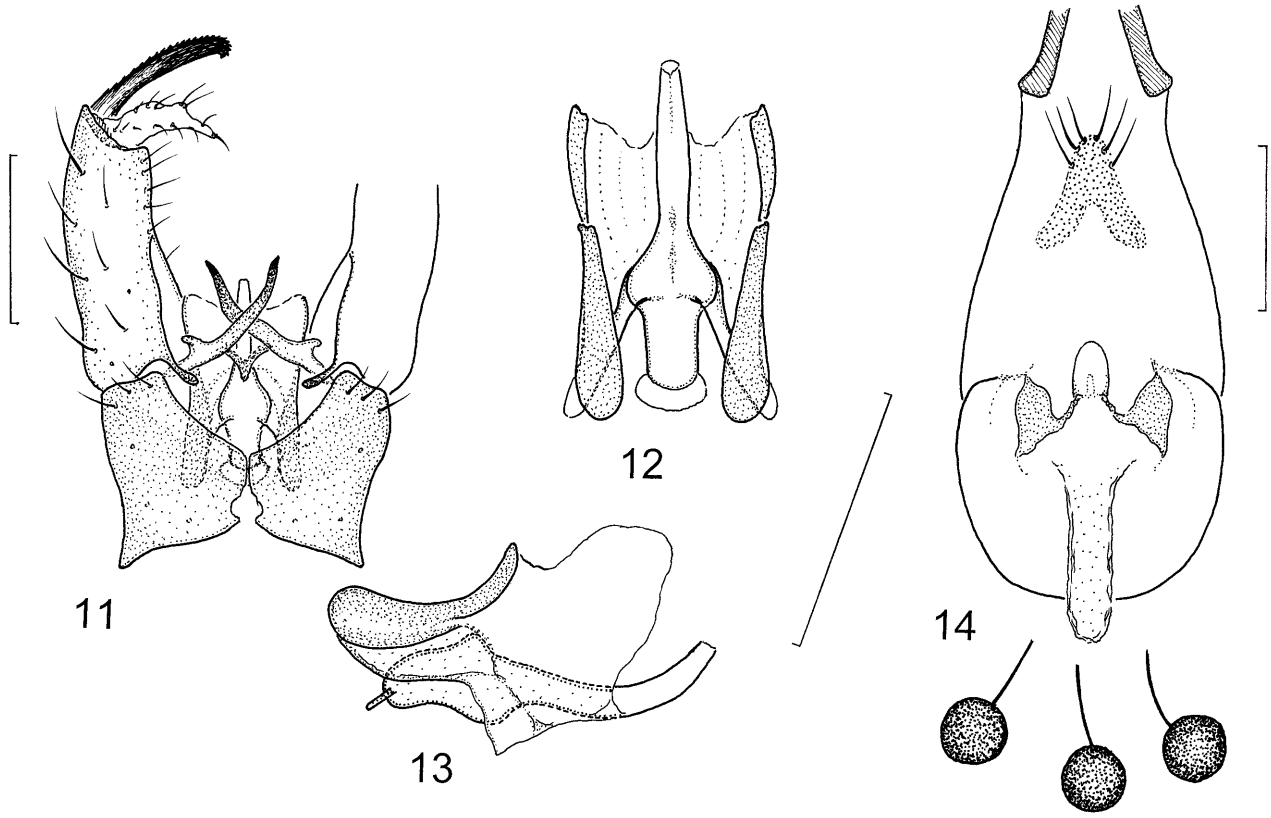
Abdomen. Male terminalia (Figs 7–9) of moderate size. Posterior margin of tergite 9 moderately excised. Gonocoxite slender, with sparse setae. Outer gonostylus slightly more than half length of gonocoxite, gently arched, more or less parallel-sided, somewhat tapered in distal section, with apical spine slightly recurved. Inner gonostylus pale, slender, generally conical, with sparse setae. Aedeagal complex as in Figs 8–9. Aedeagus short and slender, gently upturned. Lower (caudal) part of vesica rather broad, parallel-sided, or even slightly broadened anteriorly, somewhat flattened, with apodeme short and broad, rounded, fan-like. Lateral (parameral) apodeme moderately extending anteriorly beyond vesica. Female terminalia with internal structures as in Fig. 10. Spermathecae small, with sclerotized parts of ducts very short, about one third diameter of spermatheca.

Material examined.

The species was described from unspecified number of specimens from two localities: "Reichenhall, wo ich sie gegen Ende des August fing; vom Herrn Senator von Heyden wurde sie zu Anfang des September am Rhein angetroffen." (Loew, 1873: 64). I have examined four specimens that may be considered syntypes. **Lectotype** ♂ (present designation): Germany, Bad Reichenhall [Bayern] (ZMHB), labelled: "Reichh." (hand-written), "lurida Lw." (hand-written), a small blank violet paper square, "8994" (printed), "Coll. H. Loew" (printed), "Type" (printed, red), "Zool. Mus. Berlin" (printed, yellow). Accordingly labelled as lectotype ("LECTOTYPE / Rhabdomastix (Lurdia) lurida (Loew, 1873) ♂/ J. Starý des. 2002"; printed red label). The specimen is pinned, somewhat discoloured by fading, otherwise in relatively good condition, with right antenna broken off at mid-length and left fore and both hind legs missing. Terminalia dissected and placed in a sealed plastic tube with glycerine, pinned with the specimen. **Paralectotypes**: 1 ♂, 1 ♀ and 1 specimen without abdomen, Germany, Neuenburg [Baden-Würtemberg], Rheininsel (ZMHB), accordingly labelled as paralectotypes. The three paralectotypes all belong to a species different from *R.* (*L.*) *lurida*, which is described here as *R.* (*L.*) *loewi* sp. n., and are listed in more detail under the latter species. To meet the requirement of the Article 74.7.3. of the ICZN (1999) it should be emphasized that the lectotype of *R.* (*L.*) *lurida* is designated here to maintain the current usage of the name for a species with orange-yellow pleura. The type series is mixed, consisting of two species, *R.* (*L.*) *lurida* and *R.* (*L.*) *loewi* sp. n., and the lectotype is more consistent with the original description (" … der Thoraxrücken gegen die Seiten hin … zuweilen ganz und gar schmutzig ziegelroth; die Brustseiten, das Schildchen und der Hinterrücken mehr scherbengelb; … "; Loew, 1873: 62). In *R.* (*L.*) *loewi* sp. n., the pleura are predominantly dark, greyish brown, which is apparent even in the three paralectotypes.

Other material examined (86 ♂, 569 ♀): **Switzerland**: Canton Vaud: Verschiez (540 m), Pt. 564,800/128,250, 14.VII.-31.VIII.1980, 4 ♂, 1.-7.IX.1980, 2 ♂ (Ch. Dufour & W. Geiger leg.; Malaise light trap). Canton Valais: Illarsaz (395 m), 21.VIII-27.VIII.1980, 1 ♂ (M. Haechler leg.). Ulrichen, 28.VII.1979, 7 ♂, 8 ♀ (C. Ruedi leg.; light trap). Canton Uri: Altdorf, middle VII.1980, 1 ♀, IX.-X.1980, 1 ♂, 2 ♀ (L. Rezbanyai leg.; light trap). Canton St. Gallen: St. Gallen - Ost, Schaugenbädli, 21.-27.VII.1980, 1 ♂ (R. Müller leg.; light trap). Canton Ticino: Aurigeno (341 m), 24.V.-20.VII.1980, 7 ♂ (M. Haechler leg.; light trap). Gordevio, middle V.-late VII.1979, 2 ♂, 48 ♀, early VIII.-early XI.1979, 3 ♂, 98 ♀, early VI.-late VII.1980, 33 ♀, early VIII.-early X.1980, 4 ♂, 207 ♀ (L. Rezbanyai leg.; light trap). Gordevio, 23.VI.1979, 1 ♂ (W. Geiger leg.; light trap). Gudo Demanio (210 m), middle VI.-middle IX.1980, 1 ♀ (L. Rezbanyai leg.; light trap). Mairengo (900–950 m), 18.VI.-15.VII.1979, 2 ♂, 23.VII.-12.VIII.1979, 4 ♂ (Ch. Dufour & W. Geiger leg.; Malaise light trap). Vezia, S. Martino (410 m), 3.-9.IX.1979, 1 ♀ (W. Geiger & Ch. Dufour leg.; Malaise light trap). Canton Graubünden: Il Fuorn, P. Nat., 7.-19.VII.1980, 2 ♂, 7.VII.-28.VIII.1980, 6 ♂, 1 ♀ (W. Geiger leg.). Scuol (1200 m), 7.IX.1979, 4 ♂ (Ch. Dufour leg.; light trap). Zernez, PNS, 30.VII.1991, 2 ♂, 1 ♀ (W. Geiger leg.; light trap). (All MHNN; in ethanol). **Germany**: Bayern: Allgäuer Alpen, Birksau, Ringang im Stillachtal (900 m), 3.-9.VI.1974, 1 ♂, 23.-30.VI.1974, 2 ♀, 7.-15.VII.1974, 2 ♂, 12 ♀, 15.-21.VII.1974, 1 ♂, 7 ♀, 21.-25.VII.1974, 1 ♀, 25.-29.VII.1974, 2 ♂, 2 ♀, 1.-4.VIII. 1974, 1 ♂, 8 ♀, 4.-8.VIII.1974, 2 ♂, 10 ♀, 8.-11.VIII.1974, 7 ♀, 11.-15.VIII.1974, 3 ♂, 12 ♀, 15.-18.VIII.1974, 16 ♂, 27 ♀, 18.-22.VIII.1974, 1 ♂, 49 ♀, 5.-8.IX.1974, 7 ♀, 8.-12.IX.1974, 3 ♂, 17 ♀, 15.-19.IX. 1974, 1 ♀, 15.-21. IX.1974, 1 ♀, 21.-26.IX.1974, 1 ♀ (H. Mendl leg.; light trap). (All JSO; in ethanol, several specimens dried from ethanol). **Italy**: Valle d'Aosta: Courmayeur, Mt. Crammont (1200–1400 m), 24.VII.1962, 2 ♀ (exc. Amsterdam). Entrèves, Mt. de la Saxe (1250–1350 m), 26.VII.1962, 1 ♀ (exc. Amsterdam). Friuli – Venezia Giulia: Udine, Tarvisio (750 m), Torrente Bartolo, 12.VIII.1958, 1 ♀ (Br. Theowald & v. d. Goot leg.). (All ZMAN). **Bulgaria**: Pirin Mts, Popina laka (1200 m), 18.VI.1990, 1 ♂ (J. Starý leg.) (JSO).

