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A TAXONOMIC REVISION OF THE SOUTHERN SOUTH AMERICAN SPECIES OF THE GENUS *FANNIA* ROBINEAU-DESVOIDY (DIPTERA: FANNIIDAE)

MARTHA CECILIA DOMINGUEZ¹

ABSTRACT

The Southern South American species of the genus Fannia Robineau-Desvoidy are revised. Twenty five valid species are recognized for the region in the present study: Fannia albitarsis Stein, Fannia anthracina (Walker), Fannia bigoti Stein, Fannia canicularis (Linnaeus), Fannia confusa Pont & Carvalho, Fannia coxata Shannon & Del Ponte, Fannia femoralis (Stein), Fannia flavicornis Stein, Fannia flavipalpis Stein, Fannia fusconotata (Rondani), Fannia heydenii (Wiedemann), Fannia hirtifemur (Stein), Fannia incisurata (Zetterstedt), Fannia petrocchiai Shannon & Del Ponte, Fannia punctiventris Malloch, Fannia pusilla (Bigot), Fannia pusio (Wiedemann), Fannia scalaris (Fabricius), Fannia schnusei Stein, Fannia setosa (Bigot), Fannia tucumanensis Albuquerque, Fannia tumidifemur Stein and three new species from Argentina are described: two from the province of San Luis (Fannia roigi sp. nov. and Fannia hermani sp. nov.) and one from the province of Mendoza (Fannia losgateados sp. nov.). The unknown male of Fannia fusconotata is described for the first time. The Neotropical Fannia euchaetophora Carvalho is synonymized with Fannia flavicornis Stein. Redescriptions are provided for all known species and genitalic illustrations given for both sexes. Keys for each sex are given, and knowledge on the geographical distribution of all species is updated and summarized.

KEYWORDS: Description, redescription, distribution records, keys, systematics.

INTRODUCTION

The genus *Fannia* Robineau-Desvoidy (Diptera: Fanniidae) contains approximately 260 species, of which 66 occur in the Neotropical Region (Carvalho *et al.*, 2003). Partial revisions of *Fannia* have been made for the Nearctic, Neotropical and Australian regions, but none has been done for the southern part of South America. Twenty-five species are found in Argentina and Chile (Carvalho *et al.*, 2003),

including three new species. Six of these 25 species are endemic to Patagonia, while the remaining 16 s can also be found in the Neotropical realm, and three are widely distributed throughout the world. *F. tumidifemur* Stein was recorded from Argentina for the first time and *F. trimaculata* Stein was considered absent from Argentina and Chile. Carvalho *et al.* (1993, 2003) cited it to Argentina, based on Malloch (1934), who actually recorded the species from Montevideo, Uruguay and not Argentina or Chile.

1. Laboratorio de Entomología, Instituto Argentino de Investigaciones de Zonas Áridas (IADIZA), Centro Regional de Investigaciones Científicas y Técnicas (CRICYT-CONICET), CC: 507; CP: 5500, Mendoza, Argentina. E-mail: mcdomin@lab.cricyt.edu.ar

The purpose of this study is to revise the Argentinean and Chilean species of the genus *Fannia*; to provide descriptions and illustrations for both sexes of morphological characters, which have not been previously illustrated; to provide a key to the Southern South American *Fannia*; and to update distribution records.

Biology

The Fanniidae are believed to be basically inhabitants of forests, and are relatively rare in open landscapes and wetlands (Rozkošný *et al.*, 1997). Species belonging to the *Fannia anthracina* Stein species-group show distributions related to the *Notophagus* forests endemic to the Argentinean and Chilean Patagonia, however *Fannia fusconotata* (Rondani) (endemic to the province of Mendoza) and *Fannia heydenii* (Wiedemann) have been found in open arid shrub lands and open woodlands of *Prosopis* (Domínguez, 2005).

Males of almost all species form swarms under tree branches and above forest paths, members of these swarms hover in the air like hover-flies (Syrphidae) (Rozkošný *et al.*, 1997). Among the Southern South American, species the males of *F. fusconotata* were found swarming very low, near water streams and associated vegetation and *Fannia hermani* sp. nov. was found swarming directly above a water stream (Domínguez, 2005).

The medical and hygienic importance of the widely distributed species of *Fannia* such as *Fannia canicularis* (Linnaeus), *Fannia femoralis* (Stein), *Fannia incisurata* (Zetterstedt), *Fannia pusio* (Wiedemann), *Fannia scalaris* (Fabricius) are well known. *F. canicularis* and *F. scalaris* have been reared from various decaying materials in gardens (Rozkošný *et al.*, 1997). Moreover, the larvae of *F. scalaris* are frequent in cesspools, latrines and dunghills, having also been reared, accompanied by *F. canicularis* from human faeces (Rozkošný *et al.*, 1997). Some of the most abundant species occur regularly in agricultural pens used for breeding pigs, cattle, horses or fowls, and in fur farms (Rozkošný *et al.*, 1997). The larvae apparently develop in animal droppings and dung (Rozkošný *et al.*, 1997). A summary of cases of myiasis reported in the Neotropical region can be found in Guimarães & Papavero (1999), nevertheless the medical and hygienic importance of most Southern South American species is unknown. *Fannia albitarsis* Stein is found to be an important nuisance in poultry farms in the south of the province of Buenos Aires (Perotti, 1998). *F. fusconotata*, as well as *F. canicularis*,

and *F. scalaris* are believed to cause myiasis in man and in cattle (Mazza & Oribe, 1939; Oliva, 1997).

Females are usually attracted to decaying material and excrement, but a few so-called secretophagous species attack cattle in pastures as well as perspiring people in summer (Chillcott, 1961), this behaviour was observed in this study in *F. fusconotata* and *F. coxata* Shannon and Del Ponte.

Higher classification

The major contributions to the higher classification of Fanniidae was that by Chillcott (1961), who recognized five genera within Fanniidae and 18 species-groups and subgroups within the genus *Fannia*, based on external morphology and genitalic characters. According to Chillcott (1961), Fanniidae included five genera: *Fannia* Robineau-Desvoidy, *Coelomyia* Haliday, *Piezura* Rondani, *Euryomma* Stein and *Platycoenosia* Strobl. Currently, *Platycoenosia* is considered a posterior synonym of *Piezura*, and *Coelomyia* was included in the genus *Fannia* (Pont, 1964; Hockett & Vockeroth, 1987; Rozkošný *et al.*, 1997). Furthermore a genus was described after Chillcott's revision: *Australofannia* (Pont, 1977), endemic to Australia.

