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New species and records of Psocoptera (Insecta) from Argentina

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Abstract

From Argentina, one species of *Polypsocus* and five species of *Lachesilla* are here described and illustrated, as well as the male of *L. corbalanae* García Aldrete. New records are presented of 10 species previously not known in this country, also records of three species already known in Argentina. A total of 106 species are now recorded in Argentina.

Key words: Faunistics, neotropics, taxonomy

Introduction

The psocids of Argentina have been studied by Badonnel (1962, 1987); Bréthes (1923); García Aldrete (2003, 2004); Navás (1920 a & b, 1924, 1931, 1933), and Williner (1943 a & b, 1944 a, b, c & d, 1945, 1970). Presently, 90 species are known to occur in the country, representing 8.34% of the known South American psocid fauna. In this paper, I present descriptions of six additional species, in the genera *Polypsocus* and *Lachesilla*, a description of the male of *Lachesilla corbalanae* García Aldrete, records of ten species not previously known to occur in Argentina, and records of three species already known here.

Material and methods

The specimens studied here belong to the National Insect Collection at Instituto de Biología, Universidad Nacional Autónoma de México (CNIN), also the Hungarian Natural History Museum (HNHM), Budapest, Hungary, or to the Muséum National d'Histoire Naturelle (MHNG), Genève, Switzerland. Color was recorded by placing whole specimens in 80% ethyl alcohol under a dissecting microscope illuminated with white cold light at 80X. Standard measurements, given in microns, were taken of parts on slides with a filar micrometer whose measuring unit is 136 microns for wings and 53 microns for other parts (see García Aldrete 2004).

Family Amphipsocidae

***Polypsocus jujuyensis* n. sp.**
(Figs. 1–6)

Diagnosis. Member of Group II, subgroup C of Mockford (1991), that includes *P. bimaculatus* Enderlein, *P. delunatus* Roesler, *P. fasciatus* Banks, *P. fastosus* Roesler, and *P. quadriguttatus* Enderlein, differing from them in that the forewing has two posterior colorless areas, and a large, central colorless area, from the anterior end of the pterostigma to the middle of cell M; the hindwing has a pigmented band from R1 to Cu, ascending on both sides of it as far as the junction with M (Fig. 2).

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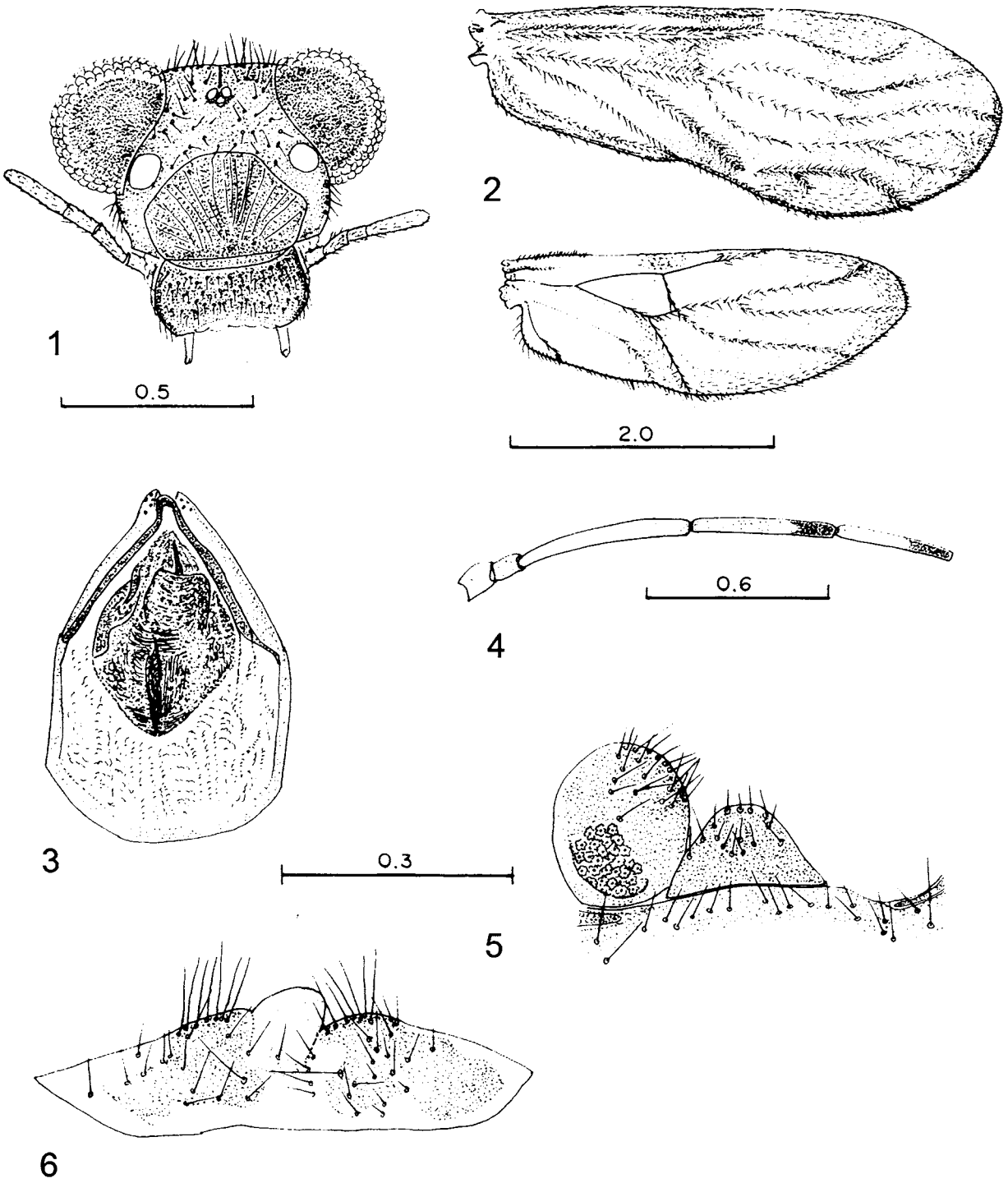
Color. Body medium brown. Compound eyes black, ocellar field ochre. Maxillary palps and legs pale brown. Antennae with scape, pedicel and f1 creamy white, flagellomeres f2-f11 creamy white, with apices brown (Fig. 4). Forewing (Fig. 2) brown, with colorless areas as described in the diagnosis. Hindwing (Fig. 2) almost hyaline, with peripheral brown band as described in the diagnosis. Abdomen creamy white, with dark brown subcuticular bands on tergum, little pigmented on venter.



FIGURES 1–6. *Polypsocus jujuyensis* **n. sp.** (male). 1. Front view of head. 2. Fore- and hindwing. 3. Phallosome. 4. Scape, pedicel and first three flagellomers of antenna. 5. Right paraproct and epiproct. 6. Hypandrium. Scales in mm. Figures 3, 5 and 6 to common scale.

Morphology. Lacinial tip typical of the genus, bicuspid, with high, rounded lateral cusp and short, median cusp. Forewing membrane with a field of marginal setae, from pterostigma to areola postica. Pterostigma rounded posteriorly, R2+3 and R4+5 diverging from a point, Rs-M joined by a short crossvein. Areola postica about twice as long as the distance from nodulus to Cu1b. Hindwing Rs-M diverging from a point (Fig. 2). Hypandrium broad (Fig. 6), with a distint median lobe, setae as illustrated. Phallosome (Fig. 3), with external parameres bearing pores apically, aedeagal arch tapering to slender apex; endophallus distinct, with "finger print" marks anteriorly, delimited on sides by strongly pigmented asperous bands. Paraprocts large, rounded (Fig. 5), with setae as illustrated and sensory fields semi-elliptic, with 27 trichobothria issuing from basal rosettes. Epiproct (Fig. 5) high, trapeziform, with setae on distal half.

Measurements. FW: 4137, HW: 3121, F: 753, T: 1265, t1: 443, t2: 144, ctt1: 23, Mx4: 185, f1: 569, f2: 477, f3: 402, f4: 383, IO: 295, D: 361, d: 250, IO/D: 0.81, PO: 0.69.