Discussion. This is the smallest of the European *Lurdia* species, or strictly speaking, a species in which the percentage of small specimens is the highest. From the most similar *R.* (*L.*) *sublurida* sp. n., *R.* (*L.*) *lurida* is practically indistinguishable externally, differing from it in some



Figs 11–14. *Rhabdomastix* (*Lurdia*) *inclinata* Edwards, 1938 (♂, ♀: Czech Republic: Vyšní Lhoty). 11–13 – male terminalia, general view, dorsal (11), aedeagal complex, dorsal (12) and lateral (13); 14 – female terminalia, internal structures, ventral. Scale bars = 0.25 mm.

details in the structure of the male terminalia, such as the shape of the inner gonostylus (broader in *sublurida*) and the length of the aedeagus (considerably longer in *sublurida*) (cf. Figs 7–9 and 20–22). Surprisingly, the two species differ considerably in the female terminalia. Whereas *R.* (*L.*) *lurida* has the smallest spermathecae, i.e., of all the species studied here, with sclerotized parts of ducts very short (Fig. 10), in *R.* (*L.*) *sublurida* sp. n., the spermathecae are of medium size, with a diameter about one and half times that of *R.* (*L.*) *lurida*, and sclerotized parts of the ducts very long, exceeding the spermathecal diameter (Fig. 23). The above features validate that the two forms are separate species.

Distribution. This species was recorded from the following European countries by Savchenko et al. (1992): Austria, Switzerland, Slovakia, Germany, France, Italy, Romania, Ukraine (modified according to the present political frontiers). Subsequently, it was recorded from Poland (Wiedeńska, 1998). With respect to the species described here the above records are unreliable except for that from Germany (type locality), and those from territories north of the Alps almost definitely are for different species. The record from Slovakia pertinent to Fig. 70 (Starý & Rozkošný, 1970) is of *R.* (*L.*) *tatrica* sp. n. Based on the material examined, the occurrence of the species in Switzerland, Germany and Italy is confirmed and a new record for Bulgaria added. *R.* (*L.*) *lurida* is presumed to occur in the Alps and south of there (see above and under *sublurida* below). The specimen of *Lurdia* subgen n. illustrated as "*Gonomyia laeta*" by de Meijere (1920, Fig. 85) is not deposisted in the ZMAN (Oosterbroek, pers. comm.).

Rhabdomastix (*Lurdia*) *inclinata* Edwards, 1938

(Figs 11–14)

Rhabdomastix inclinata Edwards, 1938: 113, 116 (description, key), Text-figs 21a (wing), g (male antenna), 22f (male terminalia).

Rhabdomastix inclinata: Coe, 1950: 52 (key), Figs 23d, f (male terminalia); Tjeder, 1964a: 32 (description of female), Figs 1–4 (female terminalia); Falk, 1991: 139 (faun. record); Rotheray & Robertson, 1993: 4, 17 (faun. record).

Rhabdomastix (*Sacandaga*) *inclinata*: Savchenko, 1982: 278 (redescription, faun. record, key), Fig. 130/2 (wing); Erhan-Dinca & Ceianu, 1986: 89 (faun. record); Savchenko, 1989: 264 (faun. record); Savchenko et al., 1992: 315 (Palaearctic catalogue); Stubbs, 1998: 5 (list).

Diagnosis. Pleuron greyish brown. Femora darkened distally. Male antenna comparatively long, flagellomeres spindle-shaped, with verticils slightly exceeding length of respective segments. Wing moderately broad. Male terminalia with outer gonostylus gently arched and inner gonostylus pale, rather slender. Aedeagus short, vesica narrow. Female terminalia with spermathecae small and sclerotized parts of ducts long.

Redescription. Body length 5–7.5 mm, wing length 6–6.5 mm.

Colour. Basic colouration brown, with greyish pruinosity. Prescutum and other dorsal parts of thorax mostly greyish brown, yellowed laterally. Scutellum yellow throughout. Pleuron mostly greyish brown, somewhat shiny, patterned with pale yellow, especially on dorso-

pleural membrane. All coxae and trochanters concolorous, yellowish brown. Femora yellowish brown, darkened distally, brown at tip. Rest of legs yellowish brown. Abdomen dark greyish brown.

Head. Male antenna subequal to combined length of head and thorax. Flagellomeres generally spindle-shaped, longest verticils slightly exceeding length of respective segments, pubescence dense, distinct, suberect.

Thorax. Wing moderately broad. Wing venation as for subgenus.

Abdomen. Male terminalia (Figs 11–13) rather small compared to entire insect. Posterior margin of tergite 9 deeply and widely excised. Gonocoxite slender, sparsely covered with setae. Outer gonostylus slightly more than half length of gonocoxite, gently arched and more or less parallel-sided, with apical spine slightly recurved. Inner gonostylus pale, slender, generally conical, sparsely covered with setae. Aedeagal complex as in Figs 12–13. Aedeagus short, very slender, gently upturned. Vesica comparatively small, its lower (caudal) part narrow, parallel-sided and cylindrical, or very slightly narrowed anteriorly, with apodeme forming narrow, rounded flange along its anterior margin. Lateral (parameral) apodeme only slightly extending anteriorly beyond vesica. Female terminalia with internal structures as in Fig. 14. Spermathecae small, sclerotized parts of ducts long, distinctly exceeding spermathecal diameter.

Material examined.

The species was described from six males and one female, all from the same locality (Edwards, 1938: 116). I have examined three type specimens. **Holotype** ♂ (original designation): Great Britain, England, [North] Yorkshire, Mulgrave Woods nr. Whitby, 23.VIII.-3.IX.1937 (F. W. Edwards leg.) (BMNH), labelled: "Type" (a red-margined circular label), "Rhabdomastix inclinata Edw. / F.W.Edwards. det. 1938" (partly printed), "N. E. Yorks., Mulgrave Woods. 23.viii.-3.ix.1937. F.W.Edwards. B. M. 1937-562" (printed). The specimen is micro-pinned on a celluloid slide, with only hind right leg missing; left wing broken off and glued to the celluloid slide. Terminalia dissected and placed in Canada balsam on another celluloid slide, pinned with the specimen. **Paratypes**: 1 ♂, 1 ♀ (BMNH), with the same collecting data and mounted in the same manner as the holotype. The male paratype with terminalia placed in a plastic tube with glycerine, pinned with the specimen; the female paratype with a yellow-margined circular label with the inscription "Paratype", and with the preparation of terminalia between celluloid slides (described and illustrated by Tjeder, 1964a).

Other material examined (5 ♂, 5 ♀): **Czech Republic**: Moravia: Vyšní Lhoty nr. Frýdek-Místek [6376], Morávka shores, 13.VII.1995, 1 ♂, 12.VII.1999, 1 ♀ (at light), 19.VII.1999, 2 ♂, 3 ♀ (1 ♂ at light) (J. Starý leg.) (JSO). **Slovakia**: Belianske Tatry Mts, Tatranská Kotlina [6788] (750 m), Belá valley, 29.VII.1974, 1 ♂, 31.VII.1974, 1 ♀, 24.VI.1975, 1 ♂ (J. Starý leg.) (JSO).

Discussion. In general appearance, *R.* (*L.*) *inclinata* is similar to other greyish brown species (*robusta, loewi, furva*), differing from some of them in having comparatively long antennae (shorter in *robusta* and *loewi*), and in that, compared to the entire insect, the hypopygium is relatively small (larger in *robusta* and *loewi*). Further male genital characters include the deep excision on tergite 9 (shallower in *robusta* and *loewi*), the short aedeagus (longer in *robusta* and *loewi*) and the narrow vesica (broader in the other three species, especially in *furva*). Female terminalia have the spermathecae small (subequal in size to *lurida*), but the sclerotized parts of the ducts very long.

Distribution. The species was recorded from Great Britain, Romania and Ukraine (Savchenko et al., 1992). The two latter records could not be confirmed. New records are presented for the Czech Republic and Slovakia.

Rhabdomastix (*Lurdia*) *mendli* sp. n.

(Figs 15–19)

Diagnosis. Pleuron orange-yellow to yellowish brown. Femora darkened distally. Male antenna comparatively long, flagellomeres spindle-shaped, with verticils slightly exceeding length of respective segments. Wing moderately broad. Male terminalia with outer gonostylus gently arched and inner gonostylus pale, rather slender. Female terminalia with spermathecae large and sclerotized parts of ducts very short.

Description. Body length 4.5–7.5 mm, wing length 4.5–7.5 mm.

Colour. Basic colouration orange-yellow. Prescutum and other dorsal parts of thorax darker, yellower laterally. Scutellum yellow. Pleura orange-yellow to yellowish brown, somewhat shiny, restrictedly patterned with pale yellow, especially on dorsopleural membrane. Coxae and trochanters yellow to yellowish brown, fore coxa darker. Femora yellowish brown, darkened distally. Rest of legs yellowish brown. Abdomen brown.

