*Zootaxa* 1688: 20–36 (2008)
www.mapress.com/zootaxa/


ISSN 1175-5326 (print edition)
**ZOOTAXA**
ISSN 1175-5334 (online edition)

# A revision of the South American bee genus *Leptometriella* Roig-Alsina (Hymenoptera, Apidae, Emphorini)

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## Abstract

A revision of the emphorine bee genus *Leptometriella* Roig-Alsina is presented. These bees occur mostly in xeric areas of South America, from Cochabamba in Bolivia to northern Patagonia in Argentina. Seven species are recognized, four of which are described as new: *L. boliviana* and *L. minima* from Bolivia, and *L. hirsutula* and *L. monteana* from Argentina. Lectotypes are designated for *Teleutemnesta separata* Holmberg, 1903, and *Ancyloscelis minuta* Friese, 1908. *Ancyloscelis humilis* Vachal, 1904, *Ancyloscelis minuta* Friese, 1908, and *Melitoma specularis* Vachal, 1909, are new synonyms of *L. separata* (Holmberg). A key to the species, descriptions, and illustrations are provided.

**Key words**: Bees, Emphorini, Argentina, Bolivia

## Introduction

The genus *Leptometriella* Roig-Alsina is a member of the Emphorini, a tribe of bees restricted to the Western Hemisphere (Michener, 2000). The genus has its maximum diversity in xeric areas of Bolivia and Argentina, although one of its species, *Leptometriella separata* Holmberg occurs also in mesic areas of eastern Argentina.

Species of *Leptometriella* are solitary, burrowing bees. As is the case of many other emphorines, its species seem to be oligolectic, and records in the literature (Jörgensen, 1912b, Sipes & Tepedino, 2005), as well as plant association labels on specimens, relate them to plants of the family Malvaceae. I have observed females of *L. separata* actively collecting pollen on flowers of *Sphaeralcea*.

Species of *Leptometriella* resemble species of *Diadasia* Patton and *Diadasina* Moure because of their uniform grayish to tawny pubescence, with distinct apical bands on the metasomal terga. The generic name *Leptometriella* alludes to this resemblance, since *Leptometria* Holmberg is a junior synonym of *Diadasia*. Its species are rather small, ranging from 4.5 to 9.5 mm long, and one of the species described here as new, *L. minima*, is the smallest within the tribe Emphorini. *Leptometriella* is distinguished from *Diadasia* by the second metasomal sternum with a gently curved gradulus, the scopal hairs on the hind tibia of the female with staight branches pointing away from the bases of the hairs, and the claws always pointed. The alternative conditions, second metasomal sternum with gradulus medially bent posteriorly forming an angle, scopal hairs on the hind tibia of the female with retrorse branches, and claws of the males frequently with rounded apices, are characteristic of *Diadasia*.

Michener (2000, 2007) includes *Leptometriella* as a subgenus of *Diadasina* because of the similarity of the two groups, although recognizing the probable paraphyly of this classification. Studies in progress show that *Diadasina*, together with *Ptilothrix* Smith, *Alepidosceles* Moure, and *Melitomella* Roig-Alsina, form a

 *Accepted by L. Packer: 6 Dec. 2007; published: 23 Jan. 2008*

well-supported clade to which *Leptometriella* does not belong. Species of *Leptometriella* may represent a basal lineage within the emphorines. *Diadasina* is distinguished from *Leptometriella* by the long, apically curved scopal hairs on the hind tibia of the female, by the labrum of both sexes with the preapical margin rounded, not carinate and without denticles, by the hind basitarsus of the female with the usual apical projection blunt and weak, and by the sixth sternum of the male with hairs longer along the midline, frequently forming a tuft. In species of *Leptometriella* the scopal hairs have straight barbulae, the labrum bears a median denticle in both sexes, and the hind basitarsus of the female has a strong apical projection. The sixth sternum of males of *Leptometriella* is covered with short, even hairs. The metapostnotum in species of *Diadasina* is entirely covered with hairs, except sometimes with a narrow longitudinal bare band, while in species of *Leptometriella* there is always a bare upper area bordering the metanotum, particularly on the sides.

The monophyly of *Leptometriella* is supported by the peculiar shape of the labrum of the female, with a flattened disc and a preapical carina usually bearing a distinct median denticle, by the basally broadened postmentum, and by the medially interrupted gradulus of the seventh metasomal tergum of the male (Roig-Alsina, 1999).

Three species groups are recognized within *Leptometriella* in the present contribution, based mainly on the morphology of the genitalia and the hidden sterna of the males. The phylogenetic relationships among species are not substantiated here, because the position of the genus within the tribe is currently under study.

## Material and methods

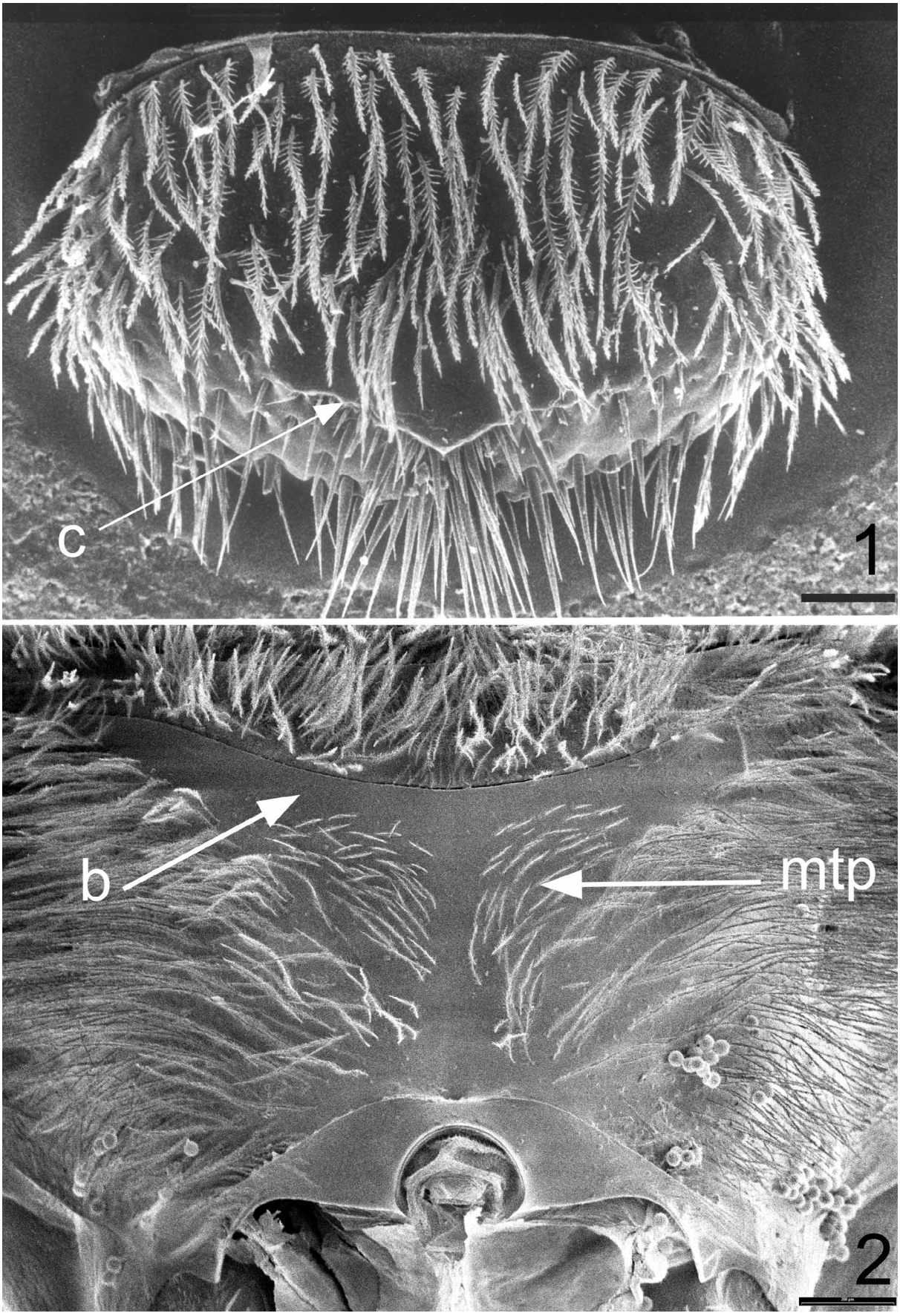
Terminology for structures follows Michener (1944, 2000), except that metapostnotum is used instead of propodeal triangle (Brothers, 1976). The following abbreviations are used: UID, upper interocular distance; LID, lower interocular distance; AOD, antennocular distance; IAD, interantennal distance. The maximum diameter of the median ocellus (MOD) is used as a reference to express the length of the pubescence and other structures. The metasomal terga (T) and sterna (S) are identified with Arabic numerals.