Material studied. Holotype male. **ARGENTINA,** Jujuy Province, Department of Valle Grande, San Francisco Valley, N of Abra de Cañas, moss forest, 23°40.5'S: 64°54.01'W, 1680m., 25.X.2006, Gyorgy Sziráki, E. Hórvath, & E. González Olazo (HNHM). Paratype male. Department of Ledesma, Calilegua National Park, Abra de Cañas, moss forest, 23°44.2'S: 64°54.1'W, 1700m., 25.X.2006, same collectors (HNHM).

Etymology. The specific name refers to the Province of Jujuy, in northwestern Argentina, where the types were collected.

Remarks. *P. jujuyensis* differs from the other five species in its group (see diagnosis), in fore- and hindwings pigmentation pattern, in having a distinct endophallus, and in having a unique hypandrium with a median lobe. *P. bimaculatus* Enderlein is Chilean, *P. delunatus* Roesler and *P. fastosus* Roesler occur in southeastern Brazil, *P. fasciatus* Banks is Caribbean, and *P. quadriguttatus* (Enderlein) occurs in Cuzco, Peru.

Family Lachesillidae

***Lachesilla andina* n. sp.**
(Figs. 7–12)

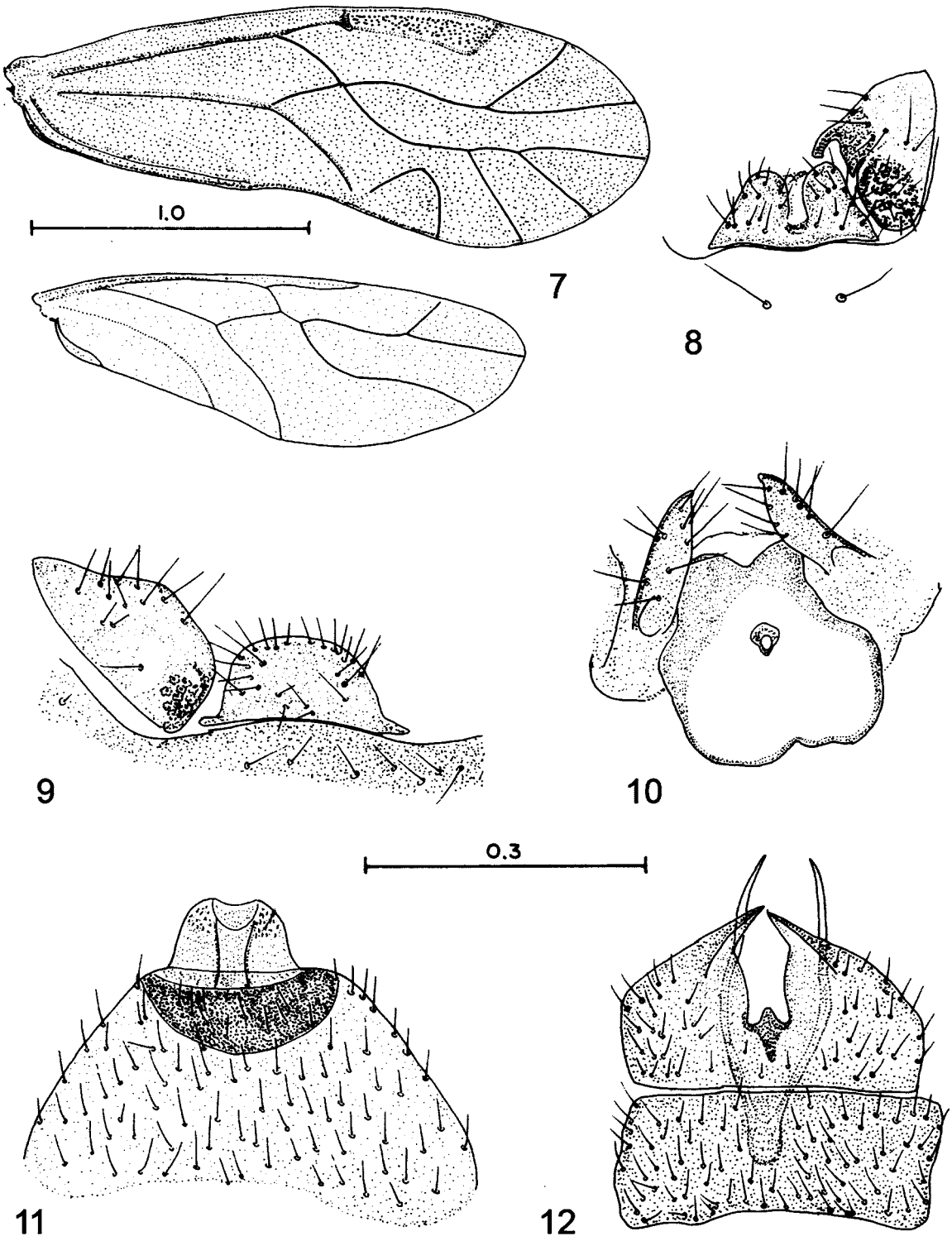
Diagnosis. Belonging in species group *patzunensis* (García Aldrete 1986). Posterior projection of the female subgenital plate with two well defined, parallel longitudinal lines, and a large, crescent-shaped pigmented area anterior to the projection. Distal piece of hypandrium with projections acuminate; bottom of the concavity projected posteriorly, strongly pigmented, pigmented area extending anteriorly.

Female. **Color**. Body pale brown. Compound eyes black, ocelli hyaline, without pigmented centripetal crescents. Maxillary palps dark brown. Wings hyaline, with a tenuous pale brown hue, veins brown. Abdomen whitish, with transverse, dark brown subcuticular rings, less pigmented ventrally.

Morphology. Forewing pterostigma long, wider distally; Rs-M diverging from a point, areola postica narrow, rounded apically (Fig. 7). Hindwing Rs-M joined basally for a distance (Fig. 7). Subgenital plate (Fig.11) broad, setose, projected posteriorly; projection broad, slightly concave distally, with two longitudinal, mesal pigmented lines, a field of microspines on each side, distally, and a semi-elliptic pigmented area anterior to the projection. Gonapophyses (Fig. 10) with a small conical projection distally, setose, with outer edge distinctly more pigmented. Ninth sternum surrounded by a slender pigmented band, broader and concave posteriorly; spermapore sclerite surrounded by a pigmented, irregular ring (Fig. 10). Paraprocts almost elliptic, broad, setose; sensory fields circular, with 11 trichobothria issuing from basal rosettes, and a marginal one without basal rosette (Fig. 9). Epiproct (Fig. 9) trapeziform, with a field of setae on each postero-lateral corner and a group of four small setae mesally, next to anterior border.

Measurements. FW: 2225, F: 427, T: 841, t1: 258, t2: 107, ctt1: 18, Mx4: 106, f1: 231, f2: 215, f3: 167, f4: 131, f5: 82, f6: 77, f7: 63, f8: 67, f9: 55, f10: 61, f11: 64, IO: 351, D: 143, d: 90, IO/D: 2.45, PO: 0.62.

Male. Color. Same as the female.



FIGURES 7–12. *Lachesilla andina* **n. sp.** 7. Fore- and hindwing (female). 8. Epiproct and left paraproct (male). 9. Right paraproct and epiproct (female). 10. Gonapophyses and ninth sternum (female). 11. Subgenital plate (female). 12. Hypandrium and phallosome apodemes (male). Scales in mm. Figures 8–12 to common scale.

Morphology. Wings same as the female; forewing Rs-M joined basally for a short distance, areola postica wider than the female's. Hypandrium (Fig. 12) of two pieces, distal one deeply concave posteriorly, straight anteriorly, each half with a projection. Phallosome apodemes joined basally, each arm slender, distally acuminate. Paraprocts (Fig. 8) broad, setose, with a mesal, curved, truncate prong; sensory fields elliptic, with 17 trichobothria issuing from basal rosettes and a marginal one without basal rosette. Epiproct (Fig. 8) broad,

almost straight anteriorly, deeply bilobed posteriorly, each lobe rounded, with a field of setae along posterior border.

Measurements. FW: 3039, HW: 2279, F: 504, T: 1056, t1: 323, t2: 108, ctt1: 22, Mx4: 119, f1: 308, f2: 279, f3: 222, f4: 180, f5: 112, f6: 100, f7: 88, f8: 81, f9: 66, f10: 79, f11: 82, IO: 392, D: 159, d: 106, IO/D: 2.46, PO: 0.66.