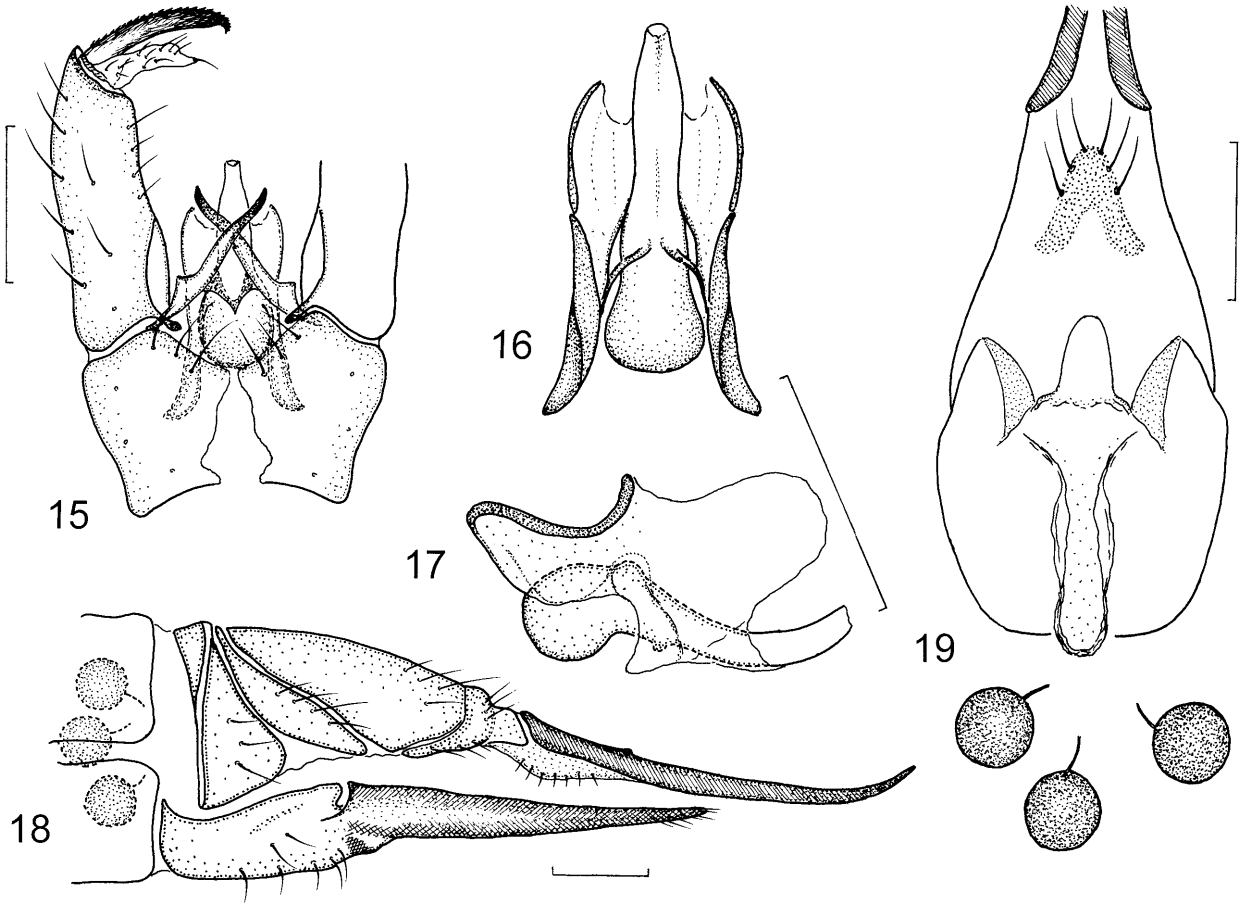
Head. Male antenna subequal to combined length of head and thorax. Flagellomeres generally spindle-shaped, longest verticils slightly exceeding length of respective segments, pubescence dense, distinct, suberect.

Thorax. Wing moderately broad, as in most other species. Wing venation as for subgenus.

Abdomen. Male terminalia (Figs 15–18) of moderate size. Posterior margin of tergite 9 moderately excised. Gonocoxite slender, with sparse setae. Outer gonostylus slightly more than half length of gonocoxite, gently arched, more or less parallel-sided, tapered only before apex, with apical spine slender, not as curved as in other species. Inner gonostylus pale, slender, generally conical, with sparse setae. Aedeagal complex as in Figs 16–17. Aedeagus short, very broad, abruptly narrowed before apex, gently upturned. Lower (caudal) part of vesica very broad, bulbous, without any trace of apodeme. Lateral (parameral) apodeme extending anteriorly beyond vesica. Female terminalia (Fig. 18) with internal structures as in Fig. 19. Spermathecae large, with sclerotized parts of ducts very short, less than half diameter of spermatheca.

Material examined.

Holotype ♂: Germany, Bayern, Allgäuer Alpen, Birksau, Ringang im Stillachtal (900 m), 11.-15.VIII. 1974 (H. Mendl leg.; light trap) (SMOC). The specimen, dried from alcohol, is glued onto a triangular cardboard point; wings somewhat crumpled, mid and hind left legs missing. Terminalia dissected and placed in a sealed plastic tube with glycerine, pinned with the specimen. **Paratypes** (131 ♂, 76 ♀): **Switzerland**: Canton



Figs 15–19. *Rhabdomastix* (*Lurdia*) *mendli* sp. n. (♂: holotype; ♀: paratype, Germany: Birksau). 15–17 – male terminalia, general view, dorsal (15), aedeagal complex, dorsal (16) and lateral (17); 18–19 – female terminalia, general view, lateral (18), internal structures, ventral (19). Scale bars = 0.25 mm.

Valais: Grand St. Bernard (2472 m), 14.-21.VIII.1980, 1 ♀ (M. Haechler leg.; light trap). Ulrichen, 28.VII.1979, 11 ♂, 14 ♀ (C. Ruedi leg.; light trap). (All MHNN; in ethanol). Zermatt env., 6.VII.1996, 1 ♀ (J. Starý leg.) (JSO). Canton Uri: Altdorf, IX.-X.1980, 1 ♂, 2 ♀ (L. Rezbanyai leg.; light trap). Hospental, Südrand (1500 m), early VII.1984, 2 ♂, 1 ♀, early VIII.1984, 1 ♂, 8 ♀, late VIII.1984, 1 ♀, early IX.1984, 1 ♂, 5 ♀, middle IX.1984, 2 ♀ (L. Rezbanyai leg.; light trap). Canton Ticino: Altanca, 14.VIII.1979, 1 ♂, 1 ♀ (W. Geiger; light trap). Fontana, 7.IX.1979, 1 ♂, 3 ♀ (W. Geiger leg.). Canton Graubünden: Il Fuorn, P. Nat., 20.VIII.1978, 1 ♂ (Ch. Dufour leg.). Il Fuorn, P. Nat., 7.VII.-28.VIII.1980, 22 ♂, 7 ♀, 7.-19.VII.1980, 27 ♂, 3 ♀ (W. Geiger leg.). Scuol (1200 m), 7.IX.1979, 5 ♂ (Ch. Dufour leg.; light trap). Val S-charl (2300 m), 26.VII.1981, 1 ♂ (W. Geiger leg.). Zernez, PNS, 30.VII.1991, 4 ♂, 1 ♀ (W. Geiger leg.; light trap). (All MHNN; in ethanol). **Germany**: Bayern: Allgäuer Alpen, Birksau, Ringang im Stillachtal (900 m), 23.-30.VI.1974, 2 ♀, 1.-7.VII.1974, 3 ♂, 1 ♀, 7.-15.VII.1974, 25 ♂, 8 ♀, 21.-25.VII.1974, 3 ♂, 4 ♀, 25.-29.VII.1974, 4 ♂, 5 ♀, 29.VII.-1.VIII.1974, 6 ♂, 1 ♀, 1.-4.VIII.1974, 1 ♀, 11.-15.VIII.1974, 2 ♂, 15.-18.VIII.1974, 8 ♂, 18.-22.VIII.1974, 2 ♂, 2 ♀, 22.-25.VIII.1974, 1 ♀ (H. Mendl leg.; light trap) (JSO, SMOC; in ethanol, 2 ♂ and 1 ♀ dried from ethanol). **Italy**: Valle d'Aosta: Entrèves, Mt. de la Saxe (1250-1350 m), 24.VII.1962, 1 ♀ (exc. Amsterdam) (ZMAN).

Etymology. This new species is named in honour of Dr. Hans Mendl (Kempten/Allgäu, Germany), a specialist on the Limoniidae, who first collected it, and who generously provided the author with his extensive *Lurdia* material from the Allgovian Alps. A noun in genitive singular.

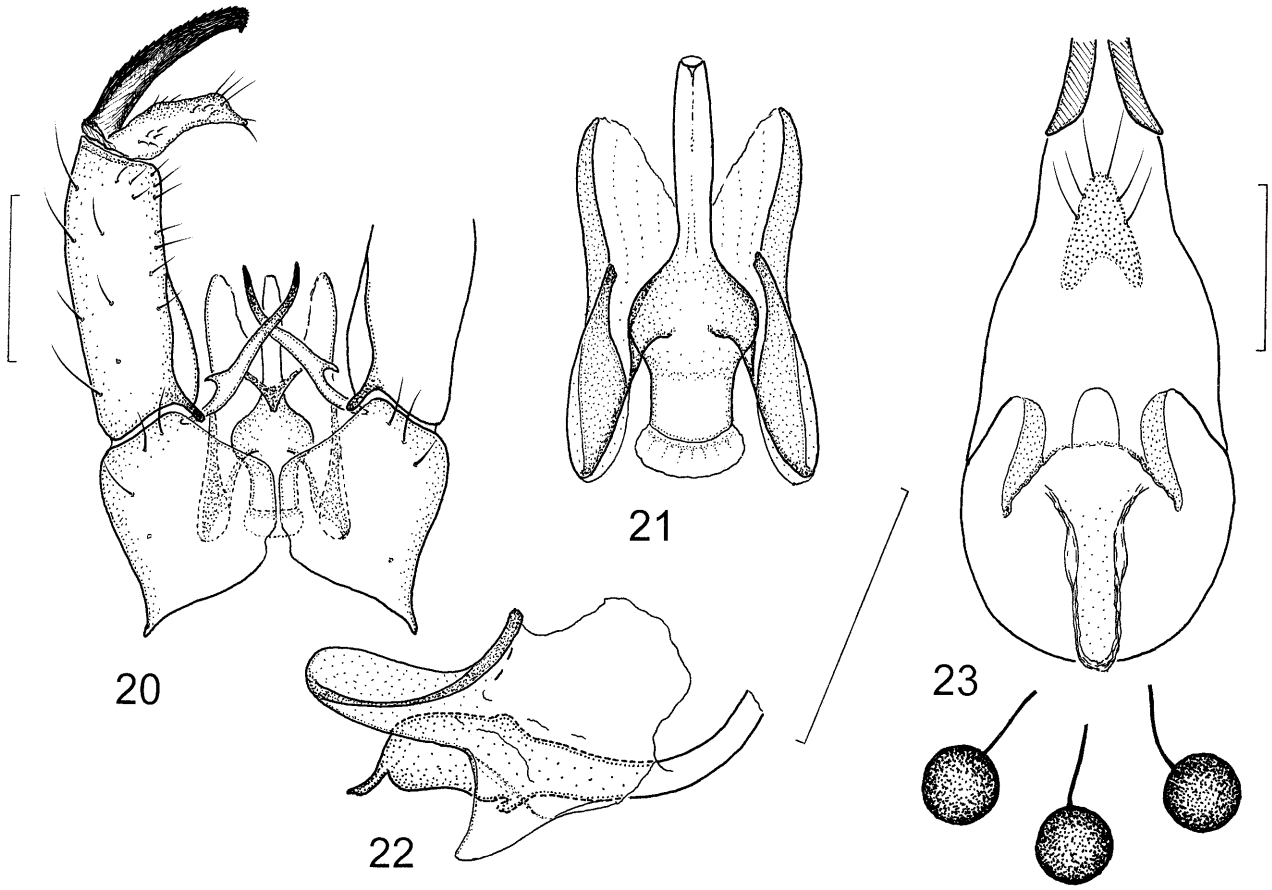
Discussion. In body colouration, the new species is practically indistinguishable from *R.* (*L.*) *lurida* and *R.* (*L.*) *sublurida* sp. n. It is, however, sufficiently distinctive in the structure of the male terminalia, with the aedeagus conspicuously broad, abruptly narrowed before apex, and the vesica very broad, bulbous, devoid of any apodeme (no other species with this combination of characters). Female terminalia have rather pale, large spermathecae (as in *robusta* and *loewi*), with sclerotized parts of the ducts short.