The classification proposed by Chillcott (1961) has been adopted in most posterior contributions. The first studies of the South American Fanniidae were those of Wiedemann (1830), Rondani (1868), Walker (1836) and Séguy (1932; 1933), as well as Gaminara (1930, 1931) and Blanchard (1937; 1942; 1975). One of the first keys to the Neotropical Fanniidae was published by Shannon & Del Ponte (1926; 1928). Albuquerque *et al.*, (1981) divided the Neotropical species of *Fannia* in eight species-groups, also discussing the relationship of the Neotropical species-groups with the Nearctic groups proposed by Chillcott (1961). Seventeen of the 22 species cited for Argentina and Chile (excluding the three new species), were included by Albuquerque *et al.* (1981) in the eight species groups proposed. However, no hypothesis dealing with the phylogenetic relationships of the genera of Fanniidae and the species groups within *Fannia* has been proposed since Chillcott's (1961) revision of the Nearctic species.

MATERIAL AND METHODS

The material used in this study is located in the following museums: American Museum of Natural History, New York, USA (AMNH); The Natural His-

tory Museum, London, England (BMNH); Colección Entomológica Universidad Concepción, Concepción, Chile (CEUC); Colección Entomológica Universidad Metropolitana, Santiago, Chile (CEUM); Centro de Investigación en Ciencias Veterinarias y Agronómicas, Colección Entomológica, Castelar, Buenos Aires, Argentina (CICVYA); Coleção de Entomologia Pe. Jesus Santiago Maure, Universidade Federal do Paraná, Curitiba, Brazil (DZUP); Fundación e Instituto Miguel Lillo, San Miguel de Tucumán, Argentina (FIML); Field Museum of Natural History, Chicago, USA (FMNH); Instituto Argentino de Investigaciones de las Zonas Áridas, Mendoza, Argentina (IADIZA); Museo Nacional de Historia Natural, Santiago, Chile (MNHN); Museo Zoologico La Specola, Florence, Italy (MZLS); Oxford University Museum of Natural History, Oxford, England (UMO); Smithsonian Institution, National Museum of Natural History, Washington D.C., USA (USNM); Staatliches Museum für Tierkunde, Dresden, Germany (SMTD); Museum für Naturkunde, Humbolt-Universität, Berlin, Germany (ZMHU).

All known synonyms are provided for each species, as well as a list of generic combinations for the currently valid names. Where possible, label data of primary types of previously described species when presented verbatim, with “/” used to indicate a change of line and “;” a change in label. Species distributions were based on examined material and reliable published records. Countries and localities were given in full. Morrone (2001) was followed to designate the geographical distribution area of each given species.

Measurements were expressed as follows: body length: anterior margin of head (frons), excluding antenna, to apex of abdomen; frons width: narrowest distance between eye margins; vitta width: measured at uppermost frontal setae; frontal setae length: relative to length of flagellum, parafacial width: relative to width of flagellum at its base, shape of flagellum: length/width; palpus shape: basal width relative to apical width; shape of fore-femur: length/width; length of ventral pubescence of mid tibia: relative to tibial width; shape of hind femur: length/width.

The following abbreviations were used in the descriptions: Head: *fr*: frontal seta; *pocl*: postocular seta; *orb*: orbital seta. Thorax: *acr*: rows of acrostichal setulae; *acr s*: acrostichal seta; *dc*: dorsocentral seta; *ial*: intra-alar seta; *npl*: notopeura; *prepm*: proepimeral seta; *pra*: prealar seta; *pprn*: postpronotal seta; *spal*: supra-alar seta. Legs: *C*: coxa; *F*: femur; *T*: tibia; *a*: anterior

seta; *ad*: anterodorsal seta; *av*: anteroventral seta; *d*: dorsal seta; *p*: posterior seta; *pv*: posteroventral seta; *pd*: posterodorsal seta; *v*: ventral seta; *ad*: anterodorsal seta.

Morphological terminology mainly follows McAlpine (1981) with the exception of the following genitalic terms: pregonite and postgonite (paramere and gonopod of McAlpine).

For genitalic examination, the abdomen was removed from a dry specimen and heated in 10% (OH) K for 10-15 minutes. The abdomen was then transferred to acetic acid, and then to glycerine. The postabdominal structures were separated from the rest of the abdomen. Examination and illustration of genitalic structures were done using compound microscope equipped with a drawing tube. After examination, the terminalia and the rest of the abdomen were placed in glycerine in a plastic microvial and pinned directly under the specimen.

Illustrations were done using a stereomicroscope. Scales were indicated in each drawing.

The presented key, allows the identification of all males of the Argentinean and Chilean species of *Fannia*, but in the case of some females, it is only possible to separate species-groups [as defined by Albuquerque *et al.*, (1981)], and the female of *Fannia pusilla* (Bigot) runs to *Fannia schmusei* Stein.

Genus *Fannia* Robineau-Desvoidy

Diagnosis: male without lower orbital seta, first presutural dorsocentral seta over half as long as the second, central katepisternal setae absent, mid tibia usually enlarged apically, wing with second anal vein strongly curved so as to intersect extension of first anal vein well before margin of wing, male hypopygium usually with a distinct bacilliform process, two or three spermathecae

Description

Male: body length 3-9.3 mm

Head: Background colour usually silvery grey; holoptic, distance between eyes no more than 3x diameter of anterior ocellus. Fron lacking both *orb*, except for *F. canicularis* with upper *orb* present. Four to 20 *fr*, of varying strength. Eye bare to densely setulose. Antero-internal eye facets usually larger than remaining. *Pocl* generally in single row and irregular in length, but may be doubled. Parafacial of varying width, but

never wider than width of flagellum, and generally bare except for *F. petrocchia* and *F. flavicornis*. Lower margin of face never strongly projecting, except for species of the *mollissima* group. Gena 0.1 to 0.9x width of flagellum. Flagellum 1 to 3x as long as broad, usually covered with silvery grey pruinosity, but may be dark or yellow. Arista dark, or yellow to orange, short pubescent. Palpus narrow, cylindrical to strongly clavate, usually dark or yellow.

Thorax: Background colour dark grey, brown, black to metallic blue, with sparse to heavy dust of varying colour; usually with distinct vittae visible in full length of acrostichal, *dc* and *ial* lines. Apex of scutellum generally concolorous with scutum, but may be yellow. *Acr*: 2-4+2-6, with 1 or 2 prescutellar *acr* s; 2+3 *dc*, except for *F. abnormis*; 2 postsutural *ial*; 3 *pprn*; 2 *npl*; 2-4 *pra*; 1 *spal*; 2 *prepm*, generally surrounded by a variable number of setulae.