Material studied. Holotype male, two paratype females, **PERU,** Cuzco, Pisaq (Sacred Valley), 15.IV.2004, 3081m., 13°25.093'S: 71°50.983'W, beating *Senecio*, shrubs and herbs with dead leaves, A. N. García Aldrete (CNIN). Paratype female, Ollantaytambo (Sacred Valley), 15.IV.2004, 2866m., 13°15.469'S : 72°15.910'W, beating shrubs with dead, hanging leaves, A. N. García Aldrete (CNIN).

Records. From type locality, 1 male, 7.VIII.2005, beating shrubs with dead, hanging leaves, A. N. García Aldrete, (CNIN). **ARGENTINA**, Salta Province, 45 km W Salta, 1950m., El Alisal, 13 female, 2–30.XII.1987, Malaise Flight Interception Trap, moist ravine thicket, S. & J. Peck; 17 km N La Caldera, Alto de la Sierra, 1550m., 1 female, 2–30.XII.1987, Malaise Flight Interception Trap, subtropical humid forest, S. & J. Peck (MHNG); Tucumán Province. Department of San Javier, ornamental trees, 1 male, 23.X.2006, G. Sziráki, (HNHM).

Etymology. The specific name refers to the known distribution of this species, in two distant localities in the Andes Mountains (southern Peru and northwestern Argentina).

Remarks. *L. andina*, together with *L. corbalanae* García Aldrete from Argentina, *L. graminicola* Badonnel from Colombia, and *L. sclera* New & Thornton from Colombia and Ecuador, constitute an assemblage of closely related species within the group *patzunensis* (García Aldrete 1986), the females of which differ in small genital details as follows: The former differs from *L. corbalanae* in having a much broader pigmented area basal to the projection of the subgenital plate, and in having a small, irregular pigmented rim around the spermapore. It differs from *L. graminicola* in having the projection of the subgenital plate shorter and distally concave, and differs from *L. sclera* in the shape and pigmentation of the ninth sternum (gonopore plate of New & Thornton 1975).

The females of the Mexican species of the group *patzunensis* (*L. bifurcata*, *L. leonilae*, *L. maya*, and *L. tapanatepeca*), have the projection of the subgenital plate and the ninth sternum distinctly different from the South American species, and only *L. sulcata* from Mexico and southeastern United States shows two longitudinal, parallel pigmented lines in the projection of the subgenital plate, as in the Southamerican species (García Aldrete 1986).

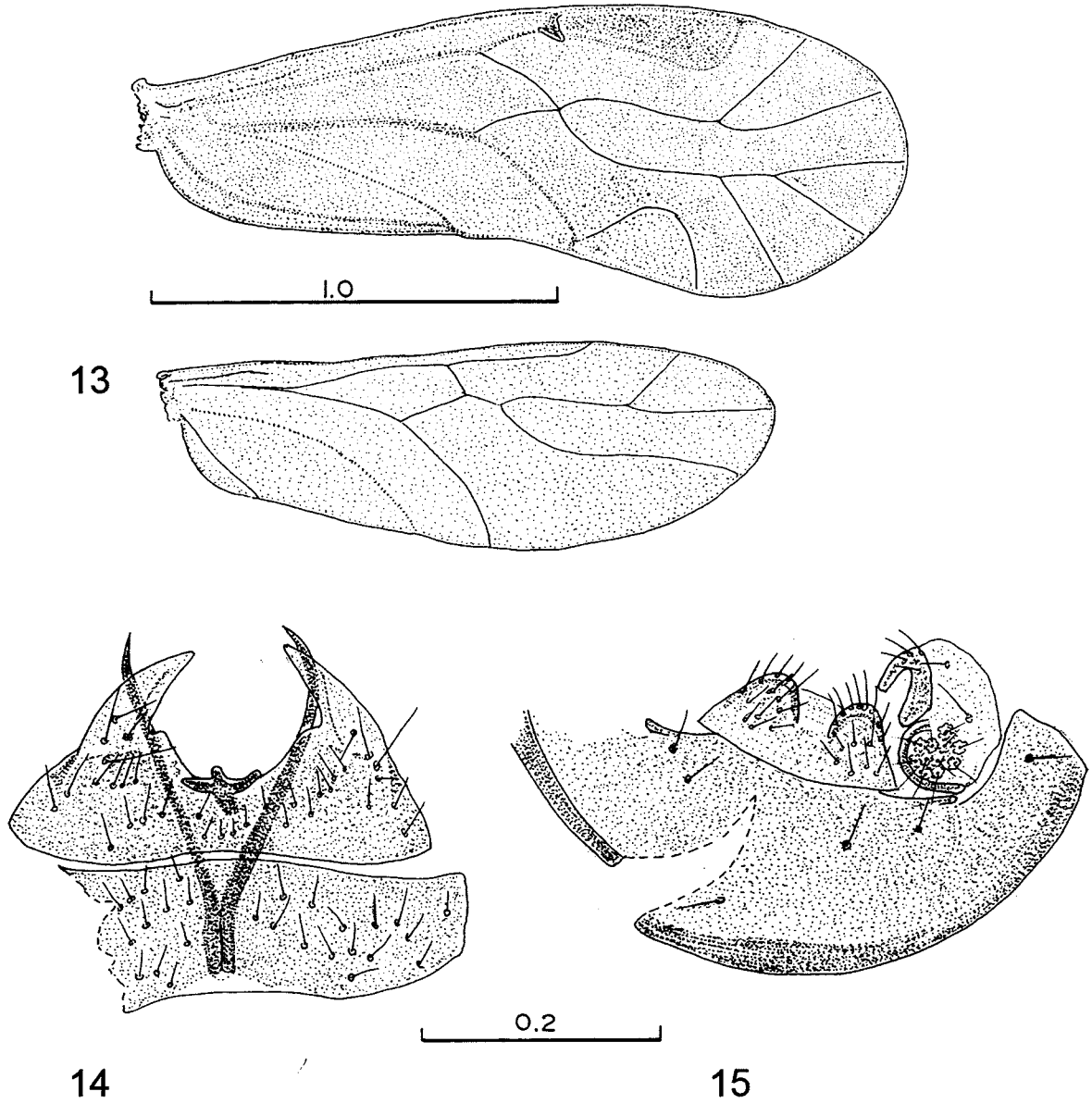
Lachesilla corbalanae García Aldrete
(Figs. 13–15)

Diagnosis. Belonging in species group *patzunensis* (García Aldrete 1986). Projections of the distal piece of hypandrium longer and broader than in *L. andina*. Sclerotized projected area at the bottom of the concavity of the distal piece of hypandrium more robust and with side arms broader and longer than in *L. andina*.

Male. Color. Body brown. Compound eyes black, ocelli hyaline, with ochre centripetal crescents. Antennae and maxillary palps dark brown, legs brown, wings opaque, fumose. Abdomen creamy white, with ochre subcuticular rings.

Morphology. Forewing pterostigma wider posteriorly, Rs-M diverging from a point, areola postica rounded apically (Fig. 13). Hindwing Rs-M fused for a distance (Fig. 13). Hypandrium of two pieces (Fig. 14), the distal one deeply concave posteriorly, almost straight anteriorly, each half with a broad based projection, blunt ended, inner edge straight and outer edge curved; a robust sclerotized projection at the bottom of the concavity, with two side arms and a short stem (Fig. 14). Paraprocts (Fig. 15) broad, setose, with a mesal, strongly sclerotized truncate prong, sensory fields with 11–12 trichobothria on basal rosettes, and a marginal one without basal rosette. Epiproct (Fig. 15) broad, deeply bilobed posteriorly, almost straight anteriorly, each lobe rounded, with a field of setae on distal half.

Measurements. FW: 1911, HW: 1479, F: 380, T: 720, t1: 221, t2: 100, ctt1: 16, Mx4: 98, f1: 199, f2: 175, f3: 153, f4: 132, IO: 318, D: 143, d: 95, IO/D: 2.22, PO: 0.66.