Specimens studied are deposited in the following institutions: American Museum of Natural History, New York (AMNH); Central Texas Melittological Institute, Austin (CTMI); Instituto y Fundación Miguel Lillo, Tucumán (IFML); Museo Argentino de Ciencias Naturales “Bernardino Rivadavia,” Buenos Aires (MACN); Museo de La Plata, La Plata (MLP); Muséum National d’Histoire Naturelle, Paris (Paris); Zoologisches Museum, Humboldt-Universität, Berlin (Berlin); Zoologische Staatssammlung, München (ZSM). Acronyms are used to indicate depositories of the specimens.

## *Leptometriella* Roig-Alsina

*Leptometriella* Roig-Alsina, 1999: 23–24. Type species *Leptometria tucumana* Brèthes, 1910.
*Diadasina* (*Leptometriella*): Michener, 2000: 683; Michener, 2007: 704.

Bees 4.5–9.5 mm long, with distinct apical bands of hairs on T2–T4 (female) or T2–T6 (male). First flagellomere short, at most 1.4 times as long as its apical width. Labrum of female with flattened disc and preapical margin keeled, bearing median denticle (Fig. 1); labrum of male with preapical margin irregularly carinate and also bearing median denticle. Mandible of female with small preapical tooth. Proboscis short, at rest barely reaching anterior coxae; second segment of labial palp at most 0.7 times as long as first; maxillary palp with brush of hairs on apex of second, and on entire third and fourth segments; postmentum broadened basally at union with lorum. Lateral carina of propleuron complete, strongly curved on anterior half. Metapostnotum with hairs usually restricted to area close to propodeal margin, in one species (*L. separata*) hairs covering lower two thirds of metapostnotum or more (Fig. 2), but always metapostnotum bare on sides, and




**FIGURES 1–2.** *Leptometriella separata*, female: 1, labrum (c, preapical carina with median denticle), scale line = 0.1 mm; 2, posterior view of mesosoma (mtp, metapostnotum; b, bare basal band), scale line = 0.2 mm.

with bare band at least 0.2 times midlength of metanotum along midline. Hind tibia of female with distinct basitibial plate; outer surface with scopal hairs with short, straight branches pointing apicad. Hind basitarsus of female with strong apical projection bearing tuft of hairs; hind basitarsus of male arcuate. Arolia present; all claws with pointed apices in both sexes. Gradulus of S2 gently curved. Gradulus of T6 of female incomplete, always with a short apical portion present and in some species with basal portion continuing pygidial plate (Figs. 12–13). Pygidial plate with sides concave, and apical portion narrow, parallel-sided.

**Species groups**

Three species groups can be recognized within *Leptometriella*. Each group has a characteristic shape and ornamentation of the hidden seventh sternum of the male (Figs. 15, 19, 23).

The *tucumana* species group, which includes *L. tucumana*, *L. nigra*, and *L. hirsutula*, is the most distinctive. In this group the mandible of the male is broadened preapically. The mandible is nearly twice as broad as the width of the acetabular groove between the groove and the inner margin (Fig. 10); in other species (Fig. 11), as well as in most emphorines, the mandible tapers apically, the inner margin being narrower, or as broad as, the groove. Only species of the emphorine genus *Alepidosceles* have a preapically broadened mandible, although more conspicuously than in the *tucumana* group. Current studies indicate that this broadened mandible is a derived condition, and has evolved independently twice within the tribe. Another characteristic of the group is the presence of a gradular carina on the basal part of the sixth tergum of the female, continuing laterad the raised margin of the pygidial plate (Fig. 12); there is also present a short gradular carina restricted to the apical part of the tergum, but this posterior short carina is present in all the species of the genus. This type of gradular carina, with a basal and an apical portion, is an apomorphic condition for the group.

*Leptometriella separata* stands apart in its own species group. The seventh metasomal sternum of the male has the admedian lobes secondarily fused along the midline (Fig. 20), a condition that is unique within the tribe. The eighth metasomal sternum of the male is only briefly split in the middle (Fig. 21), while in the other species it is deeply incised (Figs. 17, 25). The vertex of the head in this species is strongly elevated behind the ocelli.

The third group includes *L. monteana*, *L. minima*, and *L. boliviana*. The structure of the male hidden metasomal sterna is remarkably similar in the group. The seventh sternum has the same outline (Fig. 24), and the distribution and the length of the hairs is the same in the three species. Also similar are several characteristics of the male genital capsule, such as the length and shape of the gonostylus, the shape of the spatha, and the structure of the penis valve (Fig. 22). Nevertheless, these characteristics may represent the plesiomorphic condition for the genus, and the group may prove in the future to be paraphyletic. Within the group, *L. minima* and *L. boliviana* have the basal portion of the metapostnotum slanting posteriorly, not vertical as in other species.

**Key to species**
(Females of *L. boliviana* not known)

1 Vestiture wholly black ..... *nigra*
- Vestiture, at least on head and thorax, yellowish brown to whitish.....2
2 Tegula yellowish, translucent; alary sclerites easily seen through tegula. Vertex of head much elevated behind ocelli, distance from median ocellus to vertex in frontal view as long as 1.4–1.6 MOD. Prepygidial and pygidial fimbriae of female orange. Apex of T7 of male forming two small lobes (Fig. 9) .... *separata*
- Tegula brown to black, scarcely translucent. Vertex of head moderately elevated behind ocelli, distance

from median ocellus to vertex in frontal view as long as 0.6–1.1 MOD. Prepygidial and pygidial fimbriae of female yellowish to dark brown. Apex of T7 of male forming two points (Figs. 3–8) ..... 3

3 Females ..... 4

- Males ..... 7

4 T2–T4 with erect, long hairs basad of apical band, up to 1.2–1.5 times MOD (without short, appressed hairs usual in other species). Face hirsute, hairs on clypeus as long as those between antennal sockets..... ..... *hirsutula*

- T2–T4 with two strata of hairs basad of apical band: one usually of appressed hairs (short, at most 0.8 times MOD), and another of sparse, erect hairs (0.5–1.0 times MOD). Hairs on clypeus shorter than those between antennal sockets ..... 5

5 Smaller species, 4.5–5.0 mm long. Metapostnotum with short basal portion slanting posteriorly, then vertical ..... *minima*

- Larger species, 6.0–7.2 mm long. Metapostnotum nearly vertical, slightly convex ..... 6

6 T2–T5 with black hairs basad of apical band. Scutellum, close to scutum, with distinct, scattered punctures bearing hairs ..... *tucumana*

- T2 with pale hairs basad of apical band; T3–T5 variable (hairs pale in specimens of northern distribution, but dark in specimens from southern Mendoza, Neuquén and Río Negro). Scutellum with bare basal band, although few minute punctures may be present ..... *monteana*

7 Smaller species, 4.7–5.2 mm long. Apex of T7 forming two short points (Fig. 8). Metapostnotum with short basal portion slanting posteriorly, then vertical ..... *minima*

- Larger species, 5.5–7.0 mm long. Apex of T7 ending in two long points (Figs. 3–7). Metapostnotum variable ..... 8

8 Tibial spurs of mid and hind legs dark brown. T2–T4 with only appressed hairs basad of apical band. Metapostnotum with short basal portion slanting posteriorly, then vertical..... *boliviana*

- Tibial spurs of mid and hind legs yellowish. T2–T4 with erect hairs or intermixed erect and appressed hairs basad of apical band. Metapostnotum nearly vertical ..... 9

9 T2–T4 with long hairs basad of apical band, those on T2 up to 2.8 times MOD. Apex of T7 with points separated by notch with straight base (Fig. 5) ..... *hirsutula*

- T2–T4 with short hairs basad of apical band, those on T2 at most 1.2 times MOD. Apex of T7 with points forming a rounded or V-shaped notch between them ..... 10

10 T2 with pale hairs basad of apical band. Pubescence of basitarsi sparse, cuticle readily visible below hairs. Apex of T7 with points forming a V-shaped notch between them (Fig. 6) ..... *monteana*