Distribution. Switzerland, Germany, Italy.

Rhabdomastix (*Lurdia*) *sublurida* sp. n.

(Figs 1, 4, 20–23)

Diagnosis. Pleuron orange-yellow to yellowish brown. Femora darkened distally. Male antenna comparatively long, flagellomeres spindle-shaped, with verticils slightly exceeding length of respective segments. Wing moderately broad. Male terminalia with outer gonostylus gently arched and inner gonostylus weakly darkened, rather broad. Aedeagus of moderate length, vesica moderately broad. Female terminalia with spermathecae medium in size and sclerotized parts of ducts long.



Figs 20–23. *Rhabdomastix* (*Lurdia*) *sublurida* sp. n. (♂: holotype; ♀: paratype, Slovakia: Tichá dolina). 20–22 – male terminalia, general view, dorsal (20), aedeagal complex, dorsal (21) and lateral (22); 23 – female terminalia, internal structures, ventral. Scale bars = 0.25 mm.

Description. Body length 5–8 mm, wing length 5.5–7.5 mm.

Colour. Basic colouration orange-yellow to yellowish brown. Prescutum and other dorsal parts of thorax mostly darker, brown, yellower laterally. Scutellum yellow throughout. Pleuron orange-yellow to yellowish brown, somewhat shiny, restrictedly patterned with pale yellow, especially on dorsopleural membrane. Coxae and trochanters yellow to yellowish brown, fore coxa distinctly darker. Femora yellowish brown, darkened distally. Rest of legs yellowish brown. Abdomen brown.

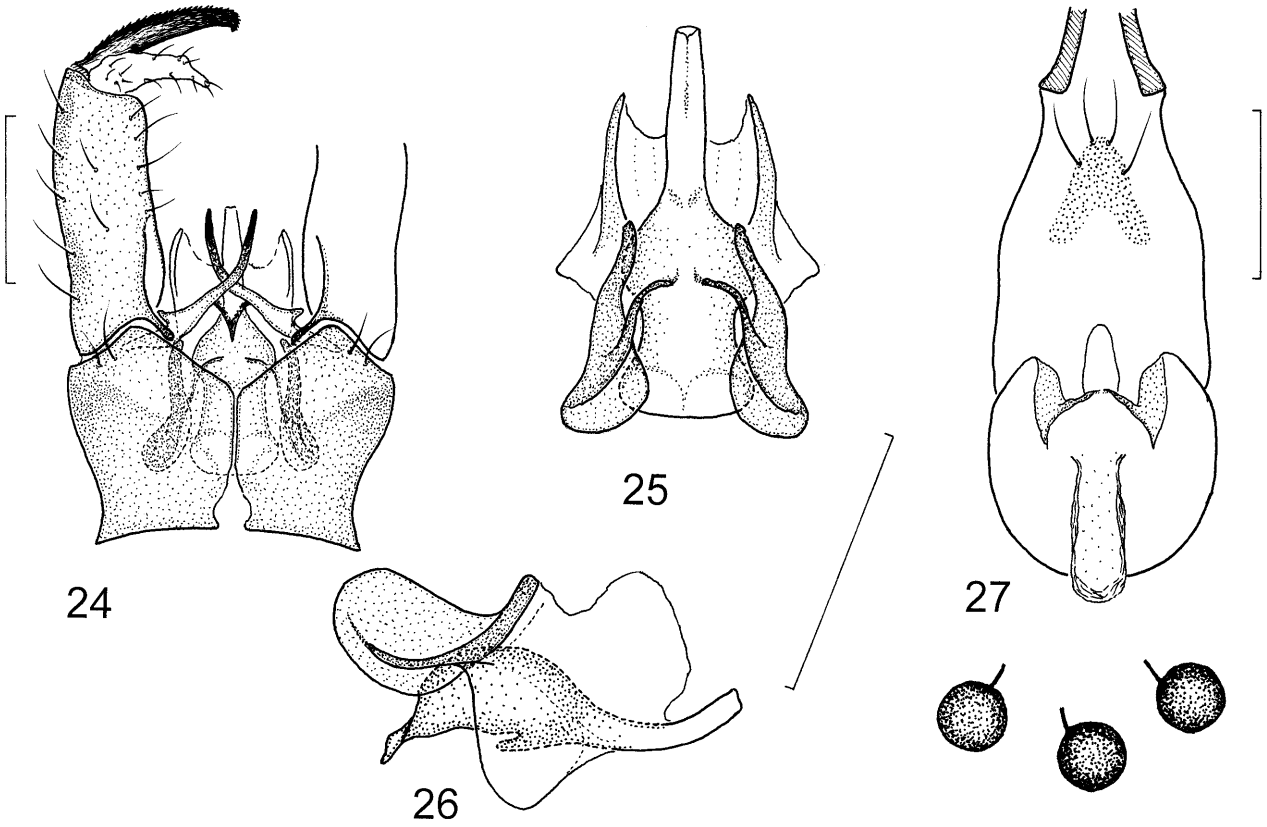
Head. Male antenna (Fig. 1) subequal to combined length of head and thorax. Flagellomeres generally spindle-shaped, longest verticils slightly exceeding length of respective segments, pubescence dense, distinct, suberect.

Thorax. Wing (Fig. 4) moderately broad, as in most other species, about three times as long as broad. Wing venation as for subgenus.

Abdomen. Male terminalia (Figs 20–22) of moderate size. Posterior margin of tergite 9 moderately excised. Gonocoxite slender, with sparse setae. Outer gonostylus slightly more than half length of gonocoxite, gently arched, more or less parallel-sided, somewhat tapered in distal section, with apical spine slightly recurved. Inner gonostylus weakly darkened, rather broad distally before tapered apex, sparsely covered with setae. Aedeagal complex as in Figs 21–22. Aedeagus of moderate length and breadth, upturned. Lower (caudal) part of vesica moderately broad, parallel-sided and cylindrical, or even broadened anteriorly, with apodeme forming narrow, rounded, fan-like flange along its anterior margin. Lateral (parameral) apodeme moderately extending anteriorly beyond vesica. Female terminalia with internal structures as in Fig. 23. Spermathecae medium in size, with sclerotized part of ducts long, exceeding spermathecal diameter.

Material examined.

Holotype ♂: Slovakia, Západné Tatry Mts, Oravice [6784], Tichá dolina [valley] (850 m), 17.VIII.1999 (J. Starý leg.) (SMOC). The specimen, in perfect condition, is glued onto a triangular cardboard point. Terminalia dissected and placed in a sealed plastic tube with glycerine, pinned with the specimen. **Paratypes** (69 ♂, 51 ♀): **Czech Republic**: Moravia: Jeseníky Mts, Branná [5868] (700 m), 26.VIII.1971, 2 ♂, Klepáčský potok [brook], 9.VII.2002, 1 ♂, 1 ♀, 21.VII.2002, 13 ♂, 2 ♀, „Dembauda" (900 m), 19.VII.1972, 1 ♂, 18.VII.1973, 1 ♀, 14.VII.1999, 1 ♂, 21.VII.1999, 5 ♂, 2 ♀, 9.VII.2002, 1 ♂ (J. Starý leg.). Jeseníky Mts, Filipovice – Červenohorské sedlo [saddle] [5869] (840 m), 23.VII.1975, 1 ♂ (J. Martinovský leg.). Jeseníky Mts, Karlov [5969], 20.VIII.1997, 1 ♂, 22.VIII.1997, 2 ♀ (J. Starý leg.). Jeseníky Mts, Malá Morávka [5969], Moravice shores, 28.VIII.1997, 5 ♂ (J. Starý leg.). Jeseníky Mts, Vidly [5869], "Skalní potok" (700 m), 13.VII.1998, 1 ♂, 1 ♀,



Figs 24–27. *Rhabdomastix* (*Lurdia*) *furva* sp. n. (♂: holotype; ♀: paratype, Slovakia: Podbanské). 24–26 – male terminalia, general view, dorsal (24), aedeagal complex, dorsal (25) and lateral (26); 27 – female terminalia, internal structures, ventral. Scale bars = 0.25 mm.