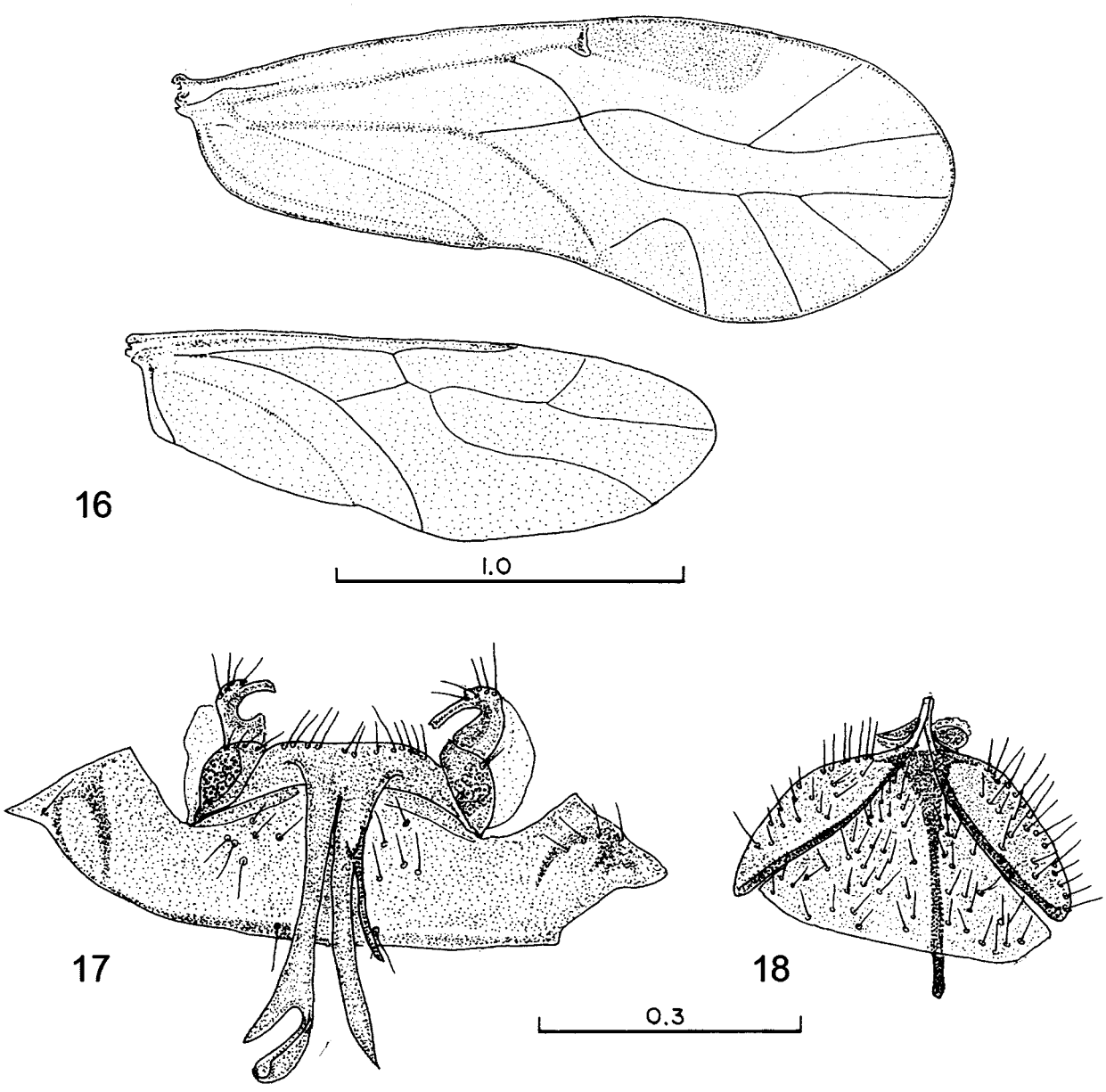
FIGURES 13–15. *Lachesilla corbalanae* García Aldrete (male). 13. Fore- and hindwing. 14. Hypandrium and phallosome apodemes. 15. Clunium, epiproct and left paraproct. Scales in mm. Figures 14 and 15 to common scale.

Material studied. **ARGENTINA**, Buenos Aires, El Tigre, Río Sarmiento, Tres Bocas, 1 male, 26.VIII.2008, beating shrubs and trees, A. N. García Aldrete (CNIN).

Remarks. The male described above was collected at the same locality as that where the female of *L. corbalanae* García Aldrete had been collected almost five years earlier (García Aldrete 2004). It is considered conspecific on the grounds of belonging in the same species group, and on presenting the same body color and wing venation as the female holotype. This species holds a sister group relationship with *L. andina* **n. sp.**, described above, on the basis of the similarities in the genitalia of both species (see Figs. 7–15 in this paper, and Figs. 6–10 in García Aldrete 2004). Male-female associations in the quite large genus *Lachesilla* must be established, first, on males and females belonging in the same species group, and second, on basis of shared characters such as head and wing pattern (if any), and wing venation, particularly shape of the pterostigma and areola postica in the forewing, nature of the junction of veins Rs and M in both wings, and presence of crossveins in both wings.

***Lachesilla dividiproctus* n. sp.**
(Figs. 16–18)

Diagnosis. Belonging in species group *pedicularia*. Distal ends of claspers free. Phallosome apodeme widening posteriorly, T-shaped. Paraprocts of two pieces, proximal one strongly sclerotized, articulated to clunium, distal one with strong, mesal prong. Epiproct broad, with long, stout posterior projection divided in two long arms, the right one divided distally into an outer, acuminate arm, and an inner, spoon-like process; the left arm long, distally acuminate, with a slender, acuminate projection on the outer edge of the proximal half (Fig. 17).



FIGURES 16–18. *Lachesilla dividiproctus* **n. sp.** (male). 16. Fore- and hindwing. 17. Clunium, epiproct and paraprocts. 18. Hypandrium, claspers and phallosome apodeme. Scales in mm. Figures 17 and 18 to common scale.

Color. Body medium brown. Compound eyes black, ocelli hyaline, without pigmented centripetal crescents. Wings hyaline, veins brown. Abdomen creamy white, with brown, subcuticular rings, less pigmented ventrally.

Morphology. As in diagnosis, plus the following: forewing pterostigma almost rectangular, wider posteriorly. Rs-M veins diverging from a point, areola postica rounded apically (Fig. 16). Hindwing Rs-M fused for a distance (Fig. 16). Hypandrium almost triangular, setose (Fig. 18). Claspers (Fig. 18) elliptic, setose, with a sclerotized band along inner edge, distal ends straight, slender. Phallosome apodeme long, slender, widening distally, with side arms slender, each associated with a round, rugose body (Fig. 18). Clunium projected over the area of the epiproct; this, wide, narrow, with setae as illustrated (Fig. 17). Proximal piece of paraproct bearing an elliptic sensory field with 11–12 trichobothria on basal rosettes and a marginal one without basal rosette, distal piece, with setae as illustrated (Fig. 17).

Measurements. FW: 2203, HW: 1675, F: 439, T: 852, t1: 302, t2: 89, ctt1: 20, IO: 332, D: 185, d: 121, IO/D: 1.79, PO: 0.65.

Material studied. Holotype male, 15 paratype males. **ARGENTINA,** Salta Province, 22 km N La Caldera, 1550m., El Ucumar, 2–30.XII.1987, Malaise FIT, Subtropical humid forest. S. & J. Peck (MHNG).

Records. **ARGENTINA,** Salta Province, El Rey National Park, 880m, Río Los Puestos, 8 males, 6–16.XII.1987, Malaise FIT, *Prosopis* forest, S. & J. Peck, (CNIN); 900m. Río La Sala, 1 male, 5–10.XII.1987, Malaise FIT, open stream side in forest, same collectors; same locality and collectors, 2 males, 5–15.XII.1987, night beating, humid moss and Chaco forest; same collectors and date, 3 males, Malaise FIT, Yungas forest. Salta Province, 17 km. N La Caldera, Alto de la Sierra, 1550 m, 1 male, 2–30.XII.1987, Malaise FIT, subtropical humid forest, S. & J. Peck; Jujuy Province, Calilegua National Park, Aguas Negras, 500m, 1 male, 18–28.XII.1987, gallery forest, Malaise FIT, S. & J. Peck (MHNG).