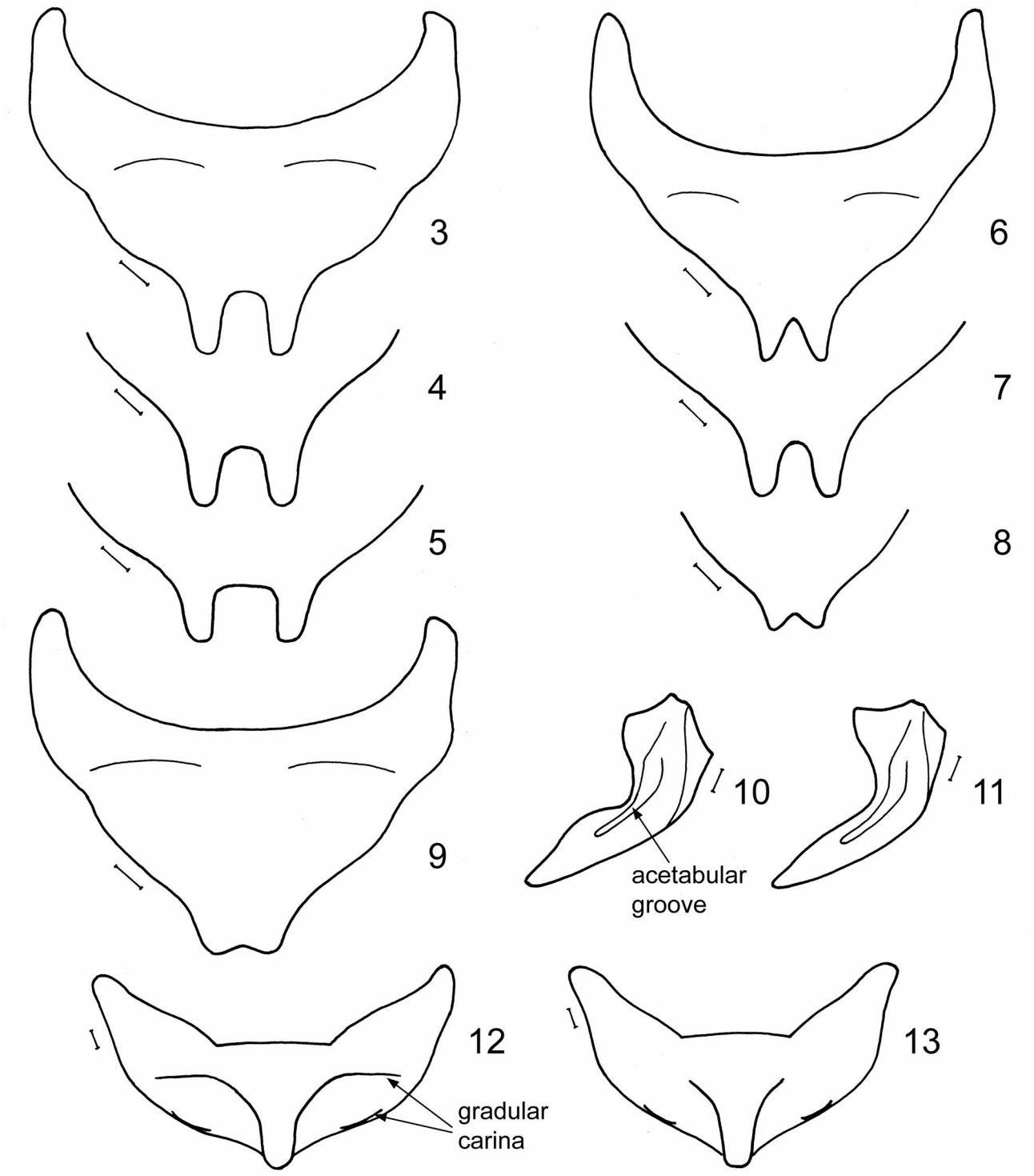
- T2 with dark hairs basad of apical band Pubescence of basitarsi dense, hiding underlying cuticle. Apex of T7 with points forming a U-shaped notch between them (Fig. 3)..... *tucumana*

***Leptometriella tucumana* (Brèthes)**
(Figs. 3, 10)

*Leptometria tucumana* Brèthes, 1910: 297. Holotype male, Tucumán, Argentina (MACN, examined).
*Ancyloscelis tucumana*: Schrottky, 1913: 254.
*Diadasia tucumana*: Schrottky, 1920: 173.
*Leptometriella tucumana*: Roig Alsina, 1999: 24, figs. 11–13.
*Diadasina* (*Leptometriella*) *tucumana*: Michener, 2000: 683; Michener, 2007: 704.

**Diagnosis.** This species is distinguished by the contrasting dark and pale vestiture of the metasomal terga, the apical bands being whitish to yellowish, and the hairs basally to the bands black. Some specimens of *L. monteana* from the provinces of Mendoza to Río Negro may also have a similar color pattern on the metasoma

(although the hairs on entire T2 are always pale) but these specimens are not sympatric with *L. tucumana*. Males are also distinguished by the dense pubescence of the basitarsi, which hides the underlying cuticle.




**FIGURES 3–13.** *Leptometriella* males, T7: 3, *L. tucumana*; 4, *L. nigra*; 5, *L. hirsutula*; 6, *L. monteana*; 7, *L. boliviana*; 8, *L. minima*; 9, *L. separata*. *Leptometriella* males, mandible: 10, *L. tucumana*; 11, *L. monteana*. *Leptometriella* females, T6: 12, *L. nigra*; 13, *L. separata*. Scale lines = 0.1 mm.

**Redescription.** *Female*. Length 6.5–7.7 mm; length of forewing 5.8–6.5 mm.

Black, except apex of mandible, flagellomeres 3–10, and tegula dark reddish-brown, distal tarsomeres and translucent apical margin of S1–S5 yellowish brown, and tibial spurs yellowish. Wings yellowish with veins and pterostigma brown. Vestiture whitish on face, underside of head, sides and venter of thorax, metanotum,

propodeum and base of T1; brown on vertex of head, dorsum of thorax, and most of metasomal sterna; yellowish brown on legs; black to brown on basal part of T2–T5; yellowish white on apical bands of T1–T4. Prepygidial fimbria brown medially and yellowish white at sides; S2–S4 may bear whitish hairs at sides. Hairs on face of moderate length, on clypeus 0.5–1.7 times MOD, between antennal sockets up to 2.3 times MOD. Hairs on scutum 1.3–2.1 times MOD; on mesopleuron 2.0–3.0 times MOD; metapostnotum with short hairs (0.2–0.4 times MOD) close to propodeal margin, remainder of metapostnotum glabrous. T1 at extreme sides and T2–T4 with sharply defined apical band of dense, appressed hairs; T2–T4 basally to apical band with mostly erect hairs of two types: short, finely plumose hairs 0.2–0.3 times MOD, and stiff, simple, longer hairs 0.5–0.6 times MOD; T3–T4 also with two strata of hairs basally to apical band. Punctures on clypeus and labrum larger than those on rest of body, on clypeus 0.20–0.25 times MOD, separated by 0.5–1.0 times their diameter. Margins of scutum with punctures dense, but median part of posterior half with punctures irregularly distributed, separated by 1–5 times their diameter; basal part of scutellum polished, with few scattered punctures; punctures on mesopleuron finer than those of scutum; upper part of metapostnotum glabrous, polished. Vertex of head moderately elevated behind ocelli, distance from median ocellus to vertex in frontal view as long as 0.9 ocellar diameters. Proportion of UID to LID 1:0.9; IAD to AOD 1:0.46. Proportion of scape, pedicel and first three flagellomeres 3:0.8:1:0.45:0.55; first flagellomere as long as 1.25 times its apical width. Mandible narrowly pointed apically; preapical tooth distinct, small. Metapostnotum nearly vertical, in same plane as metanotum. T6 basally with gradular carina, continuing raised margin of pygidial plate laterally and fading at side, also with short gradular carina on apical portion of tergum.

*Male*. Length 5.8–6.8 mm; length of forewing 5.7–6.2 mm.

Color of cuticle and vestiture similar to that of female, with well-defined yellowish apical bands at sides of T1 and on T2–T6. Distribution of vestiture and punctation similar to that of female, although denser; punctures on clypeus and labrum 0.05–0.15 times MOD. Hairs of scutum 1.5–2.5 times MOD. Apical bands on T2–T6 dense, contrasting with basal pubescence, which is formed by appressed, short hairs (those on T2 0.25–0.35 times MOD) and scattered, erect, longer hairs (on T2 0.5–0.6 times MOD). Hairs of S2–S5 1.1–1.8 times MOD. S6 evenly covered with short hairs, 0.25 times MOD. Proportion of first three flagellomeres, 1:0.5:0.75; length of first flagellomere 1.3 times its apical width. Mandible broadened preapically. T7 with two apical points separated distally by a distance similar to their length, forming medially a U-shaped notch. S7, S8 and genital capsule figured in Roig-Alsina (1999, figs. 11–13).

**Material studied. Argentina**: **Jujuy**: 1 male, Río Chico, 18-II-1955, J. F. (MLP). **Salta**: 5 females, Sumalao, 17-III-1993, P. Hazeldine (MACN); 1 male, Sumalao, III-1993, M. Fritz (MACN); 1 female, Tablillas, 15-II-1945, A. Martínez (MLP). **Tucumán**: 1 male, Tucumán, holotype (MACN). **La Rioja**: 1 male, no precise locality or date, E. Giacomelli (MACN).

### ***Leptometriella nigra* (Friese)**

(Figs. 4, 12)

*Ancyloscelis nigra* Friese, 1910: 710. Syntypes female and male from Mendoza [province], 1200 m a.s.l., November 1908, P. Jörgensen (not examined). Jörgensen, 1912a: 159. Schrottky, 1920: 171.
*Leptometria nigra*: Jörgensen, 1912b: 321.
*Leptometriella nigra*: Roig Alsina, 1999: 24.

**Diagnosis.** This species is readily distinguished by the wholly black vestiture of both sexes. It is an hirsute species, without appressed hairs on the metasomal terga basally to the apical bands. The hidden sterna of the male and the genital capsule are remarkably similar to those of *L. tucumana*.