20.VI.2000, 1 ♂ (at light), 1.VIII.2000, 1 ♂, 5 ♀ (at light), 30.VII.2001, 1 ♂, 3 ♀ (at light) (J. Starý leg.). Moravskoslezské Beskydy Mts, Prostřední Bečva [6575] (600 m), 30.VII.1992, 1 ♂, 19.VIII.1992, 3 ♂, 7 ♀, 25.VIII.1992, 7 ♂, 3 ♀ (J. Starý leg.). Hostýnské vrchy [hills], Vlčková [6672], 8.VIII.1970, 4 ♀ (J. Starý leg.). (All JSO, SMOC). **Slovakia**: Západné Tatry Mts, Oravice [6784], Tichá dolina [valley] (850 m), 17.VIII.1999, 9 ♂, 9 ♀, 19 VIII. 1999, 12 ♂, 9 ♀ (J. Starý leg.). Belianske Tatry Mts, Tatranská Kotlina [6788] (750 m), Belá valley, 31.VII.1974, 1 ♀ (J. Starý leg.). Poľana Mts, "Hronček ponds" [7383] (650 m), 6.IX.2001, 1 ♂ (at light) (J. Starý leg.). Slavec nr. Ro □ňava [7488], Slaná shores, 23.V.1980, 1 ♀ (J. Starý leg.). Bukovské vrchy [hills], Ruský Potok [6900], 5.VIII.1985, 1 ♂ (J. Starý leg.). (All JSO, SMOC).

Etymology. The name of the new species, *sublurida*, indicates its close relationship to *R.* (*L.*) *lurida*. An adjective in nominative singular.

Discussion. Externally, the new species is similar to *R.* (*L.*) *lurida*, differing in that the male terminalia have the inner gonostylus somewhat broader and the aedeagus distinctly longer and more upturned. The female terminalia are well distinguished from those of the latter species by the size of the spermathecae, which are of medium size, equalling those of *R.* (*L.*) *tatrica* sp. n., otherwise quite a different species (distinctly smaller in *lurida*), and by the considerable length of sclerotized parts of the ducts (very short in *lurida*) (see also Discussion under *lurida*).

Distribution. Czech Republic, Slovakia.

Rhabdomastix (*Lurdia*) *furva* sp. n.

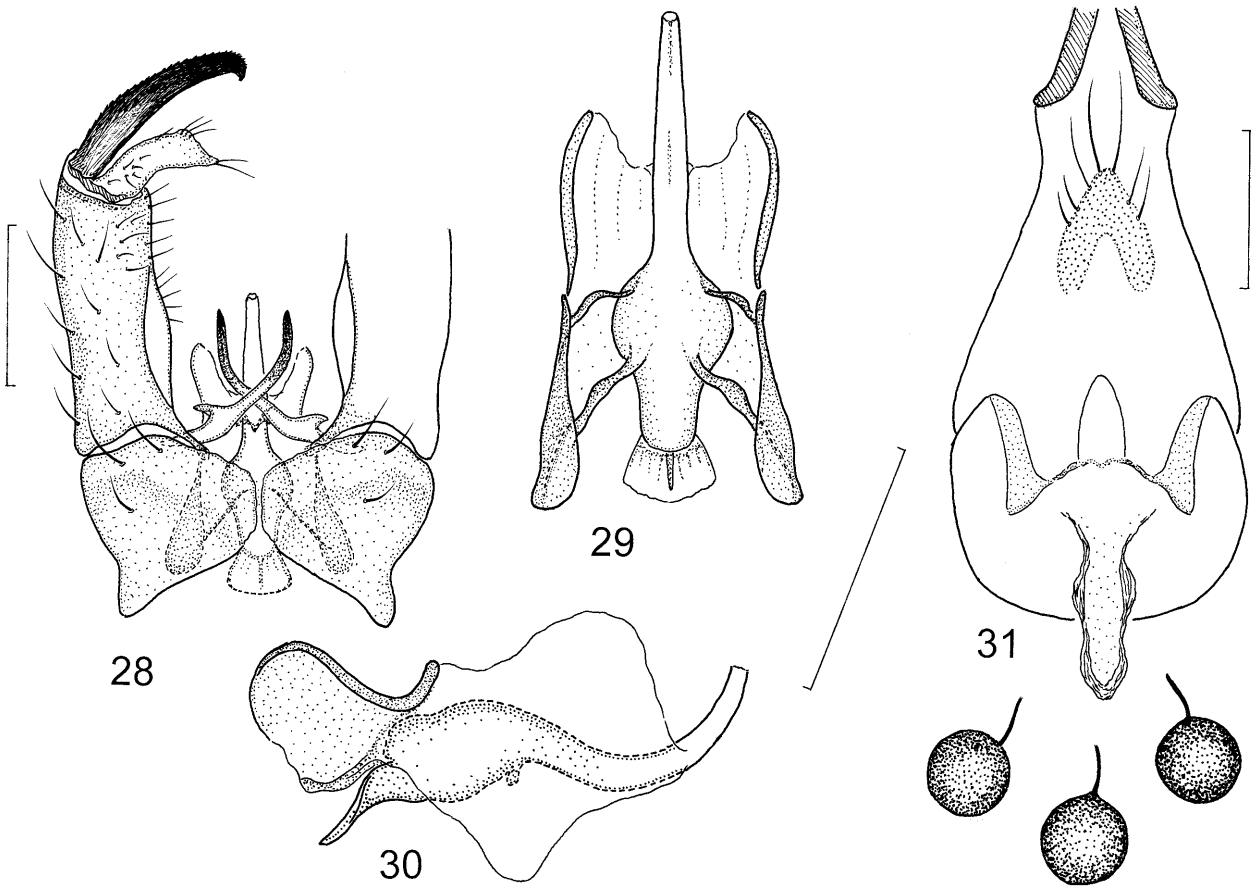
(Figs 24–27)

Diagnosis. Pleuron dark greyish brown. Femora darkened distally. Male antenna comparatively long, flagellomeres spindle-shaped, with verticils slightly exceeding length of respective segments. Wing moderately broad. Male terminalia with outer gonostylus gently arched and inner gonostylus pale, rather slender. Aedeagus short, vesica very broad. Female terminalia with spermathecae medium in size and sclerotized parts of ducts short.

Description. Body length 5–6 mm, wing length 6–6.5 mm.

Colour. Basic colouration very dark, dark brown, with dense greyish pruinosity. Prescutum and other dorsal parts of thorax mostly dark greyish brown, sometimes yellower laterally. Scutellum largely greyish brown, yellower only posteriorly. Pleuron mostly dark greyish brown, somewhat shiny, restrictedly patterned with paler areas, dirty yellow on dorsopleural membrane. Coxae and trochanters mostly brown, fore coxa still darker. Femora brown, darkened distally. Rest of legs brown. Abdomen dark greyish brown.

Head. Male antenna subequal to combined length of head and thorax. Flagellomeres generally spindle-shaped, longest verticils slightly exceeding length of respective segments, pubescence dense, distinct, suberect.



Figs 28–31. *Rhabdomastix* (*Lurdia*) *loewi* sp. n. (♂, ♀: paratypes, Germany: Birksau). 28–30 – male terminalia, general view, dorsal (28), aedeagal complex, dorsal (29) and lateral (30); 31 – female terminalia, internal structures, ventral. Scale bars = 0.25 mm.

Thorax. Wing moderately broad. Wing venation as for subgenus.

Abdomen. Male terminalia (Figs 24–26) comparatively small. Posterior margin of tergite 9 considerably excised. Gonocoxite slender, with moderately dense setae. Outer gonostylus slightly more than half length of gonocoxite, gently arched, more or less parallel-sided or weakly tapered distally, with apical spine recurved. Inner gonostylus pale, slender, generally conical, with sparse setae. Aedeagal complex as in Figs 25–26. Aedeagus short and slender, gently upturned. Vesica very broad, its lower (caudal) part flattened, with apodeme broad and rounded, coherent with vesica without distinct suture. Lateral (parameral) apodeme stout and blackened, moderately extending anteriorly beyond vesica. Female terminalia with internal structures as in Fig. 27. Spermathecae medium in size, with sclerotized parts of ducts short, about half diameter of spermatheca.

Material examined.

Holotype ♂: Slovakia, Západné Tatry Mts, Podbanské [6885], 25.VI.1973 (J. Starý leg.) (SMOC). The specimen is glued onto a triangular cardboard point; both fore and left mid leg are missing. Terminalia dissected and placed in a sealed plastic tube with glycerine, pinned with the specimen. **Paratypes** (4 ♂, 5 ♀): **Slovakia**: Západné Tatry Mts, Oravice [6784], Tichá dolina [valley] (850 m), 14.VI.1977, 1 ♂ (V. Elsner leg.; at light). Západné Tatry Mts, Podbanské [6885], 25.VI.1973, 3 ♂, 5 ♀ (J. Starý leg.). (All JSO, SMOC).

Etymology. The name of the new species, *furva* (= dark), refers to its very dark body colouration. An adjective in nominative singular.

Discussion. The new species, although strikingly different in body colouration, is very similar structurally to *R.* (*L.*) *lurida*. The two species differ in various details of the aedeagal complex, such as the shape of the vesica (narrower in *lurida*), or in that the apodeme of the vesica is continuous with the vesica without a distinct suture (separated by a distinct suture in *lurida*). Female terminalia of *R.* (*L.*) *furva* sp. n. have medium sized spermathecae (much as in *sublurida* and *tatrica*, which, however, have longer sclerotized parts of the ducts), whereas they appear smaller in *R.* (*L.*) *lurida*.

Distribution. Slovakia.

Rhabdomastix (*Lurdia*) *loewi* sp. n.

(Figs 28–31)

Diagnosis. Pleuron greyish brown. Femora darkened distally. Male antenna comparatively short, flagellomeres spindle-shaped, with verticils slightly exceeding length of respective segments. Wing comparatively narrow. Male terminalia with outer gonostylus gently arched and inner gonostylus weakly darkened, rather broad. Female termi-

nalia with spermathecae large and sclerotized parts of ducts comparatively short.

Description. Body length 5–7 mm, wing length 5.5–7.5 mm.

Colour. Basic colouration brown to dark brown, with greyish pruinosity. Prescutum and other dorsal parts of thorax mostly dark greyish brown, somewhat yellow laterally. Scutellum obscure yellow throughout. Pleuron predominantly greyish brown, somewhat shiny, restrictedly patterned with pale yellow, especially on dorsopleural membrane. Coxae and trochanters yellow, fore coxa somewhat darker. Femora yellowish brown, darkened distally. Tibiae darkened at tip. Tarsi yellowish brown. Abdomen dark greyish brown.

Head. Male antenna somewhat shorter than combined length of head and thorax. Flagellomeres generally spindle-shaped, longest verticils slightly exceeding length of respective segments, pubescence dense, distinct, suberect.

Thorax. Wing (cf. Fig. 5) somewhat narrower than in other species (except for *robusta*). Wing venation as for subgenus.