Etymology. The specific name refers to the epiproct projection, divided in two arms, each itself divided in two, the right one distally and the left one proximally.

***Lachesilla longiproctus* n. sp.**
(Figs. 19–21)

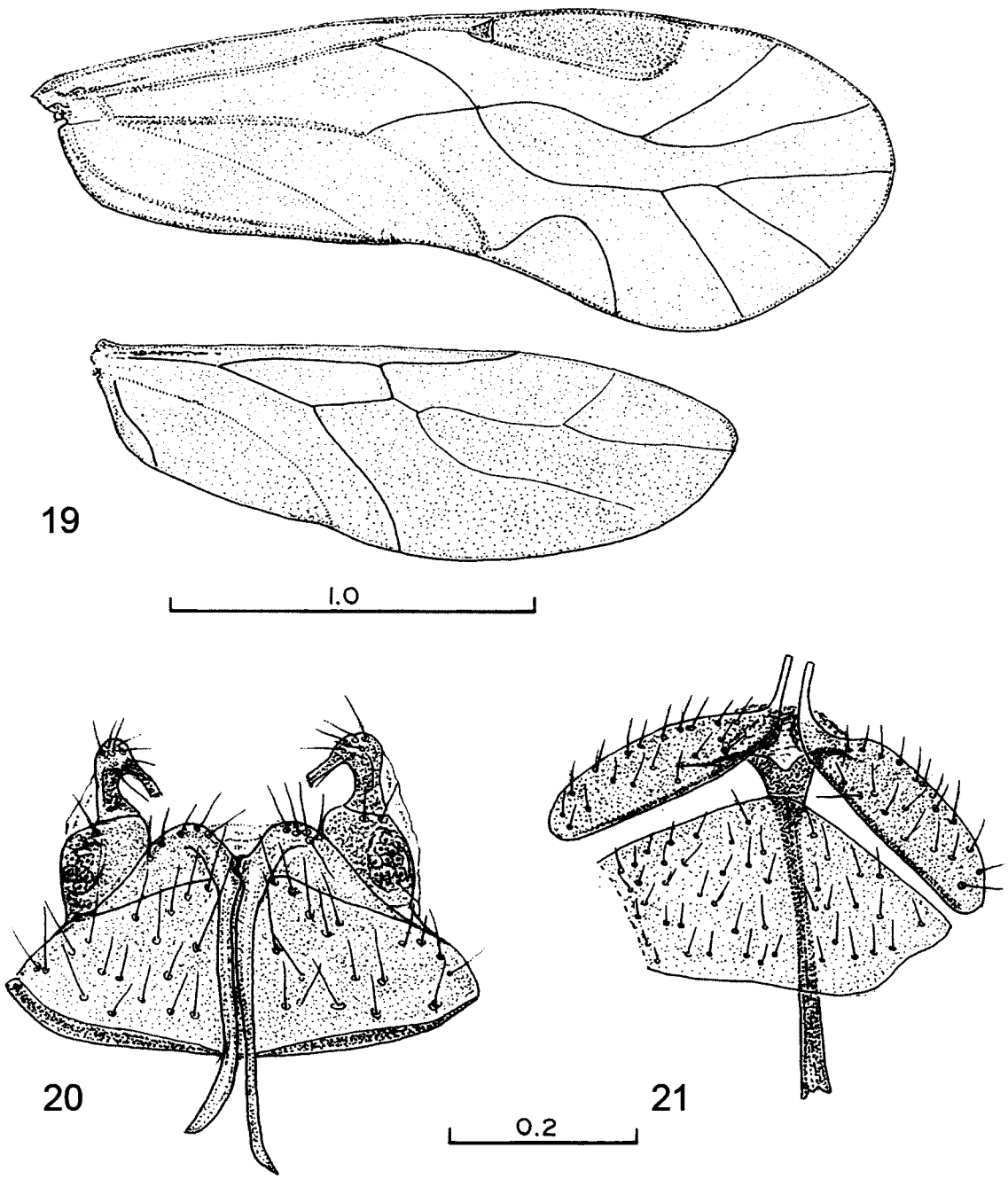
Diagnosis. Belonging in group *pedicularia*. Distal end of claspers free. Phallosome apodeme, long, slender, dilated posteriorly and divided in two slender arms, each directed laterally; a rounded, spiny area on each side, next to distal ends of claspers. Clunium extended posteriorly in area over epiproct. Paraprocts elongate, of two pieces, the proximal one articulated to clunium; the distal one with a mesal, slender prong (Fig. 20). Epiproct divided in two halves, each projected posteriorly to form a slender acuminate arm, the right one slightly shorter than the left one (Fig. 20).

Color. Body medium brown. Compound eyes black, ocelli hyaline, without centripetal crescents. Antennae, maxillary palps and legs pale brown. Wings hyaline, witha slight reddish hue. Veins brown. Abdomen creamy white, with dark brown subcuticular rings.

Morphology. As in diagnosis, plus the following: forewing pterostigma wider posteriorly, Rs-M veins joined by a crossvein or diverging from a point. Areola postica wide, apically rounded. Hindwing Rs-M veins fused for a distance. Hypandrium triangular, setose; claspers elongate, basally broad, with setae as illustrated, with a slender, sclerotized band along inner edge; distal end of each clasper slender, straight, truncate. Proximal half of paraproct with elliptic sensory field, bearing 11–12 trichobothria on basal rosettes, and a marginal one without basal rosette; distal half slender, setose. Epiproct with a setal field posteriorly on each half.

Measurements. FW: 2416, HW: 1769, F: 412, T: 812, t1: 265, t2: 76, ctt1: 19, Mx4: 85, f1: 242, f2: 227, f3: 162: f4: 144, IO: 283, D: 240, d: 164, IO/D: 1.17, PO: 0.68.

Material studied. Holotype male, 30 paratype males. **ARGENTINA,** Salta Province, El Rey National Park, 900 m., Río La Sala, 5–10.XII.1987, Malaise FIT, open streamside in forest, S. & J. Peck (MHNG).



FIGURES 19–21. *Lachesilla longiproctus* **n. sp.** (male). 19. Fore- and hindwing. 20. Clunium, epiproct and paraprocts. 21. Hypandrium, claspers and phallosome apodeme. Scales in mm. Figures 20 and 21 to common scale.

Records. **ARGENTINA,** Salta Province, El Rey National Park, 880m, Río Los Puestos, 10 males, 6–16.XII.1987, Malaise FIT, *Prosopis* forest, S. & J. Peck (CNIN); 900m, Aguas Negras Trail, 15 males, 11–15.XII.1987, Malaise FIT, *Prosopis* forest, S. & J. Peck. 950 m., Pozo Verde Trail, km. 5, 2 males, 5–15.XII.1987, Malaise FIT, Yungas forest, S. & J. Peck; 1000m., Pozo Verde Trail, km. 7, 11 males, 5–15.XII.1987, Malaise FIT, Yungas forest, S. & J. Peck (MHNG).

Etymology. The specific name refers to the length of the epiproct projections.