**Redescription.** *Female*. Length 6.5–9.5 mm; length of forewing 5.5–7.0 mm.

Body black, except apex of mandible, flagellomeres 4–10, and apex of tarsi dark reddish brown. Wings

hyaline, weakly yellowish; veins and pterostigma brown. Vestiture entirely black. Hairs dense and long on head and mesosoma. Hairs on clypeus 1.2–2.2 times MOD, between antennal sockets up to 3 times MOD. Hairs on scutum 1.4–3.1 times MOD; on mesopleuron 3.3–4.0 times MOD; metapostnotum with short hairs (0.3–0.5 times MOD) close to propodeal margin, remainder of metapostnotum glabrous. T2–T4 with apical band of dense, appressed hairs, denser on T3–T4; T2 basally to apical band with mostly erect hairs of two types: short, finely plumose hairs 0.4–0.6 times MOD, and stiff, simple, longer hairs 1.3–1.8 times MOD; T3–T4 also with erect hairs basally to apical band. Punctures on clypeus and labrum larger than those on rest of body, on clypeus 0.15–0.30 times MOD, separated by 0.5–1.0 times their diameter. Margins of scutum with punctures dense, but median part of posterior half with punctures irregularly distributed, separated by 1–5 times their diameter; basal part of scutellum polished, with few scattered punctures; punctures on mesopleuron finer than those of scutum; upper part of metapostnotum glabrous, polished. Vertex of head moderately elevated behind ocelli, distance from median ocellus to vertex in frontal view as long as 1.1–1.2 ocellar diameters. Proportion of UID to LID 0.92–0.94; of IAD to AOD 1:0.43–0.45. Proportion of scape, pedicel and first three flagellomeres 2.8:0.6:1:0.4:0.5; first flagellomere as long as 1.3 times its apical width. Mandible without distinct preapical tooth. Metapostnotum nearly vertical, in same plane as metanotum. T6 basally with gradular carina continuing raised margin of pygidial plate laterally and fading at side, also with short gradular carina on apical portion of tergum.

*Male*. Length 6.8–8.2 mm; length of forewing 5.9–7.3 mm.

Color of cuticle and vestiture similar to that of female. Distribution of vestiture and punctation similar to that of female, although denser. Hairs of scutum 1.9–3.6 times MOD. T2–T5 with apical bands of dense hairs 0.7–1.5 times MOD; T6 also with apical band, but hairs twice as long as those of previous terga; T1 without defined apical band. Hairs of basal part of terga erect (without appressed hairs), those on T2 1.5–2.3 times MOD. Hairs of S2–S5 long, 2.3–3.5 times MOD, those on S3–S5 shorter medially. S6 evenly covered with short hairs 0.25 times MOD. Proportion of first three flagellomeres, 1:0.6:0.6; first flagellomere as long as 1.3 times its apical width. Mandible broadened peapically. T7 with two apical points separated distally by a distance similar to their length, forming medially a U-shaped notch. S7, S8 and genital capsule similar to those of *L. tucumana*.

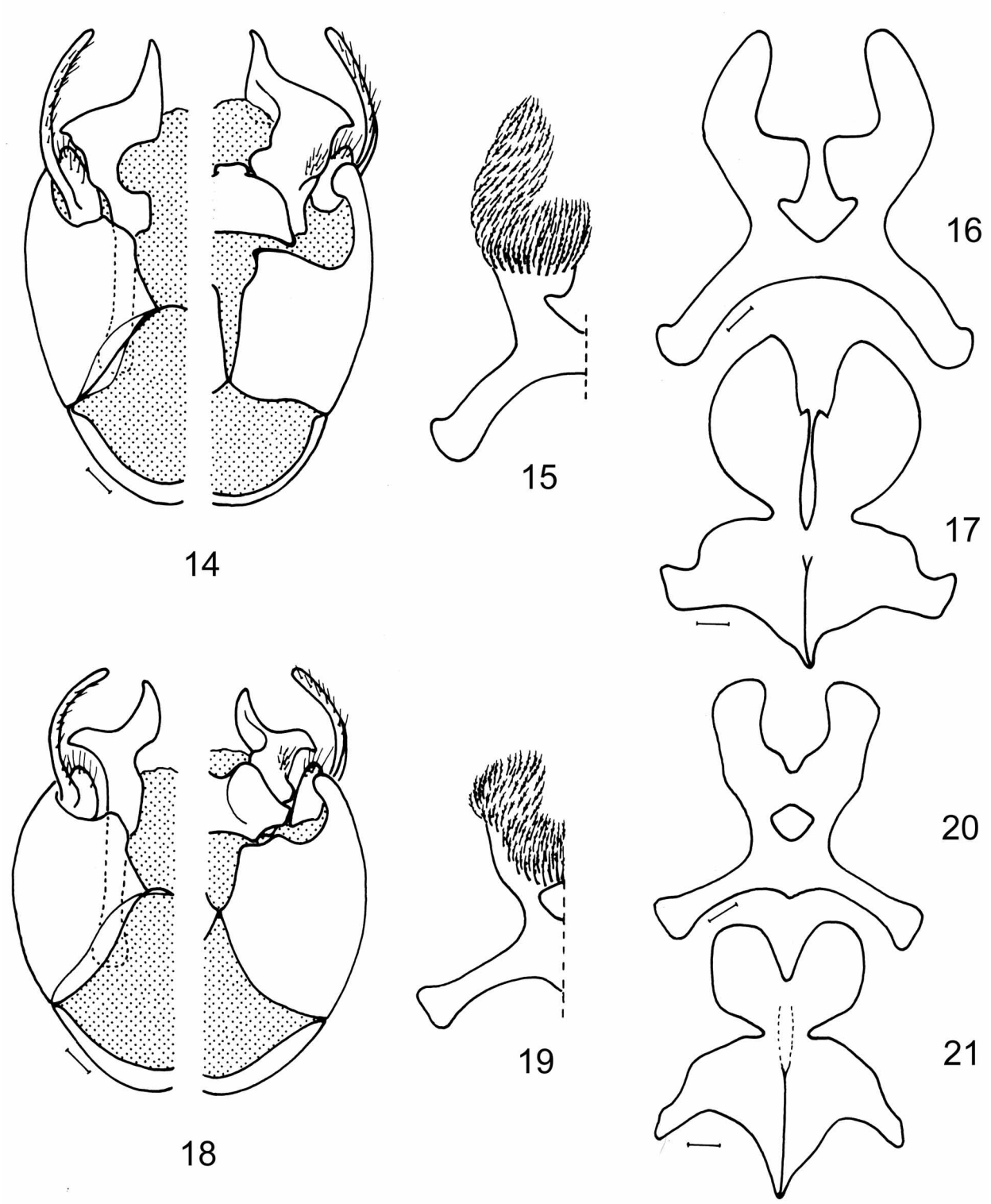
**Material studied. Argentina**. **Salta**: 2 females, 5 males, Cachi, 28-I-1968, Golbach, Terán & Willink (IFML); 7 males, Tacuil, 23-27-I-1968, A. Terán (IFML); 2 males, Tacuil, 2700 m, 23-27-I-1968, Golbach, Terán & Willink (IFML); 2 females, 1 male, Cafayate, Yacochuya, 20-III-1974, A. Willink (IFML); 3 females, 1 male, Cafayate, Yacochuya, 25-I-1986, on *Sphaeralcea bonariensis*, J.L. Neff (CTMI); 5 females, 2 males, 15 kn SE Payogasta, recta Tin Tin, 21-III-1990, A. Roig Alsina (MACN); 1 male, Tin Tin, 18-III-1993, P. Hazeldine (MACN); 2 females, Payogasta, III-1990, M. Fritz (MACN); 1 male, Amblayo, 2500 m, 30-I-1945, F. Monrós (MLP). **Catamarca**: 1 male, Joyango, 29-X-1972, L. Stange (IFML). **La Rioja**: 5 females, Guanchín15-XII-1971, C. Porter & L. Stange (IFML). **Mendoza**: 3 females, Villavicencio, 20-XI-1941 (MLP); 2 females, Bajada Villavicencio, 1300 m, on flowers of *Sphaeralcea brevipes*, 19-XI-1973, J.L. Neff (CTMI).

### *Leptometriella hirsutula* Roig-Alsina, n. sp.

(Figs. 5, 14–17)

**Diagnosis.** This species is distinguished from other species with extended pale pubescence by the length of the vestiture on the scutum (1.1–1.7 times MOD in the female, and 2.2–3.4 times MOD in the male), the length of the vestiture on the metasomal terga (up to 1.2–1.5 times MOD in the female, and 1.6–2.8 times MOD in the male), and the lack of appressed hairs on the disc of the metasomal terga. It may be confused with *L. separata*, from which it is separated by the dark tegula, the moderately elevated vertex (distance from

median ocellus to vertex in frontal view as long as MOD), and the reduced pilosity of the metapostnotum, with a large bare area close to the metanotum. The preapically broadened mandible of the male associates *L. hirsutula* with *L. tucumana* and *L. nigra*.