Legs: Dark grey to black, yellow or brown at articulations, tarsi dark brown or black. C1 bare, with a preapical ventral thorn in some species of the *scalaris* group. F1: thin to globose, with a variable number of rows of *pd*, *p*, and *pv*. T1 with 1 subapical *pd*; 1 apical *v*; 1 apical *pv*; 1 apical and 1 submedial *ad*, occasionally with a medial row of *ad*. Fore tarsomere 1 0.3x length of t1, tarsomeres 2-4, shorter and 5 as long as broad; fore tarsi partially or totally flattened, expanded and white in the *anthracina* group. C2 generally with hair-like setae, with hooked setae in some species of the *scalaris* group. F2 usually with 1 row of *ad*, *a*, *av* and a variable number of rows of *pv*, which can be hair-like or hooked. T2 usually strongly thickened in apical half (not gradually thickened as in the other genera), occasionally with a subbasal protuberance, generally with 1 submedial and 3 to 4 apical *a*, 1 submedial *ad*, 1 apical *v* variable in strength, 1 submedial and 2 apical *pd*, apical *p* and *pv*. Mid tarsus with a basal ventral crest followed by a seta in the *anthracina* group. C3 with 1, 2 or 3 short and setulose setae at apex of posterior margin, or with very strong setae in *F. coxata* or bare. F3 thin as in the *obscurinervis* group to globose as in *F. coxata*, curved in dorsoventral margins in some species of the *anthracina* group, generally with a preapical posteroventral protuberance bearing a tuft of setae varying in length, with 1 row of *ad* and variable rows of *av*; posteroventral surface bare or with variable number rows of *pv* and *p*. T3 usually conical except for *F. schnusei* where it is flattened and expanded; with 1 submedial (calcar) and 1 subapical *d* variable in length; 1 submedian, 1 apical and a variable number of medial *av*; generally lacking row of

ad, except for species of the *canicularis* and *scalaris* groups.

Wing: Clear to smoky brown. Wing veins bare, except for costa. Subcosta smoothly bent forward towards costa. The first anal vein (1A) is much shortened, and the second anal vein (2A) is thin and bow-shaped, the imaginary extension of which would intersect before wing margin. Calypters of different size, generally lower calypter slightly oval except in the *canicularis* group, and upper rounded; creamy white to brown; halter yellow to black.

Abdomen: Elongated to heart-shaped when tergite 2 is 2x width of tergite 4. Ground colour dark, occasionally with darker markings on central line and posterior margin of tergites, or partially yellow in anterolateral margins of tergites 1-3. Sternite 1 scarcely to densely setulose.

Postabdomen: Sternite 5 variable in shape usually indented and covered with setae in posterior margin. Epandrium variable in shape. Cerci generally fused, weakly fused in the *pusio* group. Often with a bacilliform process at base of cercal plate, then surstyli simple and not broadly connected to epandrium; if absent then surstyli usually formed by two processes and broadly connected to epandrium. Postgonite inconspicuous, club shaped or forming a sheath surrounding aedeagus. Hypandrial arms directed outwards or inwards, thin or broad. Aedeagus generally membranous or partially sclerotized.

Female: body length 3-9 mm. Differs from male as follows:

Head: Frons and vitta broad, distance between eye margins usually wider than 0.33x width of the head. Upper and lower *orb* present and 1 to 3 rows of fronto-orbital setulae reaching the lunula.

Leg: T2 gradually thickened towards apex, lacking subbasal protuberance. Lacking preapical posteroventral protuberance bearing a tuft of setae on F3.

Abdomen: Generally heart-shaped, and with uniform coloration.

Postabdomen: Cerci normal, short. Anal plate uniformly covered with setulae. Sternite 8 reduced. Postabdominal spiracles 7 and 8 usually on tergite 6. Two to three spermathecae, variable in shape, ducts usually partially sclerotized.

Key to males

Fig. 1

(Male of *F. pusilla* is unknown)

- 1 Hind coxa bare at apex of posterior surface2
Hind coxa setulose at apex of posterior surface (Fig. 1A)9
- 2 Antenna and palpus brown, dark grey or black, never yellow. Ground colour of body black to steely blue, with dark brown pruinosity or dark grey with light blue pruinosity. Fore-tarsomere partially or totally white flattened and expanded (Fig. 1B). Mid tarsomere 1 with a basal ventral crest, followed by a short strong seta3
Antenna and palpus yellow. Ground colour of body grey or brown, if dark grey with light blue pruinosity, fore tarsomere dark or yellow, never flattened and expanded. Mid tarsomere 1 lacking basal ventral crest8
- 3 Fore tarsomere 1 and 2 completely white, except for a black spot on fore tarsomere 1 at base. Basal ventral crest and setae of mid tarsomere 1 short, shorter than width of tarsomere. Lacking ventral protuberance on F3, only with a preapical tuft of short and thin *pv*..... *F. anthracina* (Walker)
Fore tarsomeres 1 to 4 mostly or completely white or yellowish-white. Basal ventral crest and setae of mid tarsomere 1 longer than or as long as width of tarsomere. F3 with a medial or preapical ventral protuberance bearing dense tufts of *v* or *pv* (Fig. 1C)4
- 4 Eye densely setulose; *pra* short and stout. All fore tarsomeres flattened and expanded, completely yellowish-white. Ventral protuberance of F3 in medial position. T3 preapically flattened and expanded, with numerous curled and flat *av*, and short, thin and dense preapical *pv* and *p* (Fig. 1C)..... *F. schnusei* Stein
Eye bare or weakly haired. *Pra* longer and thin. Only some fore tarsomeres expanded and flattened, yellowish-white. Ventral protuberance of F3 situated in apical third. T3 without modifications in shape, with 2 to 3 *av*, lacking *pv*5
- 5 Calypteres white or yellow in outer margin6
Calypteres brown in outer margin.....7
- 6 Fron at narrowest point 2x width of anterior ocellus. Fore tarsomere 1 expanded at apex and lacking leaf-like spine, tarsomeres 2 to 5 completely expanded and flattened. T2 with 2 *ad* and 2 *pd*. T3 with 2 to 3 *ad*. Scutum and abdomen dark, with a little thin even pale dust..... *F. bigoti* (Stein)
Fron at narrowest point less than 2x width of anterior ocellus. Fore tarsomeres weakly flattened and expanded, fore tarsomere 1 with a broad leaf-like spine at tip of posterior surface. T2 with 1 *ad* and 1 *pd*. T3 with 1 *ad*. Scutum with four light-grey dusted vittae and a broad prescutellar patch, abdomen wholly light grey dusted except for some triangulated markings on all tergites..... *F. albitarsis* Stein
- 7 T1 completely dark, 2x length of fore tarsomere 1; fore tarsomeres long and thin. T2 more or less straight, twice as long as mid tarsomere 1, with a long apical *v*. Hind femur with several strong *av* alongside tubercle..... *F. setosa* (Bigot)
T1 yellow at tip, 4x length of fore tarsomere 1, the tarsomeres rather short and compressed. T2 bent at basal third, 4x length of mid tarsomere 1, with 1 short apical *v*. F3 with 1 to 2 *av* alongside protuberance *F. confusa* Pont & Carvalho
- 8 Frontal vitta at narrowest point 1.5x width of anterior ocellus. Parafacial completely covered with short setae. Scutum lacking brown vittae. 1 *pra* dorsad *spal*, 0.33 length of same. Sternite 1 with numerous long setae. Cercal plate bearing very long and conspicuous setae, visible in ventral view..... *F. flavicornis* Stein
Frontal vitta very narrow, reduced to a line (Fig. 1D). Parafacial bare. Scutum with brown vittae. 2 *pra* near *spal*. Sternite 1 with few setae. Setae of cercal plate not visible in ventral view..... *F. fusconotata* (Rondani)
- 9 T3 with 1 row of *pv*. Light grey in ground colour and light blue dusted.....10
Lacking row of *pv* on T3. With other colouring11
- 10 C2 with 2 strong hooked setae laterad, and 1 strong vaguely hooked apical seta (Fig. 1D). T2 with a strong triangulated anteroventral crest on apical half. T3 with 3 to 4 *pv* in medial third ... *F. scalaris* (Fabricius)
C2 lacking hooked setae. T2 without crest on apical half. T3 with 4 to 6 *pv* in medial third..... *F. incisurata* (Zetterstedt)