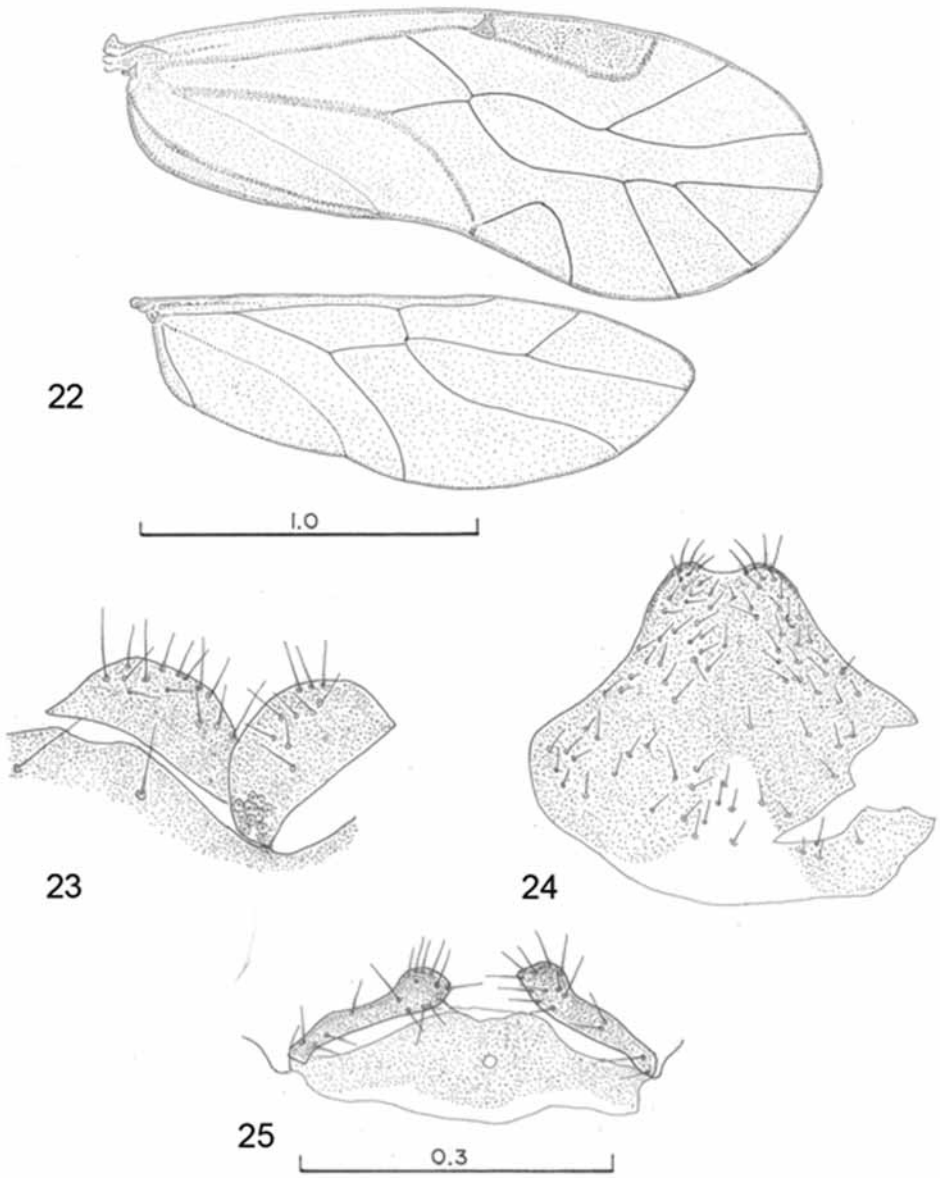
Remarks. *L. longiproctus* and *L dividiproctus* belong in an assemblage of species, within the group *pedicularia*, in which the male epiproct is projected posteriorly in two long apophyses, or is divided in two halves, each half extended into a long projection; this assemblage includes the following species: *L. aldretei* Badonnel (Colombia), *L. assymetriproctus* García Aldrete (Peru), *L. convexicornis* García Aldrete (Peru), *L.*

symmetriproctus García Aldrete (Peru), *L. trujillensis* García Aldrete (Venezuela), and *L. veneper* García Aldrete (Venezuela, Peru).

***Lachesilla peckorum* n. sp.**
(Figs. 22–25)

Diagnosis. Belonging in species group *pedicularia*, close to *L. aethiopica* (Enderlein) and *L. nuptialis* Badonnel & García Aldrete. Subgenital plate (Fig. 24), projected posteriorly, concave, with a setal field on each postero-lateral lobe, pigmented area deeply concave anteriorly. Gonapophyses long, slender anteriorly dilated posteriorly, with setae as illustrated (Fig. 25).

Color. Body pale brown. Compound eyes black, ocelli hyaline, without pigmented centripetal crescents. Wings hyaline, veins brown. Abdomen creamy white, with faint brown subcuticular rings, less pigmented ventrally.



FIGURES 22–25. *Lachesilla peckorum* **n. sp.** (female). 22. Fore- and hindwing. 23. Epiproct and left paraproct. 24. Subgenital plate. 25. Gonapophyses and ninth sternum. Scales in mm. Figures 23 and 24 to scale of Figure 25.

Morphology. Forewing pterostigma long, wider posteriorly, Rs-M veins joined by a short crossvein or diverging from a point; areola postica wide, almost triangular, rounded apically (Fig. 22). Hindwing with Rs-M veins joined by a short crossvein or fused for a distance (Fig. 22). Ninth sternum wide, narrow, with pigmented area as illustrated (Fig. 25). Paraprocts (Fig. 23), almost semi-circular, with field of setae mesally, sensory field almost circular, with 10–11 trichobothria on basal rosettes and a marginal one, without basal rosette. Epiproct trapeziform (Fig. 23), with field of setae on distal half.

Measurements. FW: 2129, HW: 1617, F: 397, T: 769, t1: 259, t2: 105, ctt1: 18, IO: 341, D: 213, d: 135, IO/D: 1.60, PO: 0.63.

Material studied. Holotype female, 1 paratype female. **ARGENTINA**. Salta Province. El Rey National Park. 900m., Río La Sala, 5–15.XII.1987, Malaise FIT. Humid mossy Chaco forest, 950m, S. & J. Peck (MHNG). Paratype female, Pozo Verde Trail, 10–13.XII.1987, Sweeping in Yungas forest, S. & J. Peck (MHNG).

Etymology. This species is dedicated to its collectors, Drs. Steward B. Peck, and Jasmila Kukalova-Peck, of Carleton University, Ottawa, Ontario, Canada, in recognition of the outstanding work of the former in neotropical coleopterology, and in recognition of the seminal work of the latter in palaeoentomology, particularly on the origin of insect wings.

Remarks. *L. peckorum* constitutes, together with *L. aethiopica* (Enderlein), and *L. nuptialis* Badonnel & García Aldrete, a group of related species (see Badonnel & García Aldrete 1980) in species group *pedicularia* (diagnosis in Mockford 1993). It differs from them in that the subgenital plate is decidedly projected posteriorly, and in that the gonapophyses are quite different than in the pair *aethiopica-nuptialis*, being reminiscent of those in *Nadleria mockfordi* Badonnel & García Aldrete (1980), which also has the subgenital plate projected posteriorly. In this context, it is pertinent to remember that *Nadleria-Lachesilla* are close genera, and that species group *pedicularia*, of the latter shows great affinities with *Nadleria* (see Mockford 1985), which explains the similarities of *L. peckorum* and *N. mockfordi*.

***Lachesilla szirakii* n. sp.**
(Figs. 26–29)

Diagnosis. Belonging is species group *szirakii* (defined below). Subgenital plate broad (Fig. 27) with sides converging to a pointed apex. Gonapophyses elongate (Fig. 28), with sides almost parallel, distally rounded and slightly projected posteriorly on outer edge.

Color. Body pale brown. Compound eyes black, ocelli hyaline, with dark brown centripetal crescents. Antennae and maxillary palps brown, palpomeres III and IV more

pigmented than basal ones. Legs pale brown. Wings hyaline, veins brown. R1 ochre distally. Abdomen creamy white, with ochre, transverse, subcuticular dorsal bands.

Morphology. Forewing pterostigma wider posteriorly, Rs-M veins diverging from a point, areola postica wide, rounded apically. Hindwing with Rs-M fused for a distance (Fig. 26). Ninth sternum (Fig. 28) unpigmented, spermapore on posterior third, with a slender pigmented rim. Paraprocts (Fig. 29) elliptic, with setae as illustrated, sensory fields elliptic, with 9-11 trichobothria issuing from basal rosettes, except a marginal one, without basal rosette. Epiproct trapeziform (Fig. 29), with field of setae on distal third.