**FIGURES 14–21.** *Leptometriella hirsutula*, male: 14, genital capsule, ventral (left) and dorsal (right) views; 15, S7, ventral view showing vestiture; 16, S7, dorsal view; 17, S8, ventral view. *L. separata*, male: 18, genital capsule, ventral (left) and dorsal (right) views; 19, S7, ventral view showing vestiture; 20, S7, dorsal view; 21, S8, ventral view. Scale lines = 0.1 mm.

**Description.** *Female holotype*. Length 7.0 mm; length of forewing 5.9 mm.

Black, except as follows: reddish apex of mandible, reddish brown flagellomeres 3–10, dark brown tegula, yellowish-brown translucent apex of S1–S5, yellowish tibial spurs, and reddish-brown distal tarsomeres. Wings hyaline, weakly amber; veins brown, pterostigma yellowish brown. Vestiture yellowish all over body, but paler on venter of thorax and sides of propodeum. Prepygidial fimbria medially, and pygidial fimbria with reddish-brown hairs. Vestiture dense and long. Hairs dense on face, on clypeus 1.1–1.7 times MOD, between antennal sockets longer, up to 2.7 times MOD. Hairs on scutum 1.1–1.7 times MOD; on mesopleuron 2.2–2.8 times MOD; metapostnotum with short hairs (0.3–0.5 times MOD) close to propodeal margin, remainder of metapostnotum glabrous. T2–T4 with apical bands of dense, appressed hairs; such a band only at sides on T1; T2 basally to apical band with mostly erect, long hairs, 0.6–1.2 times MOD (short, appressed hairs usual in other species absent); T3–T4 also with mostly erect, long hairs basally to apical band. Punctures on clypeus and labrum larger than those on rest of body, on clypeus separated by 0.5–1.0 times their diameter. Margins of scutum with punctures dense, but median part of posterior half with punctures sparse, separated by 1–3 times their diameter; scutellum punctate throughout, without impunctate basal band; upper part of metapostnotum glabrous, polished. Vertex of head moderately elevated behind ocelli, distance from median ocellus to vertex in frontal view as long as MOD. Proportion of UID to LID 1:0.85; IAD to AOD 1:0.48. Proportion of scape, pedicel and first three flagellomeres 3.3:0.8:1:0.5:0.5; first flagellomere as long as 1.2 times its apical width. Mandible narrowly pointed apically; preapical tooth distinct, small. Metapostnotum nearly vertical, in same plane as metanotum. T6 basally with gradular carina continuing raised margin of pygidial plate laterally and fading at side, also with short gradular carina on apical portion of tergum.

*Male*. Length 6.5–6.8 mm; length of forewing 6.0–6.3 mm.

Color of cuticle and vestiture similar to that of female, but vestiture longer and denser. Hairs on face between antennal sockets up to 3.1 times MOD, on scutum 2.2–3.4 times MOD. T2–T5 with apical bands of dense, decumbent, rather long hairs, 1.0–1.5 times MOD; T1 without an apical band; T6–T7 entirely covered with long decumbent hairs. T2–T5 basally to apical band with erect, long hairs, those on T2 1.6–2.8 times MOD (T2–T5 without short, appressed hairs). Hairs on S2–S5 long, 1.7–2.4 times MOD; on S6 very short and even, 0.25 times MOD. Proportion of first three flagellomeres, 1:0.8:0.9; first flagellomere as long as 1.0–1.05 times its apical width. Mandible broadened preapically. T7 with two apical points separated distally by a distance similar to their length, forming medially a U-shaped notch. S7, S8 and genital capsule as in figures 14–17.

**Etymology.** The specific name refers to the long, erect vestiture of the body.

**Material studied.** Holotype female, Argentina, Catamarca, Chumbicha, October 1957, M. Fritz (MACN). Paratypes: **Argentina, Catamarca**: 1 male, Andalgalá, El Potrero, on flowers of *Sphaeralcea*, 22-II-1974, J.L. Neff (IFML); 1 male, Chumbicha, XI-1947, R. Llano (MACN).

### ***Leptometriella separata* (Holmberg)**

(Figs. 1–2, 9, 13, 18–21)

*Teleutemnesta separata* Holmberg, 1903: 405–406. Lectotype female, by present designation: Argentina, Salta, Molinos, 1–IV–1900 (MACN, examined).

*Ancyloscelis humilis* Vachal, 1904: 19. Holotype male, Argentina, Tucumán, Girard (Paris, examined). Jörgensen, 1912a: 158. Schrottky, 1913: 254. **Synon. nov.**

*Ancyloscelis minuta* Friese, 1908: 52. Lectotype female, by present designation: Argentina, Salta, Marzo, Steinbach (Berlin, examined). Jörgensen, 1909: 224. Jörgensen, 1912a: 158 (synonymyzed with *humilis*). Schrottky, 1913: 254. **Synon. nov.**

*Melitoma (Ancyloscelis) specularis* Vachal, 1909: 21. Holotype male, Argentina, Chaco de Santiago del Estero, Río Salado, E. R. Wagner (Paris, examined). **Synon. nov.**

*Melitoma (Ancyloscelis) separata*: Vachal, 1909: 21.

*Melitoma (Ancyloscelis) humilis*: Vachal, 1909: 21.
*Leptometria separata*: Brèthes, 1910: 298.
*Leptometria humilis*: Brèthes, 1910: 298. Jörgensen, 1912b: 321.
*Leptometria minuta*: Brèthes, 1910: 298.
*Leptometria specularis*: Brèthes, 1910: 298.
*Ptilothrix separata*: Schrottky, 1913: 254.
*Diadasia separata*: Cockerell, 1919: 120. Schrottky, 1920: 172.
*Diadasia humilis*: Schrottky, 1920: 171.
*Diadasia specularis*: Schrottky, 1920: 172.
*Leptometriella separata*: Roig Alsina, 1999: 24.

**Type material.** There is a single specimen of *Teleutemnesta separata* preserved in the Holmberg Collection (MACN), which is here designated as the lectotype. It bears the handwritten labels "Molinos, IV–1–900" and "separata [female symbol] Holmberg". It is badly damaged, lacking the head, the prothorax, the forelegs, the left mid leg, the left hind leg, and the metasoma. Although in poor condition, there is no doubt on the identity of the species. Several characteristics can be observed that single out the lectotype specimen as a *Leptometriella*: small size, presence of a basitibial plate on the hind leg, plumose scopal hairs with straight short barbulae oblique to the rachis, hind basitarsus distinctly projected apically over the following tarsomere, claws pointed and arolia distinct (hind leg only), metapostnotum with sparse hairs on most of its surface except bare band close to metanotum, and horizontal part of the mesopleura in front of the middle coxae short. The lectotype is identified at the species level by the metapostnotum with hairs scattered over most of its surface (Fig. 2), the upper bare band narrow, and by the yellowish, translucent tegula. The pattern of the vestiture (both color and density) of the missing metasoma was described in detail by Holmberg (1903), who pointed out the reddish color of the prepygidial and pygidial fimbriae, characteristic of this species.

The holotype of *Ancyloscelis humilis* Vachal bears the handwritten labels "Tucuman / Rep Arg" and "Ancyloscele / humilis / [male symbol] Vachal"; it is in good condition. The holotype of *Melitoma specularis* Vachal bears the printed label "Museum Paris / Chaco de Santiago del Estero / bords du Rio Salado / Env. d'Icaño / E.R. Wagner 1904" and the handwritten label "Ancyloscelis / [male symbol] / specularis / Vach."; it is in good condition. Both types are males of *L. separata*. They are readily identified as such by the elevated vertex of the head, the bilobed apex of T7 of the male, and the translucent tegula.

Friese (1908) based his *Ancyloscelis minuta* on a composite series. I have studied two specimens from Berlin labeled as types. The female corresponds to *L. separata* (Holmberg), and has been selected as the lectotype, following the interpretation of *minuta* made by previous authors (Jörgensen, 1912a, 1912b, Schrottky, 1920) who considered *minuta* Friese as a synonym of *humilis* Vachal. The male specimen corresponds to *Diadasina riparia* (Ducke, 1907). Both specimens, which are in good condition, bear identical printed labels "Argentina / Salta 2500 / 3.1905 / Steinbach", and identification labels "Ancyloscelis / minuta / 1907 Friese det."

**Diagnosis.** This species is easily distinguished by the metapostnotum with sparse hairs on most of its surface except a glabrous band close to the metanotum, the vertex of the head much elevated behind the ocelli, the yellowish, translucent tegula, through which the alary sclerites are easily seen, and the bilobed apex of the male T7. The male has a unique seventh sternum, with the apical lobes secondarily fused (Fig. 20).