11	Abdomen trimaculated	12
	Abdomen with different colour pattern.....	15
12	Parafacial with setae	13
	Parafacial bare	14
13	T3 lacking row of <i>v</i>	<i>F. femoralis</i> (Stein)
	T3 with numerous long and hair-like rows of <i>v</i>	<i>F. pusio</i> (Wiedemann)
14	Eye scarcely pilose. Two strong <i>pra</i> , near <i>spal</i> . T3 with a preapical protuberance only visible on posterior surface; 1 short row and a short hair-like subapical tuft of <i>pv</i>	<i>F. punctiventris</i> Malloch
	Eye bare. Two <i>pra</i> , one very thin and short near <i>spal</i> and the other stouter and longer, near the transverse suture. T3 lacking preapical protuberance, and bare on posteroventral surface	<i>F. flavipalpis</i> Stein
15	Abdomen yellow in lateral margins of tergites 1-3. Wing clear	16
	Abdomen completely black, with darker markings in central longitudinal line and apex of tergites 2-5. Wing smoky	22
16	Upper <i>orb</i> present	<i>F. canicularis</i> (Linnaeus)
	Upper <i>orb</i> absent.....	17
17	Parafacial with strong setae throughout. Thorax lacking vittae	<i>F. petrocchia</i> Shannon & Del Ponte
	Parafacial lacking strong setae. Thorax with vittae.....	18
18	C3 with 4 to 5 long and stout setae at apex of posterior surface. Hypopygium protruding (Fig. 1A).....	<i>F. coxata</i> Shannon & Del Ponte
	Apex of posterior surface lacking such setae. Hypopygium not protruding.....	19
19	T2 with 1 truncate apical <i>pd</i> (Fig. 1E). Hind tarsomere 1 expanded and flattened (Fig. 1F).....	<i>F. roigi</i> sp. n.
	T2 never with truncate apical <i>pd</i> . Hind tarsomere 1 normal in shape.....	20
20	Scutum brown, lacking vittae along <i>acr</i> and <i>dc</i> lines.....	<i>F. tumidifemur</i> Stein
	Scutum brown with grey vittae along <i>acr</i> and <i>dc</i> lines	21
21	F2 with 2 rows of <i>pv</i> hooked at base, forming a dense ctenidium of 4 to 5 rows in apical fourth.....	<i>F. tucumanensis</i> Albuquerque
	F2 with 2 rows of hooked <i>pv</i> , lacking apical ctenidium	<i>F. heydenii</i> (Wiedemann)
22	Body length 5 to 7 mm. Wing smoky, dark in upper half of the space between R1 and R 2+3 (Fig. 1G). Halter black. F3 with 1 row of very short <i>pv</i> , not visible in anterior view	23
	Body length 3 to 4 mm. Wing smoky, clear in upper half of the space between R1 and R 2+3. F3 with 1 row of long and hair-like <i>pv</i> , visible in anterior view.....	<i>F. losgateados</i> sp. n.
23	F3 with two complete rows of <i>av</i> , one long and the other short and hair-like. Surstylus with a lobate process bearing very short setulae in basal region.....	<i>F. hermani</i> sp. n.
	F3 with a single row of <i>av</i> . Surstylus lacking lobate processes at base.....	<i>F. hirtifemur</i> (Stein)

Key to females

(Females of *F. bigoti*, *F. roigi*, *F. setosa*, *F. tucumanensis* and *F. tumidifemur* unknown)

1	C3 bare at apex of posterior margin	2
	C3 setulose at apex of posterior margin.....	7
2	Ground colour dark brown with metallic blue reflections, never yellow in first abdominal tergites.....	3
	Ground colour grey, abdominal tergites 1-3 laterally yellow	6
3	Calypter dark brown in outer margin.....	4
	Calypter white, yellow or yellowish brown in outer margin.....	5
4	Several rows of <i>po</i> . Scutum weakly pruinose, confined to <i>pprn</i> and post-alar calli. Abdomen thinly bluish dusted. Halter black.....	<i>F. schnusei</i> and <i>F. pusilla</i>
	One row of <i>po</i> . Scutum with 4 to 5 grey vittae. Abdomen heavily pruinose. Halter brown.....	<i>F. albitarsis</i>
5	T1 yellow at apex, black in remaining. T2 with 2 <i>ad</i> and 2 <i>pd</i> . T3 with the <i>ad</i> at the same level as or very slightly basad of the submedian <i>d</i>	<i>F. confusa</i>
	T1 completely black. T2 with 1 <i>ad</i> and 1 <i>pd</i> . T3 with the <i>ad</i> well apicad of the submedian <i>d</i> , by at least tibial diameter.....	<i>F. anthracina</i>

6(2) Parafacial bare	<i>F. fusconotata</i>
Parafacial setulose	<i>F. flavicornis</i>
7(1) T3 with 1 row of <i>pv</i> . Three spermathecae.....	<i>scalaris</i> group
Lacking row of <i>pv</i> on T3. Two spermathecae, if three, then one reduced.....	8
8 Wing smoky. Two spermathecae normal in size, third reduced.....	<i>obscurinervis</i> group
Wing never smoky. Two spermathecae	9
9 Abdomen grey in ground colour with lateral yellow markings in tergites 1-3	10
Abdomen with different pattern.....	11
10 Parafacial setulose	<i>F. petrocchiaie</i>
Parafacial bare	<i>heydenii</i> group (including <i>F. coxata</i> and <i>F. flavipalpis</i>)
11 Abdomen with tergite 2 completely yellow	<i>F. canicularis</i>
Abdomen with tergite 2 never completely yellow	12
12 Abdomen black, light bluish-grey at posterior margin of first abdominal tergites	<i>F. losgateados</i> sp. n.
Abdomen trimaculated	13
13 Fron silvery pruinose, pruinosity clearly heavier near eye, disappearing near frontal vitta, where it is reddish-brown.....	<i>F. pusio</i>
Fron silvery pruinose.....	14
14 Thorax grey with brown vittae	<i>F. punctiventris</i>
Thorax black, lacking vittae	<i>F. femoralis</i>

***Fannia albitarsis* Stein**

Figs. 2A-H

Fannia albitarsis Stein, 1911:105; 1919:131; Malloch, 1934:205; Séguy, 1937:164; Ortiz, 1946:156; Pont, 1972:3; Albuquerque *et al.*, 1981:10; Holloway, 1985:253; Carvalho *et al.*, 1993:6; Pont & Carvalho, 1994:231-232; Perotti & Brasesco, 1996:3-8; Perotti, 1998:145-154; Pont, 2001:459-460; Carvalho *et al.*, 2003:7.