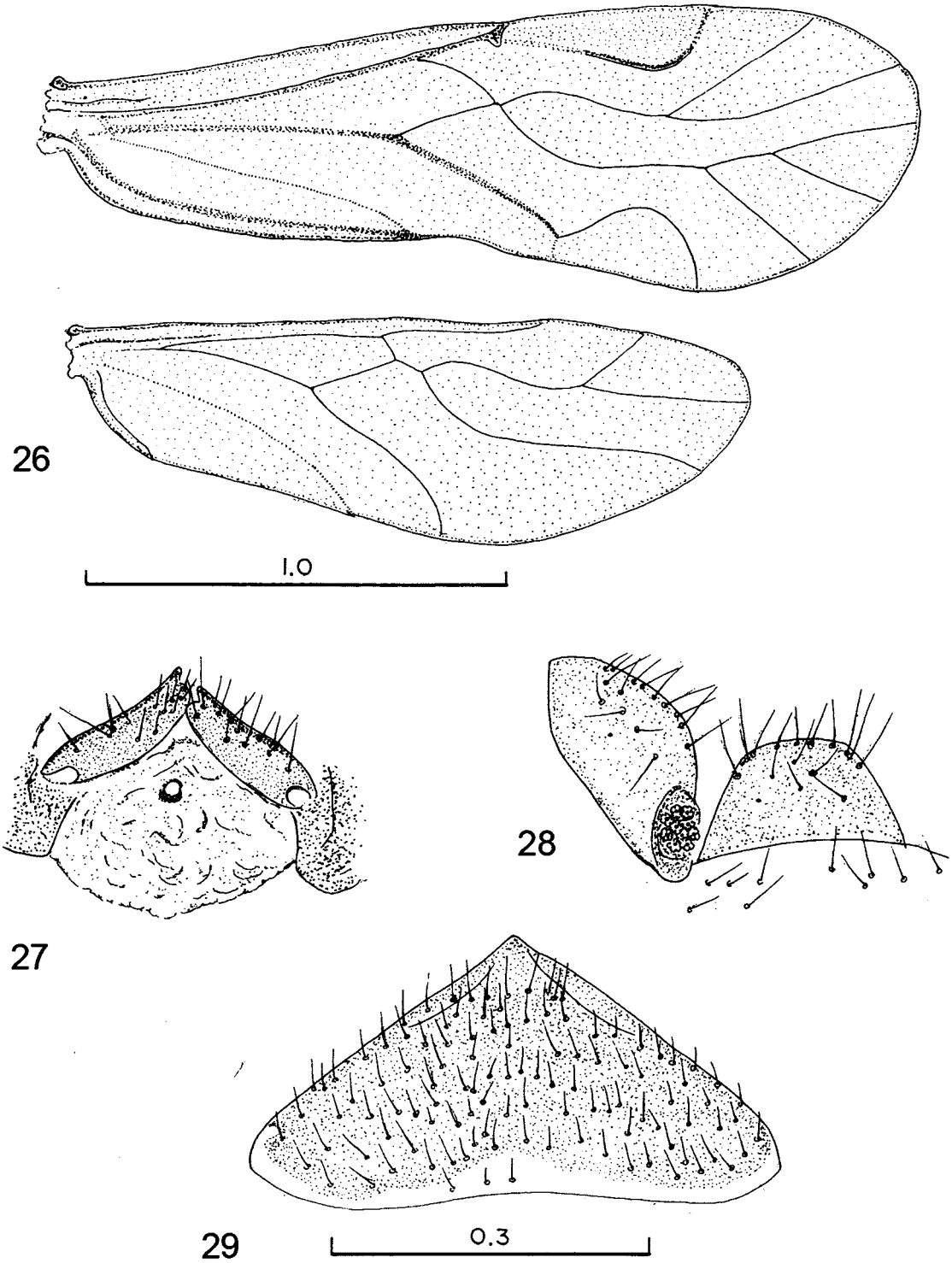
Measurements. FW: 2093, HW: 1636, F: 345, T: 682, t1: 195, t2: 69, ctt1: 15, Mx4: 81, f1: 177, f2: 135, f3: 116, f4: 100, IO: 202, D: 143, d: 95, IO/D: 1.41, PO: 0.66.

Material studied. Holotype female. **ARGENTINA,** Jujuy Province, Department of Ledesma, Calilegua National Park, Tataupa trail, subtropical deciduous forest, 23°44.6'S: 64°51.2'W, 766m., 28.X.2006, G. Sziráki (HNHM).

Etymology. This species is dedicated to György Sziráki, of the Hungarian Natural History Museum, for making available for study an important collection of Psocoptera from Argentina, and in recognition to his studies on Neuroptera.

Remarks. *L. szirakii* is not assignable to any of the species groups presently recognized in *Lachesilla*, it shows a combination of characters (subgenital plate pointed, gonapophyses projected posteriorly) not observed in any of the species groups, hence it constitutes its own, diagnosed as follows:

Species group *szirakii*. Subgenital plate conical, apex pointed. Gonapophyses long, sclerotized along outer edge, distally rounded, with a small posterior projection.



FIGURES 26–29. *Lachesilla szirakii* **n. sp.** (female). 26. Fore- and hindwing. 27. Gonapophyses and ninth sternum. 28. Right paraproct and epiproct. 29. Subgenital plate. Scales in mm. Figures 27 and 28 to scale of Figure 29.

New records of Psocoptera from Argentina

Family Pachytroctidae

Tapinella vittata García Aldrete

Tapinella vittata García Aldrete 1993:94.

Misiones Province, San Ignacio Miní, 1 female, 10.IX.2003, beating branches with dead leaves in forest. A. N. García Aldrete (CNIN). This species was previously known only from central and southern Mexico, so its presence in Argentina is remarkable.

Family Epipsocidae

Bertkauia crosbyana Chapman

Bertkauia crosbyana Chapman 1930: 364.

Misiones Province, San Ignacio Miní, 1 female, 10.IX.2003, sifting litter in forest. A. N. García Aldrete (CNIN). The presence of this species in Argentina is noteworthy: its distribution was typically Nearctic, with records in Canada, USA, and a southernmost limit in northeastern Mexico.

Family Stenopsocidae

Graphopsocus cruciatus (Linnaeus)

Hemerobius cruciatus Linnaeus: 1768: 225.

Jujuy Province, Ledesma, Calilegua National Park, La Herradura Trail, 1 male, 1 female, 27.X.2006, 23°45.5'S: 64°51,3'W, 605m, subtropical deciduous forest, G. Sziráki, E. Hórvath & E. González Olazo, (HNHM). This Holarctic species had already been collected in Argentina, in Misiones (Williner 1970). In South America it has also been recorded in Rondonia, Brazil (New 1981).

Family Amphipsocidae

Dasypsocus roesleri (New & Thornton)

Kolbea roesleri New & Thornton 1975: 42.

Misiones Province, San Ignacio Miní, 1 female, 10.IX.2003, beating branches with dead leaves in forest, A.N.García Aldrete (CNIN); Jujuy Province, Ledesma, Calilegua National Park, La Lagunita Trail, subtropical deciduous forest, 23°45.1'S: 64°51.1'N, 753m, 1 male, 1 female, 2.XI.2006, G.Sziráki, E.Hórvath & E.González Olazo; Tataupa Trail, 1 male, 1 female, same vegetation and collectors, 23°44.6'S: 64°51.2'W (HNHM). This species was known in Brazil, southern Mexico and Venezuela (Lienhard & Smithers (2002).

Polypsocus selenius Roesler

Polypsocus selenius Roesler 1940: 22.

Jujuy Province, Ledesma, Calilegua National Park, 1 female, 5.XI.2006, Abra de Cañas, moss forest, 23°46.3'S: 64°54.1'W, 2253m, G.Sziráki, E.Hórvath & E.González Olazo; Valle Grande, San Francisco Valley, N of Abra de Cañas, moss forest, 1 female, 23°40.5'S: 64°0'W, 1680m, same collectors; Tucumán Province, San Javier, La Sala groove, 1 female, 23.X.2006, 26°48.3'S: 65°20.9'W, G.Sziráki (HNHM). This species was previously known from Brazil and Venezuela (Lienhard & Smithers 2002).

Family Lachesillidae

Lachesilla ambigua Badonnel

Lachesilla ambigua Badonnel 1972: 34.

Salta Province, 22 km N La Caldera, El Ucumar, 1550m, 1 male, 2–30.XII.1987, Malaise FIT, subtropical humid forest, S.& J.Peck (MHNG); Mendoza Province, Mendoza Valley, Potrerillos, 1300m, 1 male, 17.I.1997. Steppe with shrubs, sweeping vegetation, D. Burckhardt (MHNG). This species was previously known from Chile (Badonnel 1972).