Abdomen. Male terminalia (Figs 28–30) of moderate size. Posterior margin of tergite 9 widely but shallowly emarginate. Gonocoxite slender, with sparse setae. Outer gonostylus slightly more than half length of gonocoxite, gently arched, more or less parallel-sided, sometimes even straight and somewhat tapered distally, with apical spine recurved. Inner gonostylus weakly darkened, rather broad distally before tapered apex, with sparse setae throughout. Aedeagal complex as in Figs 29–30. Aedeagus long and slender, strongly upturned. Vesica broad, its lower (caudal) part rather long and narrowed anteriorly, with apodeme long, broad and fan-like. Lateral (parameral) apodeme not extending anteriorly beyond vesica. Female terminalia with internal structures as in Fig. 31. Spermathecae large, with sclerotized parts of ducts slightly shorter than spermathecal diameter.

Material examined.

Holotype ♂: Germany, Neuenburg [Baden-Würtemberg], Rheininsel (ZMHB), labelled: "Lg Neuenbg. Rheininsel" (handwritten), a small blank violet paper square, "lurida" (handwritten), "Typus" (printed, red), "Zool. Mus. Berlin" (printed, yellow), "PARALECTOTYPE / Rhabdomastix (Lurdia) lurida (Loew, 1873) ♂/ J. Starý des. 2002" (printed, red). Accordingly labelled as holotype ("HOLOTYPE / Rhabdomastix (Lurdia) loewi sp. nov. ♂/ J. Starý des. 2002"; printed red label). The specimen is micro-pinned on a small piece of what looks like plant parenchyma (formerly used for such purposes). It is somewhat discoloured by fading yet distinctly darker than the lectotype of *R.* (*L.*) *lurida*, without attached legs; one leg glued to the specimen, another separately. Terminalia dissected and placed in a sealed plastic tube with glycerine, pinned with the specimen. **Paratypes**: 1 ♀ and 1 specimen without abdomen (probably a male according to the structure of the antennae), with the same locality data (ZMHB); most of other labels as for holotype. The latter two specimens were labelled as paralectotypes of *R.* (*L.*) *lurida* and paratypes of *R.* (*L.*) *loewi* sp. n. by the present author. **Other paratypes** (20 ♂, 13 ♀): **Switzerland**: Canton Valais: Grugnay (762 m), 2.IX.1994, 1 ♀ (J. Starý leg.) (JSO). Ulrichen, 28.VII.1979, 1 ♀ (C. Ruedi leg.; light trap). Canton Uri: Gotthard, late VII.1980, 3 ♀ (L. Rezbanyai leg.; light trap). Canton Ticino: Gordevio, middle V.-late VII.1979, 2 ♀, early VIII.-early XI.1979, 1 ♂, early VIII.-early X.1980, 1 ♂ (L. Rezbanyai leg.; light trap). Vezia, S. Martino (410 m), 16.-22.VII.1979, 1 ♂ (W. Geiger & Ch. Dufour leg.; Malaise light trap). Canton Graubünden: Trimmis, 26.V.1980, 1 ♂ (W. Geiger leg.). (MHNN; in ethanol, 3 ♀ dried from ethanol in JSO). **Germany**: Bayern: Allgäuer Alpen, Birksau, Ringang im Stillachtal (900 m), 25.-29.VII.1974, 1 ♀, 29.VII.-1.VIII.1974, 1 ♂ (H. Mendl leg.; light trap) (JSO; in ethanol). Allgäuer Alpen, Birksau, Stillachtal (850 m), 1.VII.1995, 3 ♂, 3 ♀ (J. Starý leg.) (JSO). **Austria**: Tirol: Achenthal, 26.VII.1886, 1 ♂ (J. Mik leg) [listed as *lurida* by Lackschewitz, 1940] (NHMW). **Italy**: Piemonte: Prali (TO), Malzat, Ribba (1550 m), 30.VII.2000, 8 ♂ (G. B. Delmastro leg.; dried from ethanol). Villar Pellice (TO), Confl. Ghicciard-Pellice (690 m), 4.VI.2001, 2 ♂, 2 ♀ (G. B. Delmastro leg.; dried from ethanol). (All JSO). Friuli – Venezia Giulia: Tarvisio, 28.VII.1886, 1 ♂ (A. Handlirsch leg.) [listed as *lurida* by Lackschewitz, 1940] (NHMW).

Etymology. The new species is named in honour of Hermann Loew, a distinguished European dipterist of the 19th century, who first collected it. A noun in genitive singular.

Discussion. Both in the body colouration and the structure of the male terminalia, *R.* (*L.*) *loewi* sp. n. is most similar, and probably closely related, to *R.* (*L.*) *robusta* sp. n., differing from the latter in that the antennal verticils slightly exceed the length of the respective flagellomeres (twice the length of the flagellomeres in *robusta*). Male terminalia provide further significant characters (see Discussion under *robusta*). Female terminalia with the spermathecae large (much as in *mendli* and *robusta*), with sclerotized parts of the ducts slightly shorter than the spermathecal diameter (thus approximating *robusta*).

Distribution. Switzerland, Germany, Austria, Italy.

Rhabdomastix (*Lurdia*) *robusta* sp. n.

(Figs 2, 5, 32–35)

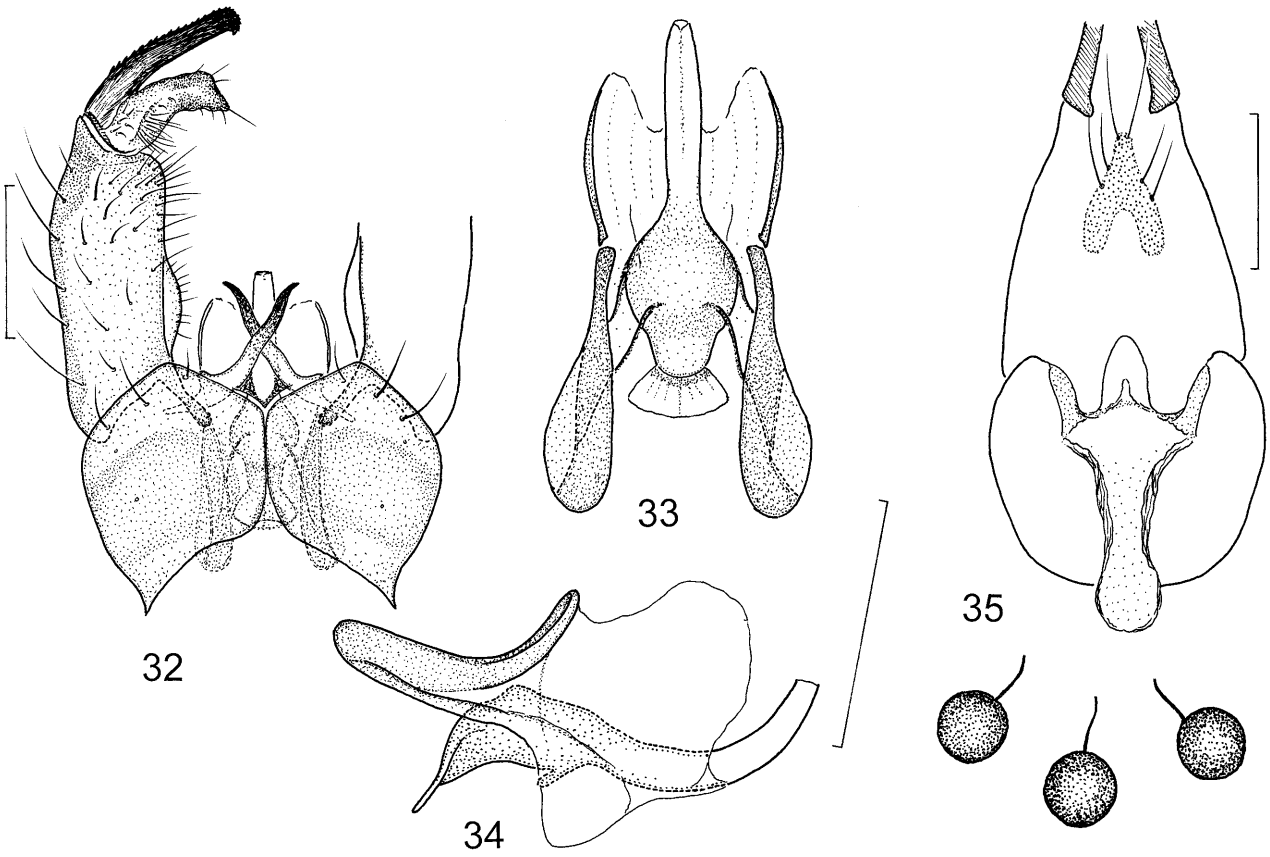
Diagnosis. Pleuron greyish brown. Femora darkened distally. Male antenna short, flagellomeres spindle-shaped, with verticils long, about twice length of respective segments. Wing comparatively narrow. Male terminalia with outer gonostylus gently arched and inner gonostylus considerably darkened, very broad and bent at mid-length. Aedeagus long, vesica broad. Female terminalia with spermathecae large and sclerotized parts of ducts rather long.

Description. Body length 4–6 mm, wing length 5.5–7 mm.

Colour. Basic colouration brown to dark brown, with greyish pruinosity. Prescutum and other dorsal parts of thorax mostly dark greyish brown, somewhat yellowed laterally. Scutellum obscure yellow, darkened anteriorly in middle. Pleuron predominantly greyish brown, somewhat shiny, patterned with pale yellow, especially on dorsopleural membrane.

Coxae and trochanters yellowish brown. Femora yellowish brown, darkened distally. Rest of legs yellowish brown. Abdomen dark greyish brown.

Head. Male antenna (Fig. 2) somewhat shorter than combined length of head and thorax. Flagellomeres gen-



Figs 32–35. *Rhabdomastix (Lurdia) robusta* sp. n. (♂: holotype; ♀: paratype, Czech Republic: Branná). 32–34 – male terminalia, general view, dorsal (32), aedeagal complex, dorsal (33) and lateral (34); 35 – female terminalia, internal structures, ventral. Scale bars = 0.25 mm.

erally spindle-shaped, rather broad, longest verticils long, about twice length of respective segments, pubescence dense, distinct, suberect.