Diagnosis: Medium size species, dark grey to black with light blue pruinescence. Frontal vitta at narrowest point 2,7x width of anterior ocellus. Eye slightly setulose. Parafacial bare. Antenna dark grey. Palpus dark brown. Scutum dark grey to black, slightly light bluish, grey light bluish vittae visible in full length of *acr* and *dc* line. One *pral* near the supraalar seta, 0.33x length of *spal* and a second *pral* near the transverse suture slightly shorter than the first. Fore tarsomere 1 flattened and expanded, partially yellow whitish and with a broad leaf-like spine at the tip of posterior surface; tarsomere 2 completely white yellow; tarsomere 3 and 4 as wide as long, partially yellow-white. T2 constricted at base, with a subbasal protuberance. C3 bare at apex of posterior surface. F3 thin; with a very prominent preapical protuberance on ventral and posteroventral surfaces and with a preapical tuft of hair-like *pv*, 1.5x femoral width. T3 lacking median row of *ad*. Wing clear. Halter yellow brown. Abdomen heart shaped and with darker triangular markings on tergites 2-4.

Material examined: Argentina. Tucumán 1 ♂, Quebrada La Loma, 21-X-1949, col. R. Golbach (FIML). Mendoza 42 ♂, 8 ♀, Maipú, Barrio COVE, XI-2000, col. Domínguez (IADIZA). 16 ♂, 71 ♀, Valles fértiles, XI-2001, col. ISCAMEN (IADIZA); 2 ♂, 1 ♀, CRICYT, Ciudad, X-2001, cols. Debandi, Domínguez & Scheibler (IADIZA). Chile. Tarapacá 1 ♂, Iquique, col. Herrera (CEUM). 1 ♂, Mamiña, col. Herrera (CEUM). Valparaíso. 3 ♂, Archipiélago Juan Fernández, Isla Robinsón Crusoe, Camino al Palillo, 2-I-1993 cols. Marshall & Gonzalez (CEUM). Santiago 1 ♂, Talagante, col. Zapata (CEUM). Antofagasta 2 ♂, Calama, 7-XII-1959 (CEUM). Malleco 2 ♂, Angol, 23-XI-1970 (CEUC). 5 ♂, San Vicente, 15-VIII-1995, col. J. N. Artigas (CEUC).

Description

Male: body length 5.0-6.0 mm.

Head: Frontal vitta dark brown to black, at narrowest point 2,7x width of anterior ocellus. Fronto-orbital plate grey, heavily pruinose, at uppermost *fr* slightly narrower than anterior ocellus. Sixteen long *fr*; 1.3x length of flagellum. Eye slightly setulose, antero-internal facets larger than remaining; *pocl* of irregular length in first quarter. Face and parafacial silvery grey; parafacial at base of flagellum 0.9x width of same and bare. Facial carina dark grey to brownish red in some specimens. Scape and pedicel dark grey, flagellum 2.2x as long as broad and covered with silver grey