Lachesilla castrii Badonnel

Lachesilla castrii Badonnel 1963: 336.

Salta Province, El Rey National Park, Río La Sala, 900m, 1 female, 5–10.XII.1987, Malaise FIT, open streamside in forest, S. & J. Peck. This species also was previously known only from Chile (Badonnel 1963).

Lachesilla cuala García Aldrete

Lachesilla cuala García Aldrete 1988: 41.

Jujuy Province, Calilegua National Park, 1 male, 1 female, 18.XII.1987, Aguas Negras, 500m, subtropical humid forest, UV light trap, S. & J. Peck; same locality, date and collectors, camp ground forest, Malaise FIT, 5 males, 900m. Aguas Negras Trail. 11–15.XII.1987. Same trap and collectors, *Prosopis* forest, 40 males, 74 females. El Cortadero, km. 6. 800 m. Forest, Malaise FIT, same collectors, 1 male, 2 females. Estaca El Cero, 900 m. Forest, Malaise FIT, same collectors, 6 males, 8 females. La Lagunita Trail, subtropical deciduous forest, 23°45.1'S: 64°51.1'W, 753 m. 27.X.2006. G. Sziráki, 1 male. Pueblo Ledesma. Garden of the guest house, 23°49.7'S: 64°47.5'W, light trap, 29–30.X.2006. G. Sziráki, E. Hórvath & E. González Olazo, 7 males, 6 females. Salta Province. 45 km W Salta, El Alisal, 1–29.XII.1987. 1950 m. Moist ravine thicket. Malaise FIT. S. & J. Peck, 4 males, 1 female. 17 km N La Caldera, Alto de la Sierra, 1550 m. 2–30.XII.1987, Malaise FIT, subtropical humid forest, S. & J. Peck, 65 males, 31 females. 22 km N La Caldera, El Ucumar, 1550 m. 2–30.XII.1987. Malaise FIT, subtropical humid forest, S. & J. Peck, 5 males,1 female. El Rey National Park. Río Los Puestos, 880 m. 6–16.XII.1987. Malaise FIT, *Prosopis* forest. S. & J. Peck, 13 males. 900 m. Pozo Verde Trail, km 1. 9–10.XII.1987. UV light trap, Chaco thorn forest, same collectors, 7 males, 6 females. 950 m. Pozo Verde Trail, 10–13.XII.1987. Yungas forest, sweeping. Same collectors, 7 males, 6 females. 950 m. Pozo Verde Trail, km. 5. Same collectors, 5–15.XII.1987. Malaise FIT, Yungas forest, 39 males, 36 females. 1000 m. Pozo Verde Trail, km 7. Same date, trap, vegetation and collectors, 51 males, 53 females. 900 m. Río La Sala. Humid moss and Chaco forest, same date, trap and collectors, 63 males, 57 females. Same locality, date and collectors, night beating, 29 males, 28 females. 5–10.XII.1987. Malaise FIT, open stream inforest, same collectors, 3 males (MHNG).

This is a widely distributed species, occurring in Mexico, Panama, Trinidad and Brazil (Lienhard & Smithers 2002). In Argentina it had been collected in Misiones (García Aldrete 2004).

Lachesilla paulista García Aldrete

Lachesilla paulista García Aldrete 1982: 200.

Salta Province, El Rey National Park, Río La Sala, 900m, 1 male, 5–10.XII.1987, Malaise FIT, open streamside in forest, S. & J. Peck, (MHNG). This species had been collected in Misiones (García Aldrete 2004). It was previously known only in Sao Paulo, Brazil (García Aldrete 1982).

Lachesilla tectorum Badonnel

Lachesilla tectorum Badonnel 1931: 238.

Jujuy Province, Ledesma, Pueblo Ledesma, garden of the guest house, Light trap, 23°49.7'S: 64°47.5'W, 444m, 1

female, 29–30.X.2006, G. Sziráki, E. Hórvath & E. González Olazo (HNHM); Calilegua National Park, Aguas Negras, 500m, 3 females, 18.XII.1987, UV light trap, subtropical humid forest, S. & J. Peck. Salta Province, El Rey National Park, 880m, Río Los Puestos, 3 females, 6–16.XII.1987, Malaise FIT, *Prosopis* forest, S. & J. Peck; Pozo Verde Trail, km 1, 1 female, 9–10.XII.1987, UV light trap, Chaco thorn forest, S. & J. Peck. Aguas Negras Trail, 900m, 2 females, 11–15.XII.1987, Malaise FIT, *Prosopis* forest, S. & J. Peck (MHNG).

This is a widespread species, with records in the Canary Islands, Cape Verde Islands, Madeira, USA, Cuba, Haiti, Jamaica, Mexico, Panama, Trinidad, Brazil, Colombia, Madagascar, Mozambique, Mascarene Islands, India, Australia and airborne in the Pacific region (Lienhard & Smithers 2002).

Family Ectopsocidae

Ectopsocopsis cryptomeriae (Enderlein)

Ectopsocus cryptomeriae Enderlein 1907: 100.

Jujuy Province, Ledesma, Calilegua National Park, Tataupa Trail, subtropical deciduous forest, 1 female, 29.X.2006, 23°44.6'S: 64°51.2'W, 766m, G. Sziráki, E. Hórvath & E. González Olazo (HNHM). As well as the above species, it is widely distributed, in South America it has been recorded in Brazil; for its distribution see Lienhard & Smithers (2002).

Family Pseudocaeciliidae

Scytopsocus coriaceus Roesler

Scytopsocus coriaceus Roesler 1940: 12.

Misiones Province, San Ignacio Miní, 1 female, 10.IX.2003, beating branches with dead leaves in forest, A.N.García Aldrete (CNIN). This species was previously known in Mexico, Cuba, Jamaica and Brazil (Lienhard & Smithers 2002).

Family Psocidae

Psococerastis fasciata Mockford

Psococerastis faciata [sic!] Mockford 1981: 260.

Misiones Province, Iguazú National Park, 10 males, 7 females, 11.IX.2003, beating branches of trees and shrubs with dead hanging leaves, A. N. García Aldrete; Wanda, circa precious stones mine, 54 km E Puerto Iguazú, 1 male, 10.IX.2003, beating branches of trees and shrubs in forest, A. N. García Aldrete (CNIN). This species was known from Mexico, Belize, Panama and Brazil (Lienhard & Smithers 2002).

Discussion

This paper contributes to an ongoing effort of documenting the richness of psocid species in Argentina, a discontinuous effort started by Navás in 1920, that lasted until 1933. Then, in 1943, Williner started a series of publications that ended in 1945. Nothing was published until 1970, when Williner again published a short note on *Graphopsocus cruciatus*, and it was not until 2003 that a description of an Argentinian psocid was published by García Aldrete, followed by a more extensive paper on *Lachesilla* species in 2004.

Of the 20 species dealt with in this paper, six are endemic to the country (*P. jujuyensis*, *L. corbalanae*, *L. dividiproctus*, *L. longiproctus*, *L. peckorum* and *L. szirakii*); two species are widely distributed (*L. tectorum* Badonnel and *E. cryptomeriae*), nine species are shared with neighbouring countries or with countries in the

neotropics, including the Holarctic *G. cruciatus* (*D. roesleri, P. selenius, L. ambigua, L. castrii, L. cuala, L. paulista, S. coriaceus* and *P. fasciata*), and two species are disjunct from their main range of distribution in the northern neotropics and in the Nearctic (*T. vittata* and *B. crosbyana*).

The presently known 106 species of Argentinian psocids have been collected in the provinces of Buenos Aires, Catamarca, Chubut, Córdoba, Jujuy, Mendoza, Misiones, Salta, Santa Fe, Santiago del Estero, Tierra del Fuego and Tucumán, with most of the collecting having been done in Buenos Aires and Misiones, but there are no records from the provinces of Corrientes, Chaco, Entre Ríos, Formosa, La Pampa, La Rioja, Neuquén, Río Negro, San Juan, San Luis and Santa Cruz. This, and the fact that very little collecting by specialists has been done recently in the country, leads to assume that most probably the real richness of psocid species in Argentina must be higher than what is presently known.

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