Thorax. Wing (Fig. 5) somewhat narrower than in other species (except for *loewi*), more than three times as long as broad. Wing venation as for subgenus.

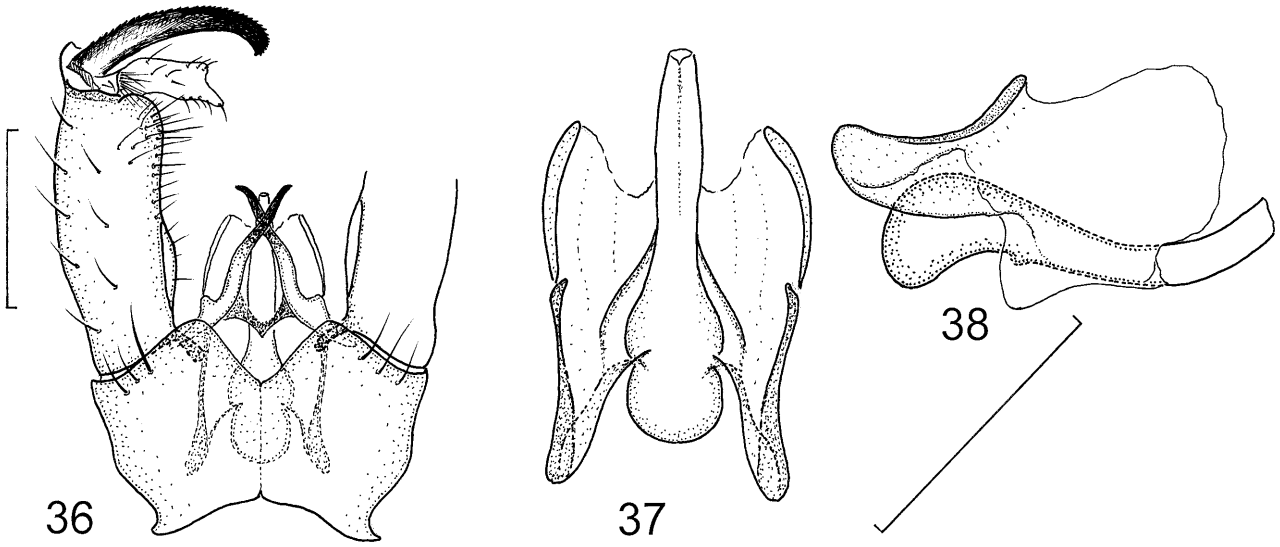
Abdomen. Male terminalia (Figs 32–34) very large compared to entire insect. Posterior margin of tergite 9 widely but shallowly emarginate. Gonocoxite comparatively stout, with rather dense setae. Outer gonostylus more than half length of gonocoxite, gently arched, more or less parallel-sided, sometimes straight and slightly tapered distally, with apical spine recurved. Inner gonostylus considerably darkened, very broad, flattened, bent at midlength and tapered before apex, with sparse setae throughout and with additional loose tuft of very delicate and rather long setae near base. Aedeagal complex as in Figs 33–34. Aedeagus rather long and broad, strongly upturned. Vesica broad, its lower (caudal) part considerably narrowed anteriorly, with apodeme long, broad and fan-like. Lateral (parameral) apodeme massive, extending anteriorly far beyond vesica. Female terminalia with internal structures as in Fig. 35. Spermathecae large, with sclerotized parts of ducts subequal in length to spermathecal diameter.

Material examined.

Holotype ♂: Czech Republic, Moravia, Jeseníky Mts, Branná [5868], "Dembauda" (900 m), 19.VII.1972 (J. Starý leg.) (SMOC). The specimen, in perfect condition, is glued onto a triangular cardboard point. Terminalia dissected and placed in a sealed plastic tube with glycerine, pinned with the specimen. **Paratypes** (66 ♂, 12 ♀): **Czech Republic**: Moravia: Jeseníky Mts, Branná [5868] (700 m), 17.VII.1973, 5 ♂, Klepáčský potok [brook], 9.VII.2002, 21 ♂, 4 ♀, 21.VII.2002, 27 ♂, 1 ♀, „Dembauda" (900 m), 19.VII.1972, 5 ♂, 1 ♀, 20.VII.1972, 2 ♂, 1 ♀, 22.VII.1972, 1 ♂, 17.VII.1973, 2 ♂, 1 ♀, 18.VII.1973, 1 ♀ (J. Starý leg.), 17.VII.1973, 1 ♂ (J. Martinovský leg.) (JSO, SMOC). **Slovakia**: Belianske Tatry Mts, Tatranská Kotlina [6788] (750 m), Belá valley, 26.VII.1974, 1 ♂ (J. Martinovský leg.), 31.VII.1974, 1 ♀, 6.IX.1977, 1 ♂, 1.VII.1978, 1 ♀, 5.VIII.1999, 1 ♀ (J. Starý leg.) (JSO).

Etymology. The new species is named *robusta* for its large and stout hypopygium. An adjective in nominative singular.

Discussion. From all the species treated here, *R.* (*L.*) *robusta* sp. n. is well distinguished by its comparatively short antennae with verticils long, about twice the length of respective segments (Fig. 2) and the large, robust hypopygium (Fig. 32). The wings are comparatively narrow (Fig. 5), a feature shared only with *R.* (*L.*) *loewi* sp. n. Inner gonostylus of the male terminalia is very broad, flattened and darkened, with a tuft of delicate setae near base, thus approximating the condition in *R.* (*L.*) *tatrica* sp. n. and *R.* (*L.*) *falcata* sp. n., quite differently coloured species. In contrast to the two latter species, the



Figs 36–38. *Rhabdomastix* (*Lurdia) falcata* sp. n. (holotype), male terminalia, general view, dorsal (36), aedeagal complex, dorsal (37) and lateral (38). Scale bars = 0.25 mm.

inner gonostylus is distinctly bent at midlength in *R.* (*L.*) *robusta* sp. n. The most closely related species is probably *R.* (*L.*) *loewi* sp. n., which is almost identical in body colouration and outline of the wings and similar in the structure of the male terminalia. In *R.* (*L.*) *robusta* sp. n., however, the inner gonostylus is extraordinary powerful and darkened (not so in *loewi*), setosity on various parts of the hypopygium dense and conspicuous (not so in *loewi*) and the aedeagus is shorter and broader. Female terminalia of *R.* (*L.*) *robusta* sp. n. have large spermathecae, much as in *R.* (*L.*) *mendli* sp. n. and *R.* (*L.*) *loewi* sp. n., with sclerotized parts of the ducts subequal in length to spermathecal diameter (distinctly differing from *mendli*, which has the ducts very short, less than half the diameter of spermatheca, and similar to *loewi*, which has the ducts only slightly shorter than the diameter).

Distribution. Czech Republic, Slovakia.

Rhabdomastix (*Lurdia*) *falcata* sp. n.

(Figs 3, 36–38)

Diagnosis. Pleuron bright orange-yellow. Fore femur strongly darkened distally. Male antenna short, flagellomeres oval to elongate, with verticils slightly exceeding length of respective segments. Wing moderately broad. Male terminalia with outer gonostylus long, considerably arched and inner gonostylus weakly darkened, very broad, trapezoid. Aedeagus medium in length, vesica bulbous, not especially broad.

Description. Body length 5–5.5 mm, wing length 5.5–6.5 mm.

Colour. In the single dry-mounted specimen available (1 ♂, Bulgaria, Pirin Mts.), basic colouration is much as in *R.* (*L.*) *tatrica* sp. n., generally bright orange-yellow to yellowish brown, consisting of various hues of yellow and brown. Prescutum and other dorsal parts of thorax mostly dark brown, yellow laterally and restrictedly so elsewhere, especially in middle of scutum. Scutellum yellow throughout. Pleuron bright orange-yellow, somewhat shiny, conspicuously patterned with yellow and brown, pale yellow on dorsopleural membrane. Coxae and trochanters yellowish brown, fore coxa distinctly darker. Femora yellowish brown, strongly darkened distally, blackish at tip of fore femur. Tibiae darkened at tip. Tarsi yellowish brown. Abdomen greyish dark brown. Specimens preserved in ethanol appear entirely pale yellow.

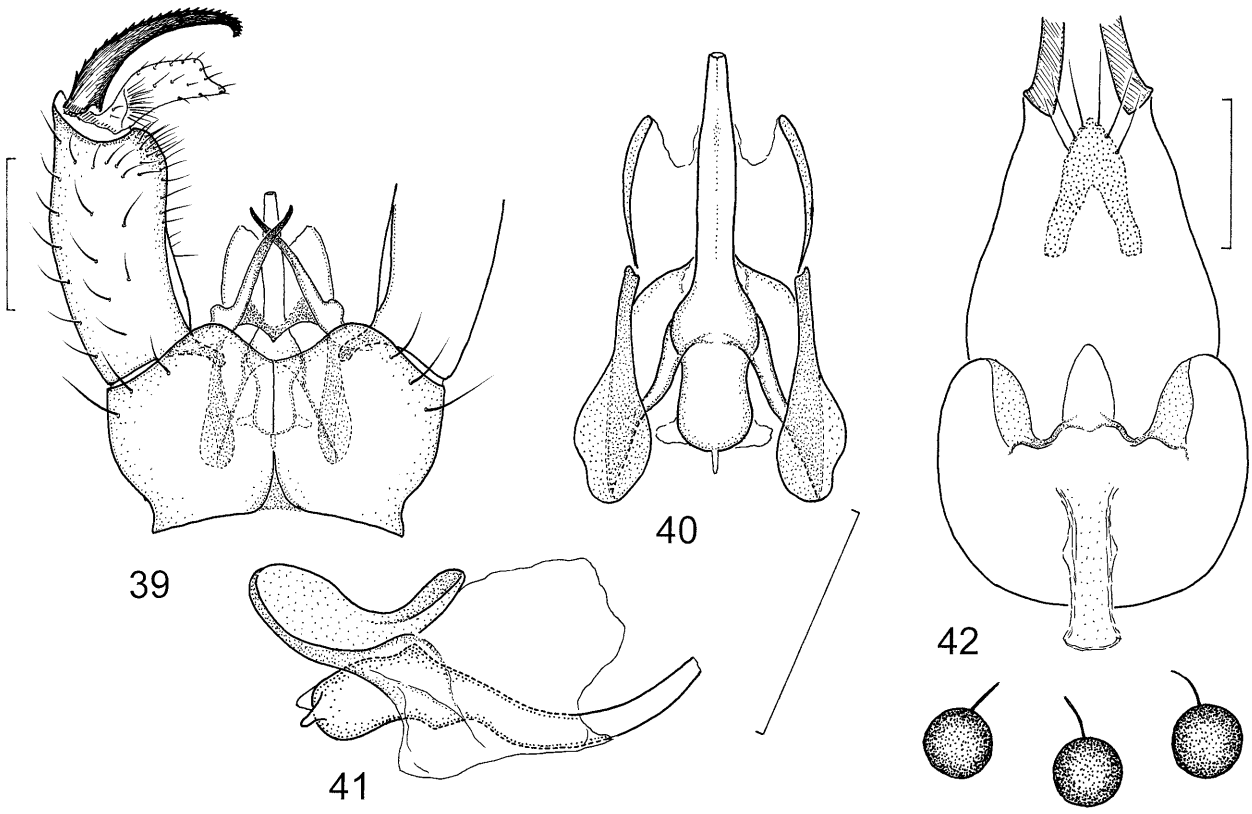
Head. Male antenna (Fig. 3) distinctly shorter than combined length of head and thorax. Flagellomeres not markedly spindle-shaped, rather oval to elongate, longest verticils slightly exceeding length of respective segments, pubescence short, indistinct.