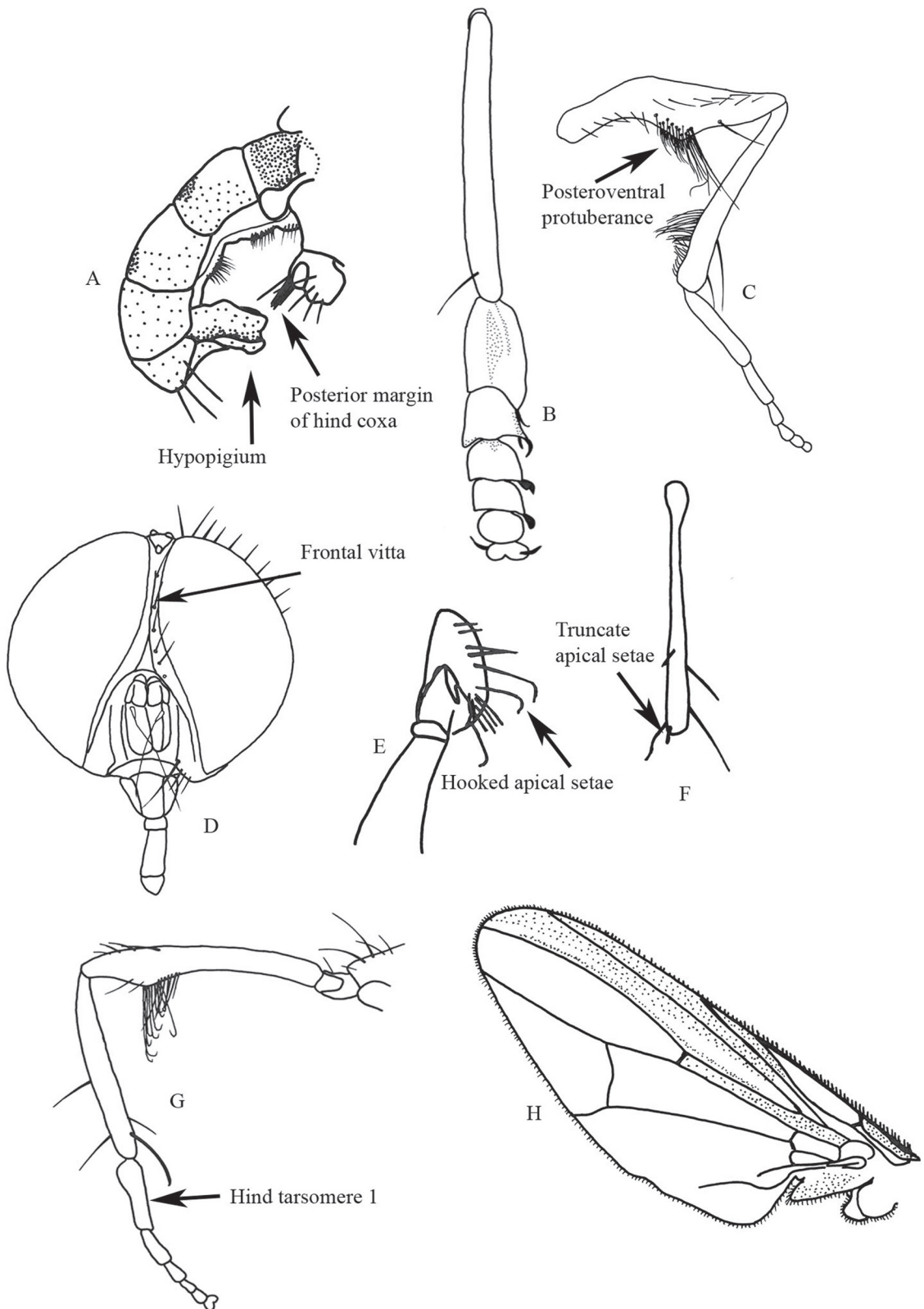


FIGURE 1: *F. coxata* Shannon & Del ponte. A. Male hind coxa and abdomen, lateral. *F. schnusei* Stein. B. Male fore tarsi, dorsal. C. Male hind leg, anterior. *F. fusconotata* (Rondani). D. Male head, anterior. *F. scalaris* (Fabricius). E. Male mid coxa, anterior. *F. roigi* sp. nov. F. Male mid tibia, posterior. G. Male hind leg, anterior. *F. hermani* sp. nov. H. Wing.

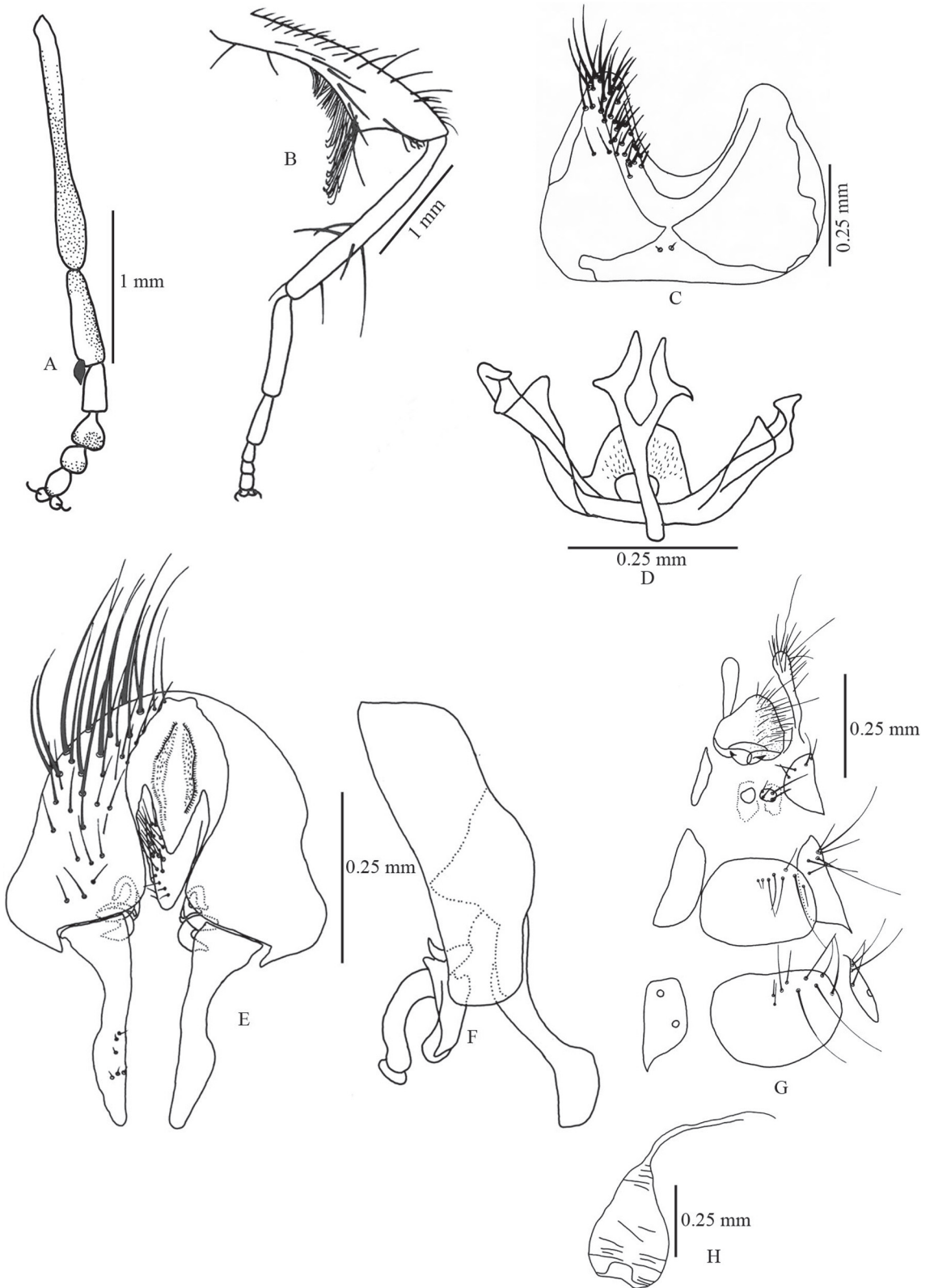


FIGURE 2: *Fannia albitarsis* Stein. A. Male fore tibia and tarsi, dorsal. B. Male hind leg, anterior. C. Male sternite 5, ventral. D. Male hypandrium, ventral. E. Male terminalia external structures, ventral. F. Male terminalia external structures, lateral. G. Female terminalia, ventral. H. Spermatheca.

pruinosity. Arista black and arista pubescence shorter than arista width at base. Palpus dark brown, slightly clavate, the apex 1.5x the width of the base. Lower oral margin convex and grooveless.

Thorax: Scutum dark grey to black, slightly light bluish, grey light bluish vittae visible in full length of *acr* and *dc* lines; pleura grey; apex of scutellum light blue greyish; 3+4 *acr*; with two additional prescutellar *acr*; 1 strong prescutellar *acr*s; 2+3 *dc*; *pprn* with few setulae; one *pral* near *spal*, 0.33x length of same and a second *pral* near the transverse suture slightly shorter than the first; prealar area bare; two *prepm* surrounded by numerous hair like setulae.