**Redescription.** *Female*. Length 6.5–8.0 mm; length of forewing 5.3–6.0 mm.

Black, except apex of mandible and flagellomeres 3–10 dark reddish brown, distal tarsomeres and translucent apical margin of S1–S5 yellowish brown, tibial spurs yellowish, and tegula yellowish, translucent. Wings pale amber, with veins and pterostigma yellowish brown. Vestiture yellowish brown to pale gray, but on inner side of mid and hind basitarsus, and on most of metasomal sterna orange brown; on prepygidial and pygidial fimbriae orange. Hairs on face of moderate length, on clypeus 0.5–1.0 times MOD, between antennal sockets up to 2.2 times MOD. Hairs on scutum 1.4–2.0 times MOD; on mesopleuron 2.0–2.8 times MOD; metapostnotum with short hairs 0.4–0.6 times MOD, except glabrous band close to metanotum. T1–T4 with well-

defined apical bands of dense, appressed hairs. T2 basally to apical band with dense semierect hairs 0.7–1.0 times MOD, and intermixed erect hairs 1.2–1.3 times MOD; T3–T4 with appressed hairs and intermixed erect hairs. Punctures on clypeus and labrum larger than those on rest of body, on clypeus 0.1–0.2 times MOD, separated by 0.5–1.0 times their diameter. Margins of scutum with punctures dense, but median part of posterior half with punctures irregularly distributed, separated by 1–5 times their diameter; basal part of scutellum polished, with punctures regularly distributed; punctures on mesopleuron finer than those of scutum; upper part of metapostnotum glabrous, polished. Vertex of head strongly elevated behind ocelli, distance from median ocellus to vertex in frontal view as long as 1.4–1.5 ocellar diameters. Proportion of UID to LID 1:0.9; IAD to AOD 1:0.42. Proportion of scape, pedicel and first three flagellomeres 3:0.8:1:0.6:0.6; first flagellomere as long as 1.2 times its apical width. Mandible without distinct preapical tooth. Metapostnotum nearly vertical, in same plane as metanotum. Gradulus of T6 with gradular carina restricted to posterior portion of tergum.

*Male*. Length 5.2–7.5 mm; length of forewing 4.8–5.8 mm.

Color of cuticle and vestiture similar to that of female. Distribution of vestiture and punctation similar to that of female, although denser. Hairs on face between antennal sockets up to 2.8 times MOD, on scutum 2.3–2.6 times MOD. With well-defined apical bands on T1–T6; T2 basally to apical band with erect, moderately long hairs 0.8–1.6 times MOD and without appressed hairs; T3–T6 with hairs progressively more decumbent, but without short appressed hairs. Hairs of S2–S5 0.8–1.1 times MOD. S6 evenly covered with short hairs, 0.2–0.3 times MOD. Proportion of first three flagellomeres, 1:0.9:0.9; first flagellomere as long as 1.1 times its apical width. Mandible tapering apically. T7 with apical points forming short rounded lobes (Fig. 9). S7, S8 and genital capsule as in figures 18–21.

**Color variation.** Specimens of *L. separata* present a striking color change related to age. Fresh specimens, recently emerged, have a yellowish-brown to tawny vestiture, while old specimens have a pale greyish vestiture. This variation in color is seen in nature and also in preserved specimens, as for example in series taken from the same place and date. Almost invariably tawny specimens have wings with neat margins, while pale grayish specimens have tattered wings.

**Material studied. Argentina**: **Jujuy**: 2 males, Esperanza, 3-III-1961, J. Foerster (MLP). **Salta**: 1 female lectotype of *T. separata* Holmberg, Molinos, 1-IV-1900 (MACN); 3 males, Coronel Moldes, I-1945, F. Monrós (MLP); 1 male, Rosario de Lerma, XI-1992, M. Fritz (MACN); 2 females, 3 males, La Viña, XII-1992, M. Fritz (MACN); 5 females, La Viña, 28-XII-1992, on *Sphaeralcea*, A. Roig Alsina and L. Horovitz (MACN); 5 females, 1 male, Embarcación, XI-1989, A. Roig Alsina (MACN); 1 female, 40 km N Embarcación, 10-XI-1993, A. Roig Alsina (MACN); 3 females, 20 km E La Candelaria, 20-I-1986, on *Sphaeralcea*, J.L. Neff (CTMI); 1 male, Amblayo, 22-III-1990, A. Roig Alsina (MACN); 1 female, Cafayate, Yacochuya, 20-III-1974, A. Willink (IFML); 1 female, 2 males, Cafayate, 24-II-1993, P. Hazeldine (MACN); 15 females, 14 males, 6 km S Pichanal, 9-XI-1993, A. Roig Alsina (MACN). **Tucumán**: 1 female, 16 km N San Pedro de Colalao, 16-XII-1976, L. Stange (IFML); 1 female, 1 male, El Cadillal, 4-I-1976, L. Stange (IFML); 3 females, 5 males, 11 km NW El Cadillal, 28-X-2004, A. Roig Alsina and L. Compagnucci (MACN); 1 female, Tapia, 9-XI-1968, A. Willink (IFML); 1 male 6 km W Tapia, 20-XI-1993, A. Roig A. (MACN); 1 female, Trancas, 20-XI-1940 (MLP); 1 female, Horco Molle, 700 m, 20-XI-1972, L. Stange (IFML); 2 females, Tafí Viejo (MACN); 1 male, Garmendia, III-1946, Sacristi (IFML); 1 female, 1 male, Guasapampa, 1-XII-1940 (MLP); 1 female, Manantiales, 2-XII-1941 (MLP); 4 females, 2 males, Chorromoro, 22-XI-1940 and 12-XI-1942, A. Ogloblin (MLP); 1 female, Chicligasta, Arroyo Celeste, 5-XII-1973, on *Sphaeralcea*, J.L. Neff (CTMI); 2 females, Amaicha del Valle, 1-2-II-1985, L. Moffatt (MACN). **Catamarca**: 1 male, Santa María, 29-XI-1974, A. Willink (IFML); 1 female, 2 males, Santa María, 16-I-1986, on *Sphaeralcea bonariensis*, J.L. Neff (CTMI); 2 females, 1 male, Andalgalá, 19-XI-1944 (MLP); 2 females, Andalgalá, 17-X-1973, on *Sphaeralcea*, J.L. Neff (CTMI); 1 male, Andalgalá, 11-X-1973, on *Modiola sp.*, J.L. Neff (CTMI); 3 females, Andalgalá, 7-II-1973 and 17-X-1973, on *Sphaeralcea*, J.L. Neff (IFML); 2 females, San Fernando, III-1990, A. Roig A. (MACN); 1 female, Arroyo ca. Infanzón, ruta 11, 22-XI-1977, Willink & Fidalgo

(IFML); 7 females, 1 male, El Rodeo, 19-I-1989, L. Moffatt (MACN); 1 female, El Rodeo, 16-IV-1972, C. Porter (IFML); 1 male, El Alto, 21-III-1950, R. Maldonado (MLP); 2 females, 2 males, El Alto, 11-I-1960, A. Willink (IFML); 14 females, 2 males, Las Viñas, 9-XI-1942, on *Sphaeralcea*, A. Ogloblin (MLP); 1 female, Joyango, 29-X-1972, L. Stange (IFML). **La Rioja**: 2 females, Durazno, 15-XI-1944 (MLP); 3 females, Schagui, 800 m, IV-1951, Budin (IFML); 1 male, Ochoa Huasi, 17-III, A. Martínez (MLP); 1 female, Malanzán, I-1923, M. Gómez (MACN); 1 female, Huanchín, I-1928, M. Gómez (MACN). **Santiago del Estero**: 1 male holotype of *M. specularis* Vachal, bords du Rio Salado, Environs d'Icaño, 1904, E.R. Wagner (Paris), 9 females, 5 males, Termas de Río Hondo, 24-IV-1951 and 29-XI-1951, A. Ogloblin (MLP); 1 female, Dique Frontal, Termas de Río Hondo, 3-V-1972, C. Porter (IFML); 1 female, 2 males, Costas del Salado, km 511, M. Gómez (MACN); 1 female, 1 male, Desvío 511, Depto. Matará, XI-1928, M. Gómez (MACN); 1 female, 3 males, Campo Gallo, III-1940, A. Prosen (MLP); 1 female, 3 males, Tapso, 2-XI-1942, A. Ogloblin (MLP); 6 females, 4 males, Quirós, 28-XI-1941 (MLP). **Formosa**: 1 male, Gran Guardia, J. Foerster (MLP). **Chaco**: 1 female, 1 male, Roque Sáenz Peña, Ohnmeiser (MACN); 1 female, Fontana, 5-XI-1935, J.B. Daguerre (MACN). **Córdoba**: 2 females, Totoral, 18-II-1948, P. López (IFML); 1 male, Villa María, 17-XI-1940 (MLP); 1 female, La Calera, XI-1952 (MLP); 1 female, Colón, 10 km Jesús María, 3-XII-1973, on *Gaillardia megapotamicum*, J.L. Neff (CTMI); 1 female, Jesús María, 19-XI-1940 (MLP); 1 female, 4 males, Río Segundo, 20-XI-1952 (MLP); 1 male, Deán Funes, 12-XII-1940 (MLP); 8 females, 1 male, Depto. San Martín, 3-I-1948 (IFML); 1 male, Villa Carlos Paz, Cerro de la Cruz, 16-XII-1983, A. Oliva (MACN). **Mendoza**: 1 female, Godoy Cruz, Blanco Encalada, 8-I-1940 (MLP); 1 female, Cacheuta (MACN). **San Luis**: 1 male, Potrero de los Funes, 14-XI-1941, A. Ogloblin (MLP); 1 male, San Jerónimo, XI-1972, G. Williner (MACN). **La Pampa**: 1 female, General Pico, 7-XI-1945 (MLP). **Santa Fe**: 1 male, Piquete, 20-I-1930, A. Bridarolli (MACN); 1 female, Rosario (MACN); 1 male, Candiotti, 22-XI-1945, A. Ogloblin (MLP); 1 female, 2 males, Guadaloupe, 5-XI-1945 (MLP); 1 female, 4 males, Vera, 2-XI-1945, A. Ogloblin (MLP); 1 female, Saladillo, 28-XI-1921, Hubrich (ZSM). **Buenos Aires**: 1 male, Canal San Fernando, 3-XI-1945, A. Ogloblin (MLP); 3 females, Buenos Aires, 22-XI-1908, 8-III-1910, 2-I-1915, J. Brèthes (MACN). **Río Negro**: 2 females, I-1991, U. Fritz (MACN).