Thorax. Wing moderately broad. Wing venation as for subgenus.

Abdomen. Male terminalia (Figs 36–38) of moderate size. Posterior margin of tergite 9 with comparatively narrow but deep, V-shaped excision. Gonocoxite slender, with moderately dense setae. Outer gonostylus long, distinctly more than half length of gonocoxite, considerably arched and slightly tapered distally, with apical spine stout, recurved. Inner gonostylus weakly darkened and very broad, flattened, generally trapezoid in outline, with sparse setae throughout and with additional loose tuft of very delicate and rather long setae near base. Aedeagal complex as in Figs 37–38. Aedeagus of moderate length, rather broad and gently upturned. Lower (caudal) part of vesica more or less bulbous (but not as broad as in *mendli*), with apodeme reduced to narrow flange, or entirely lacking. Lateral (parameral) apodeme extending anteriorly beyond vesica. Female unknown.

Material examined.

Holotype ♂: Switzerland, Canton Graubünden, Il Fuorn, National Park, 7.VII.-28.VIII.1980 (W. Geiger leg.) (MHNN). The specimen, preserved in alcohol, is without legs and with left wing damaged. Terminalia dissected and placed in a glass micro-vial with the specimen. **Paratypes** (9 ♂): **Switzerland**: Canton Ticino: Vezia, S. Martino (410 m), 16.-22.VII.1979, 1 ♂



Figs 39–42. *Rhabdomastix* (*Lurdia*) *tatrica* sp. n. (♂: holotype; ♀: paratype, Slovakia: Roháčska dolina). 39–41 – male terminalia, general view, dorsal (39), aedeagal complex, dorsal (40) and lateral (41); 42 – female terminalia, internal structures, ventral. Scale bars = 0.25 mm.

(Ch. Dufour & W. Geiger leg.; Malaise light trap). Canton Graubünden: Il Fuorn, National Park, 7.-19.VII.1980, 2 ♂, 7.VII.-28.VIII.1980, 2 ♂ (W. Geiger leg.). Scuol (1200 m), 7.IX.1979, 1 ♂ (Ch. Dufour leg; light trap). Zernez, PNS, 30.VII.1991, 1 ♂ (W. Geiger leg.; light trap). (MHNN; in ethanol, 2 ♂ dried from ethanol in JSO). **Germany**: Bayern: Allgäuer Alpen, Birksau, Ringang im Stillachtal (900 m), 29.VII.-1.VIII.1974, 1 ♂ (H. Mendl leg.; light trap) (JSO; in ethanol). **Bulgaria**: Pirin planina, Banderica valley (1700-1900 m), 27.VII.1971, 1 ♂ (P. Lauterer leg.) (JSO).

Etymology. The name of the new species, *falcata* (= scythe-shaped), refers to the shape of its outer gonostylus. An adjective in nominative singular.

Discussion. *R.* (*L.*) *falcata* sp. n. is distinctive in its body colouration (much as in *tatrica*), in the structure of the male antennae (Fig. 3) and, above all, in the male terminalia (for details see Discussion under *tatrica* and Figs 36–38).

Distribution. Switzerland, Germany, Bulgaria.

Rhabdomastix (*Lurdia*) *tatrica* sp. n.

(Figs 39–42)

Rhabdomastix lurida: Starý & Rozkošný, 1970: 116 (faun. record, note), Fig. 70 (male terminalia) [partim, see figure and note].

Rhabdomastix (Sacandaga) lurida: Starý, 1984: 33, 230 (faun. record) [partim]; Starý, 1987: 20 (list) [partim]; Starý, 1997: 13 (list) [partim].

Diagnosis. Pleuron bright orange-yellow. Fore femur strongly darkened distally. Male antenna comparatively short, flagellomeres spindle-shaped, with verticils slightly exceeding length of respective segments. Wing moderately broad. Male terminalia with outer gonostylus long and considerably arched and inner gonostylus weakly darkened, very broad, trapezoid. Aedeagus long, vesica moderately broad. Female terminalia with spermathecae medium in size and sclerotized parts of ducts rather long.

Description. Body length 5.5–8 mm, wing length 6.5–8 mm.

Colour. Basic colouration orange-yellow to yellowish brown, with colours bright and colour changes sharp. Prescutum and other dorsal parts of thorax mostly dark brown, yellow laterally. Scutellum yellow throughout. Pleuron orange-yellow to yellowish brown, somewhat shiny, restrictedly patterned with pale yellow, especially on dorsopleural membrane. Coxae and trochanters yellow to yellowish brown, fore coxa distinctly darker. Femora yellowish brown, strongly darkened distally, blackish at tip of fore femur. Tibiae darkened at tip. Tarsi likewise somewhat darkened. Abdomen dark greyish brown.

Head. Male antenna somewhat shorter than combined length of head and thorax. Flagellomeres generally spindle-shaped, rather broad, longest verticils slightly exceeding length of respective segments, pubescence dense, distinct, suberect.

Thorax. Wing moderately broad. Wing venation as for subgenus.

Abdomen. Male terminalia (Figs 39–41) large relative to insect. Posterior margin of tergite 9 shallowly emarginate. Gonocoxite comparatively stout, with rather dense setae, especially on distal inner margin. Outer gonostylus long, distinctly more than half length of gonocoxite, scythe-shaped, considerably arched and considerably tapered distally, evenly passing into curved, slender apical spine. Inner gonostylus weakly darkened and very broad, flattened, generally trapezoid in outline, with sparse setae throughout and with additional loose tuft of very delicate and rather long setae near base. Aedeagal complex as in Figs 40–41. Aedeagus rather long, slender, upturned. Lower (caudal) part of vesica moderately broad, parallel-sided, cylindrical, or somewhat bulbous, with apodeme mostly reduced to two lateral flanges and minute median lobe, sometimes apodeme even lacking completely. Lateral (parameral) apodeme massive, distinctly extending anteriorly beyond vesica. Female terminalia with internal structures as in Fig. 42. Spermathecae medium in size, with sclerotized parts of ducts subequal in length to spermathecal diameter.

Material examined.

Holotype ♂: Slovakia, Západné Tatry Mts, Roháčska dolina [valley] [6784], Zverovka [chalet] env. (1050 m), 27.VI.1998 (J. Starý leg.) (SMOC). The specimen, in perfect condition, is glued onto a triangular cardboard point. Terminalia dissected and placed in a sealed plastic tube with glycerine, pinned with the specimen. **Paratypes** (47 ♂, 20 ♀): **Slovakia**: Západné Tatry Mts, Račková dolina [valley] [6884], 18.VII.1967, 1 ♂, 1 ♀ (J. Starý leg.) [listed as *lurida* by Starý & Rozkošný, 1970]. Západné Tatry Mts, Roháčska dolina [valley] [6784], Zverovka [chalet] env. (1050 m), 27.VI.1998, 24 ♂, 8 ♀, 21.VII.1998, 19 ♂, 6 ♀ (J. Starý leg.). Vysoké Tatry Mts, Mengusovská dolina [valley] [6886] (1200-1350 m), 27.VI.2002, 1 ♂, 1 ♀. Belianske Tatry Mts, dolina Siedmich prameňov [valley] [6787], 30.VII.1974, 2 ♂, 4 ♀ (J. Starý leg.). (All JSO, SMOC).

Etymology. The name of the new species, *tatrica*, is derived from the name of the mountains, the Tatras, which the species seems to be restricted to. The name is deemed to be and to be treated as a latinized adjective in nominative singular, in accordance with relevant provisions of the Article 11.9. of the ICZN (1999).

Discussion. The new species is characterized by its bright body colouration with orange-yellow pleura and dark legs (colour differences more pronounced than, e.g., in *sublurida*), and the antennae comparatively short, thus most resembling *R.* (*L.*) *falcata* sp. n. It is similar to the latter species also in the structure of the male terminalia, especially in that the outer gonostylus is long and considerably arched and the inner one flattened, trapezoid, with a tuft of delicate setae near base. These features readily distinguish the two species from the others. From *R.* (*L.*) *falcata* sp. n., *R.* (*L.*) *tatrica* sp. n. differs especially in that its hypopygium is large relative to the insect, the outer gonostylus more tapered distally and the aedeagus distinctly longer. Male antennae of *R.* (*L.*) *tatrica* sp. n., although slightly shorter than in, e.g., *R.* (*L.*) *lurida*, are longer than those of *R.* (*L.*) *falcata* sp. n., with flagellomeres spindle-shaped (rather oval to elongate in *falcata*). Female terminalia have medium sized spermathecae (much as in *sublurida*) and sclerotized parts of the ducts subequal in length to spermathecal diameter (longer in *sublurida*).

Distribution. Slovakia. The record under *lurida* pertinent to Fig. 70 in Starý & Rozkošný (1970) belongs here. The species has only been collected in the Tatras.

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