Legs: Dark grey to black, yellow brown at articulations. F1: normal to thin (length/width = 7.1), with 1 row of *pd* as long as femoral width, with five to six rows of short hair-like *p*; 1 row of *pv* slightly longer than femoral width. T1 with 1 subapical *pd*; 1 apical *v* and 1 apical *pv*; 1 apical and 1 submedial *ad*, lacking medial row of *ad*. Fore tarsomere 1 flattened and expanded, partially yellowish white and with a broad leaf-like spine at the tip of posterior surface; tarsomere 2 completely yellowish white; tarsomere 3 and 4 as wide as long, partially yellowish white (Fig. 2A). F2 with 1 complete row of *ad* and 1 row of *a*; 1 row of hair-like *av* at base, stout and shorter towards apex; 1 complete row of hair-like *pv* at base, and two rows of shorter and stouter setae in apical third; 1 row of hair-like *p* at base, stouter and ventrally directed at apex. T2 constricted at base, with a subbasal protuberance; ventral pubescence short, 0.3x tibial width; with 1 submedial and 3 apical *a*; 1 subapical *ad*; 1 strong, slightly curved apical *av*; 1 submedial and 1 weaker apical *pd*; 1 short and stout apical *p*. Mid tarsomere 1 with a basal ventral crest, followed by short strong seta. C3 bare at apex of posterior surface. F3 thin (length/width = 10); ventral and posteroventral surfaces with a very prominent preapical tubercle (Fig. 2B); 1 row of *ad*, longer and dorsally directed towards apex; 1 row of *av* as long as femoral width, interrupted preapically and with 2 or 3 long apical *av*; preapical tuft of hair-like *pv*, 1.5x femoral width. T3 with 1 long submedial and 1 shorter (0.5x length of submedial) subapical *d*, 1 submedial and 1 apical *ad*, lacking median row; 2 medial and 1 apical *av*; ventral and posteroventral surfaces with a weak apical ctenidium at apex.

Wing: Clear. Lower calypter slightly oval, the uppermost is rounded, both white; knob of halter yellow brown, dark brown at base.

Abdomen: Heart-shaped, tergite 2 2x width of tergite 4. Dark grey to black covered with light blue to greyish pruinescence, with darker triangular markings on tergites 2, 3 and 4. Hypopygium not protruding.

Postabdomen: Posterior margin of sternite 5 profoundly indented and covered with setae (Fig. 2C). Hypandrium thin, postgonite inconspicuous (Fig. 2D). Posterior margin of epandrium broadened, bell-shaped; cercal plate fused and tapering at apex; bacilliform process corkscrew-shaped; surstyli simple, long and central respect to the epandrium, slightly clavate (Figs. 2E-F).

Female: body length 5.0-5.7 mm. Differs from male as follows:

Head: Ocellar triangle short, extending up to the fourth *fr*. Fron and frontal vitta broad, the distance between eye margins is wider than 0.33x of head width. Four to five strong *fr*, slightly longer than flagellum and bearing six to seven long setulae between *fr*; half as long as the setae. With upper and lower *orb*, and two to three rows of fronto-orbital setulae.

Leg: F1 with 1 row of *p* as long as femoral width; 1 or 2 short rows of *pv*. T1 with a conspicuous subapical ctenidium. Fore tarsi dark brown to black, lacking leaf-like spine at apex of posterior surface of basal tarsomere. F2 with 1 row of short *av*, lacking row of *pv*. T2 tapering towards the base, ventral pubescence absent; 1 apical *pv*; 1 apical *p*, longer than *pv*. F3 lacking preapical tubercle and hair-like *pv*.

Abdomen: Heart-shaped, this shape much more pronounced than in the male, tergite 2 2x width of tergite 4; uniformly dark grey.

Postabdomen: Cerci normal, short; anal plate longer than broad and uniformly covered with setulae; sternite 8 reduced to a anterior pair of circular plates bearing two setae and four to five setulae; postabdominal spiracles 7 and 8 on tergite 6 (Fig. 2G). Two pear-shaped spermathecae, slightly grooved, with partially sclerotized ducts (Fig. 2H).

Distribution: NEOTROPICAL: Peru, Bolivia, South of Brazil; ANDEAN: Chile, Argentina, Falkland Islands. Introduced probably through commerce, into South Africa, Australia and New Zealand (Pont & Carvalho 1994).

Fannia anthracina (Walker, 1836)

Figs. 3A-D

Anthomyia anthracina Walker, 1836:356.

Homalomyia erythropis Bigot, 1888:30; Stein, 1907b:274; Enderlein, 1912:101.

Coelomyia erythropis Schnabl, 1902:160. [Junior secondary homonym in *Fannia* of *Homalomyia*

erythropis Bigot, 1888]; Schnabl & Dziedzicki, 1911:132-133. synonymy with *erythropis* Bigot by Albuquerque, 1953:496.

Fannia erythropis; Stein, 1919:131; Malloch, 1934:203 (possibly = *errata* Malloch) (*armata* Bigot nec Meigen); Séguy, 1937:167 (syn.: *armata* Bigot); Séguy, 1938:119; Albuquerque, 1953:496; Pont, 2000a:101; 2000b:12.