***Leptometriella monteana* Roig-Alsina, n. sp.**
(Figs. 6, 11, 22–25)

**Diagnosis.** This species can be recognized by the bare, polished, nearly inpunctate basal band of the scutellum, the mostly glabrous metapostnotum, the moderately elevated vertex of the head, the short vestiture of the metasomal terga, and the T7 of the male with the two apical points forming a V-shaped notch medially. The male genitalia and terminal sterna associate *L. monteana* with *L. minima* and *L. boliviana*.

**Description.** *Female holotype*. Length 6.0 mm (paratypes 6.0–7.2 mm); length of forewing 5.3 mm (paratypes 5.1–5.5 mm).

Head black, mandible with dark brown apex. Antenna with scape, pedicel, and first two flagellomeres black, rest of antenna dark brown. Thorax and propodeum black; tegula dark brown, black close to scutum. Metasoma black, with apices of sterna and pygidial plate brown. Legs blackish to dark brown with tibial spurs yellowish, and apex of tarsi reddish brown. Wings hyaline with veins and pterostigma brown. Vestiture mostly white to pale gray, but light brown to brown on apex of mid tibia, dorsum of hind tibia, all tarsi and most of metasomal sterna; prepygidial fimbria orange brown to brown medially and paler at sides, pygidial fimbria brown (dark vestiture more extended on metasomal terga and legs in specimens of southern distribution, see color variation below). Vestiture dense and long on most of head, but sparse on clypeus and labrum; hairs on clypeus 0.8–1.8 times MOD, between antennal sockets 1.2–2.0 times MOD. Hairs on scutum 1.5–1.8 times MOD; on mesopleuron 1.8–2.6 times MOD; metapostnotum with short hairs (0.2–0.3 times MOD) close to

propodeal margin, remainder of metapostnotum glabrous. T1–4 with apical band of dense, appressed hairs, that on T1 sometimes interrupted medially. T2 basally to apical band with appressed hairs 0.5–0.8 times MOD, and intermixed erect hairs 0.5–1.0 times MOD; T3–T4 also with intermixed appressed and erect hairs. Punctures of moderate size, but sparse, on clypeus and labrum; on rest of body punctures small. Margins of scutum with punctures rather dense, but median part of posterior half of scutum polished, with punctures minute, sparse, separated by 3–6 times their diameter; dorsum of scutellum with transverse band with few or no punctures; upper part of metapostnotum glabrous, polished, with few wrinkles at sides close to metanotum; punctures of mesopleuron as sparse as those of center of scutum. Vertex of head moderately elevated behind ocelli, distance from median ocellus to vertex in frontal view as long as 1.15 ocellar diameters. Proportion of UID to LID 1:0.91; IAD to AOD 1:0.42. Proportion of scape, pedicel and first three flagellomeres 3.3:0.8:1:0.5:0.6; first flagellomere as long as 1.15 times its apical width. Mandible apically narrowly pointed; preapical tooth distinct, small. Metapostnotum nearly vertical, in same plane as metanotum. Gradulus of T6 with short gradular carina restricted to posterior part of tergum.

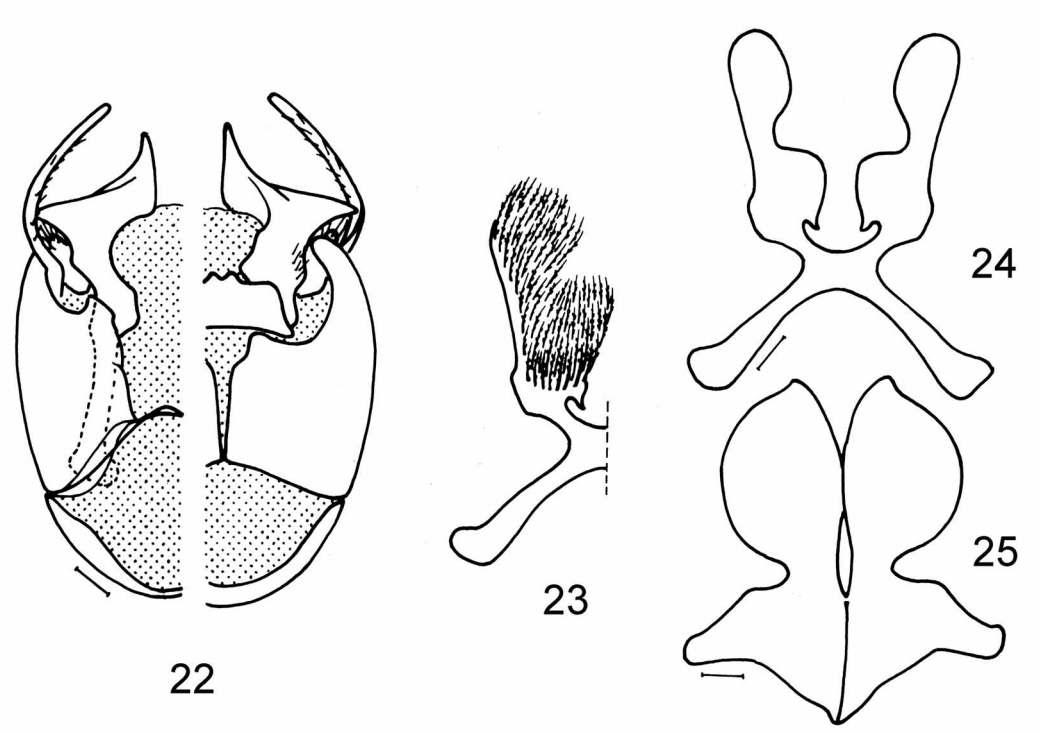
*Male*. Length 5.4–6.7 mm; length of forewing 5.0–5.7 mm.

Color of cuticle and vestiture similar to that of female, but pale vestiture (white to pale gray) more extensive, light brown hairs restricted to hind tarsus. Distribution of vestiture and punctation similar to that of female, although denser. Hairs of scutum 1.6–2.4 times as long as flagellar diameter. T2–T6 with apical band of dense hairs; band on T1 less defined. Hairs of basal parts of terga erect (appressed hairs absent), those on T2 0.8–1.2 times as long as flagellar diameter. Hairs of S2–S5 rather short, 1.0–1.5 times as long as flagellar diameter, those on S3–5 shorter medially. S6 evenly covered with short hairs. Proportion of first three flagellomeres, 1:0.7:0.8; first flagellomere as long as 1.0–1.1 times its apical width. Mandible tapering apically. T7 with two apical points separated distally by a distance similar to their length, forming medially a V-shaped notch. S7, S8 and genital capsule as in figures 22–25.

**Color variation.** The color pattern of the vestiture of this species presents latitudinal variation. Specimens from the north (provinces of Catamarca to northern Mendoza) have pale hairs on most of the body, except a few areas with brown hairs: the males have brown hairs only on the tarsi, and the females have brown hairs on the apex of the mid tibia, the dorsum of the hind tibia, all the tarsi, the prepygidial fimbria medially, the pygidial fimbria, and most of the metasomal sterna. Specimens from Neuquén and Río Negro are darker, having brown hairs on T3–T4 (female) or on T3–T6 (male) basally to and contrasting with the pale apical bands. The females have brown hairs on entire T5–T6 including the prepygidial and pygidial fimbriae, and the mid and hind legs have brown hairs beyond the apex of the femora in both sexes. A female from southern Mendoza (La Tosca) is intermediate, with brown hairs basally to the pale bands on T3–T4, but with prepygidial fimbria with pale hairs laterally and legs colored as in northern specimens. I have not detected any morphological differences that may suggest that the southern specimens represent a different species.

**Etymology.** The name *monteana*, pertaining to the Monte, refers to the Monte biogeographic region (Cabrera & Willink, 1973), where the species occurs.

**Material studied.** Holotype female, Argentina, La Rioja, Guandacol, 29-XI-1993, P. Hazeldine (MACN). Paratypes: **Argentina**: **Catamarca**: 3 females, 1 male, Belén, 30-X-1972, on flowers of *Verbesina encephaloides*, L. Stange (IFML); 1 female, 2 males, Andalgalá, 6-XI-1972 and 17-X-1973, all on flowers of *Sphaeralcea*, J.L. Neff (CTMI); 1 female, El Rodeo, 20-28-I-1958, R. Golbach (IFML). **La Rioja:** 3 males, Nonogasta, XI-1927, M. Gómez (MACN); 1 female, Chilecito, 25-XI-1944, A. Ogloblin (MLP); 2 females, 1 male, Famatina, 23-XI-1975, L. Stange (IFML). **San Juan**: 2 males, Pampa de Vieja, 8 km NE San José de Jáchal, 1-XI-1991, J.G. Rozen, L. Peña & A. Ugarte (AMNH). **Mendoza:** 1 male, Mendoza, P. Joergensen (MACN); 1 male, San Rafael, base Volcán Diamante, 2-XII-1982, Del Vitto (IADIZA); 1 female, 1 male, Malargüe, La Tosca, 20-XI-1973, J.L. Neff (CTMI). **Neuquén**: 1 female, Arroyito, ruta nac. 237, 6-10-XII-1987, A. Willink (IFML). **Río Negro**: 1 female, Luis Beltrán, XI-1987, M. Fritz (MACN); 1 male, San Antonio Oeste, XII-1984, M. Fritz (MACN).




**FIGURES 22–25.** *Leptometriella monteana*, male: 22, genital capsule, ventral (left) and dorsal (right) views; 23, S7, ventral view showing vestiture; 24, S7, dorsal view; 25, S8, ventral view. Scale lines = 0.1 mm.

***Leptometriella minima* Roig-Alsina, n. sp.**
(Fig. 8)

**Diagnosis.** This species can be recognized by its small size, being the smallest species in the genus. It is also distinguished by the metapostnotum with a short basal subhorizontal portion, the extremely short pubescence of the metasomal terga, and the scarcely elevated vertex of the head.

**Description.** *Female holotype*. Length 4.6 mm (paratypes 4.5–5.0 mm); length of forewing 4.1 mm (paratypes 4.0–4.6 mm).

Head black; apical half of mandible brown. Thorax and propodeum black; tegula brown. Metasoma dark brown, with apex of terga and sterna pale brown, translucent. Legs black, but beyond basitarsus brown; tibial spurs yellowish. Wings hyaline with veins and pterostigma brown; center of pterostigma light brown. Vestiture mostly whitish, but pale brownish on apex of tarsi and dorsum of T1–T2; prepygidial and pygidial fimbriae yellowish brown. Vestiture of head, thorax, most of legs, propodeum, and base of T1 long. Hairs sparse on clypeus and labrum, on clypeus 1.4–2.4 times MOD, between antennal sockets 2.0–3.0 times MOD. Hairs on scutum 1.5–3.0 times MOD; on mesopleuron 3.4–4.4 times MOD. Metapostnotum mostly glabrous, except close to propodeal margins with short hairs, as long as 0.3 times MOD. T1–T4 with well-defined narrow apical bands of appressed hairs; band on T1 interrupted medially. Disc of T1–T4 with extremely short, appressed hairs, as long as 0.2–0.4 times MOD and with intermixed, sparse, erect hairs 0.6 times MOD, although erect hairs on T2 present only at sides. Labrum and clypeus with distinct moderate punctures, on clypeus 0.2–0.3 times MOD, separated by 0.5–1.0 times their diameter; rest of body with small punctures; with shiny, impunctate areas surrounding ocelli, on center of scutum, and narrow band on dorsum of scutellum; metapostnotum tessellate. Vertex of head scarcely elevated behind ocelli, distance from median ocellus to vertex in frontal view as long as 0.6 ocellar diameters. Proportion of UID to LID 1:0.85; IAD to AOD 1:0.42. Proportion of scape, pedicel and first three flagellomeres 3.3:0.8:1:0.6:0.6; first flagellomere as long as its apical width.

Mandible narrowly pointed apically; preapical tooth distinct, small. Metapostnotum with basal portion slanting posteriorly, convex when seen in profile. Gradulus of T6 with short gradular carina restricted to posterior portion of tergum.

*Male*. Length 4.7–5.2 mm; length of forewing 4.1–4.7 mm.

Color of cuticle and vestiture similar to that of female. Hairs of scutum 1.4–2.3 times MOD. T2–T6 with narrow apical band of appressed hairs; band on T1 less defined. Basal part of T2 with decumbent hairs, short medially (0.3–0.5 times MOD), longer laterally. T3–T6 basally with intermixed decumbent hairs 0.4–0.6 times MOD, and semierect hairs 0.8 times MOD. S6 evenly covered with short hairs 0.2 times MOD. Proportion of first three flagellomeres, 1:0.8:0.9; first flagellomere as long as 1.1 times its apical width. Mandible tapering apically. T7 ending apically in two short points separated by a shallow notch. S7, S8 and genital capsule similar to those of *L. monteana*.

**Etymology.** The specific name alludes to the small size.

**Material studied.** Holotype female, Bolivia, Cochabamba, 1946, R. Zischka col. (MLP). Paratypes: 12 females and 16 males, same data as holotype (MLP, MACN).

***Leptometriella boliviana* Roig-Alsina, n. sp.**
(Fig. 7)

**Diagnosis.** This is the only *Leptometriella* species that has dark tibial spurs. As in *L. minima*, the metapostnotum has a short basal portion slanting posteriorly. It is distinguished from *L. minima* by its larger size, the length of the metasomal vestiture, and the stronger apical points of the male T7.

**Description.** *Male holotype*. Length 6.5 mm (paratype 6.5 mm); length of forewing 5.9 mm (paratype 5.8 mm).

Black, except as follows: reddish apex of mandible, dark brown tegula, yellowish-brown, translucent apex of S1–S5, dark brown tibial spurs, and reddish-brown distal tarsomeres. Wings hyaline, weakly amber; veins brown, pterostigma brown. Vestiture pale yellowish-brown on most of body, whitish on venter of thorax and underside of coxae, trochanters and femora. Vestiture dense and long. Hairs dense on face, on clypeus 1.8–3.2 times MOD, between antennal sockets longer, up to 3.5 times MOD. Hairs on scutum 2.5–4.0 times MOD; on mesopleuron 2.8–4.0 times MOD; metapostnotum with short hairs (0.5–0.7 times MOD) close to propodeal margin, remainder of metapostnotum glabrous. T2–T5 entirely covered by dense, decumbent hairs; apical bands evident because of denser hairs; T1 also with apical band. T2 basally to apical band with decumbent hairs 0.7–1.0 times MOD, and scattered semierect hairs 1.3–1.6 times MOD; T6–T7 entirely covered with decumbent hairs. Hairs on apical margins of S2–S5 1.4–1.7 times MOD, on disc of S6 short and even, 0.25 times MOD, but on apical margin longer, 0.5–0.7 times MOD. Punctures on clypeus even, small (0.10–0.15 times MOD), separated by 0.5–1.0 times their diameter. Punctures on anterior part of scutum and mesopleuron similar to those of clypeus, on posterior half of scutum sparse; scutellum punctate throughout, without impunctate basal band. Metapostnotum dull, finely tessellate. Vertex of head strongly elevated behind ocelli, distance from median ocellus to vertex in frontal view 1.5 times MOD. Proportion of UID to LID 1:0.90; IAD to AOD 1:0.45. Proportion of scape, pedicel and first three flagellomeres 2.3:0.5:1:0.5:0.5; first flagellomere as long as 1.5 times its apical width. Mandible tapering apically. Metapostnotum with basal portion slanting posteriorly, convex when seen in profile. T7 ending apically in two short points separated by a U-shaped notch. S7, S8 and genital capsule similar to those of *L. monteana*.

**Etymology.** The name of the species refers to the country where the species occurs.

**Material studied.** Holotype male, Bolivia, Cochabamba, Chapare, Aguirre, 3200 m, XII-1950, Martínez (MACN). Paratypes: 1 male, same data as holotype (MACN).

**Acknowledgements**

I am indebted to the curators of the collections listed in the section Material and methods for the loan of specimens, J. G. Rozen, Jr. (AMNH), J. L. Neff (CTMI), M. V. Colomo de Correa (IFML), N. Díaz and A. Abrahamovich (MLP), C. Villemant (Paris), F. Koch (Berlin), and K. Schönitzer and J. Schuberth (ZSM); to L. Packer for helpful citicism of the manuscript. This study was funded by the Consejo Nacional de Investigaciones Científicas y Técnicas, Argentina, PIP 5755.

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