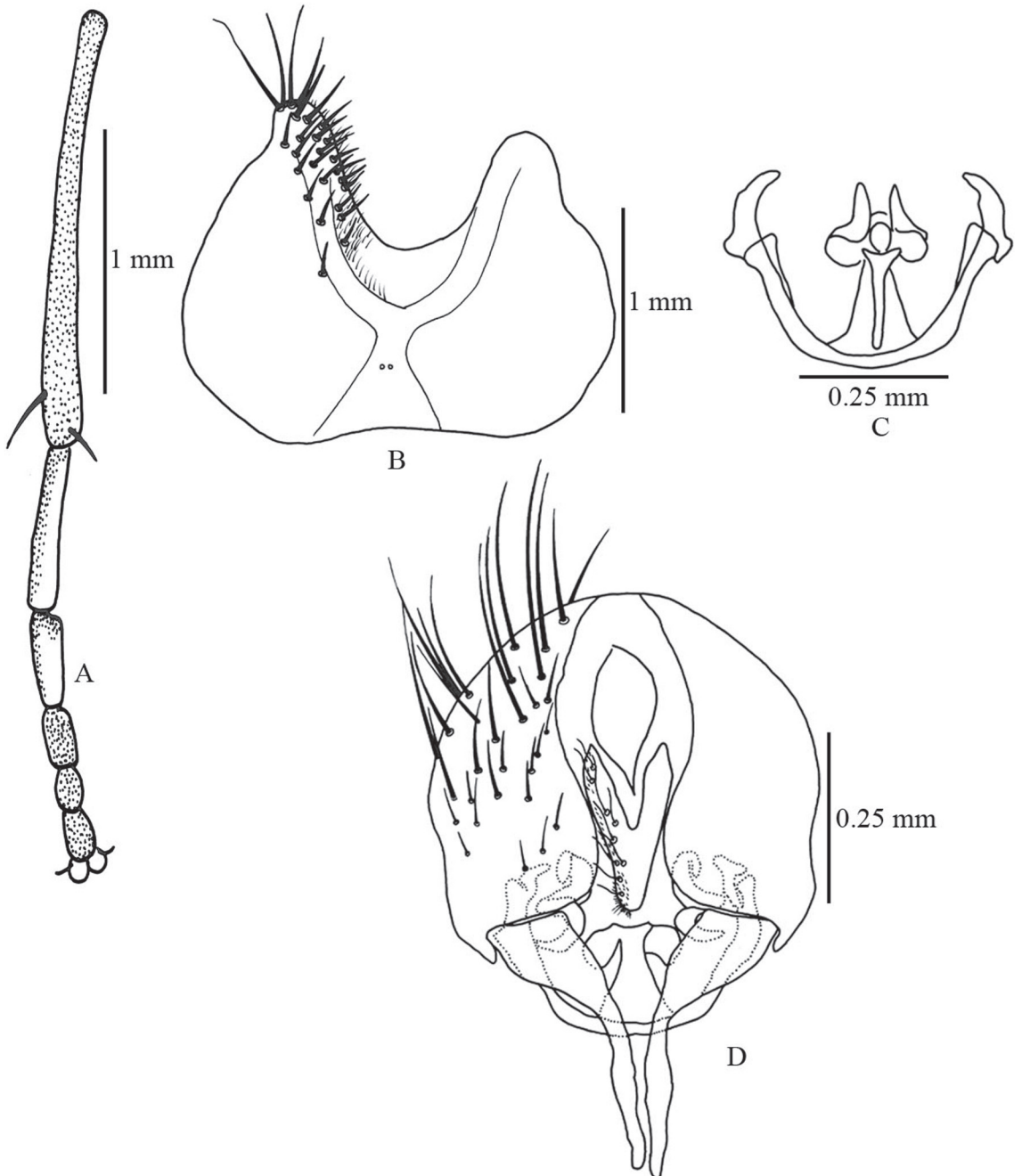


FIGURE 3: *Fannia anthracina* (Walker). A. Male fore tarsi, dorsal. B. Male sternite 5, ventral. C. Male hypandrium, ventral. D. Male terminalia external structures, ventral.

Fannia anthracina; Malloch, 1934:205; Ortiz, 1946:156; Hennig, 1955b:26; 1957:411; 1965:11-20; Pont, 1965:427; 1972:3; Albuquerque *et al.*, 1981:10, 11 and 21; Carvalho *et al.*, 1993:7; Pont & Carvalho, 1994:231-232; Carvalho *et al.*, 2003:8.

albibasis; Malloch, 1934:202. Synonymy by Pont, 1965:428.

Diagnosis: Medium size black steely blue species. Frontal vitta at narrowest point 1.5x width of anterior ocellus. Eye short setulose. Parafacial bare. Antenna and palpus black. Thorax lacking vittae. One *pral* near *spal* 0.33x length of same and a second *pral* near the transverse suture, shorter than the first. F1 with five to six rows of long hair-like *p*. Fore tarsomeres 1 and 2 slightly expanded and completely white, the remaining black and without modifications in shape. Mid tarsomere 1 with a basal ventral crest, followed by short strong setae. F3 with a weak preapical tubercle on posteroventral surface and a tuft of hair-like *pv*, slightly longer than femoral width, coinciding with preapical tubercle; posterior surface covered with hair-like setae as long as femoral width, extending up to preapex. Hind coxa bare. Wing faintly smoky. Halter black.

Material examined: Argentina: Neuquen 1 ♀, Pucará, Parque Nacional Lanín, X-1952/II-1952, col. Schajovsky (FIML). Chile: Valparaíso 4 ♂, Archipiélago Juan Fernández, Isla Robinson Crusoe, Mirador Selkirk, 30-XII-1992, cols. Marshall & González (CEUM). 1 ♂, Isla Juan Fernández, Masafuera, Quebrada de las Casas, 11-II-55, col. G. Kuschel (CEUM). 1 ♂, Miradero, 550 m, 15-II-51 (CEUM). X Región 1 ♂, Magallanes, 11-X-68, col. J. Riesco (MNHN). 1 ♂, Punta Arenas, Ea. Gueyrabo, 23-XII-1979, col. G. Cerda (MNCN). 2 ♂, Punta Arenas, Parcelas, 21-XI-1972 and 25-XI-1972, col. G. Cerda (MNCN).

Description

Male: body length 6.4-6.60 mm.

Head: Frontal vitta light brown, at narrowest point 1.5x width of anterior ocellus. Fronto-orbital plate dark grey to black, at uppermost *fr* 0.7x width of anterior ocellus. Twenty *fr*; 1.4x length of flagellomere. Eye very short setulose; antero-internal eye facets larger than remaining; *poel* of irregular length at vertex, and biserial after first 15. Face and parafacial dark grey to black; parafacial 0.6x width of flagellum

at base of same and bare. Facial carena dark grey to black, gena dark brown. Scape and pedicel black, flagellum 1.9x as long as broad and covered with thick grey pruinescence. Arista entirely black, pubescence shorter than aristal width at base. Palpus black and elongated, the apex 1.5x width of the base. Lower oral margin convex and grooveless.

Thorax: Scutum, scutellum and pleura uniformly black to steely blue, mainly shining; 3+4 *acr*, with 1 strong *acrs*; 2+3 *dc*; *pprn* with numerous and long setulae; 1 *pral* near *spal*, 0.33x length of same and 1 *pral* near the transverse suture, shorter than the first; prealar area with several long setulae; 2 *prepm* surrounded by numerous setulae.

Legs: Completely black. F1 normal (length/width = 5); with 1 row of *pd* setae as long as femoral width; 5 to 6 rows of long hair-like *p*; 1 row of *pv* longer than femoral width, thin and spaced at the base, broader and shorter at apex. T1 with 1 subapical *pd*; with 1 apical *v* and 1 apical *pv* setae; with 1 submedial and 1 apical *ad*, lacking medial row. Fore tarsomeres 1 and 2 slightly expanded and completely white, the remaining black and without modifications in shape (Fig. 1B). F2 with 1 row of *ad*, longer than femoral width; 3 rows of *a*; 1 row of *av*, long and straight at base, stouter and shorter at apex; 1 row of *pv* hair-like at base, forming a short and hooked tuft at apex; 1 row of *p*, thin and setulose at base, stouter and ventrally directed at apex. T2 slightly curved, constricted at base and with a subbasal protuberance; ventral pubescence short, 0.5x width of tibia; with 1 submedial and 3 apical *a*; 1 subapical *ad*; 1 strong and slightly curved apical *av*, 1 submedial and 1 smaller apical *pd*; 1 very long apical *p*; 1 apical *pv*. Mid tarsomere 1 with a basal ventral crest, followed by short strong seta. C3 bare on posterior surface. F3 normal (length/width = 7), posteroventral surface with a weak preapical tubercle; 1 row of *ad* setae, longer and dorsally directed towards apex; 1 row *av* as long as femoral width, interrupted preapically, and 2 to 3 long apical *av*; tuft of hair-like *pv* slightly longer than femoral width, coinciding with preapical tubercle; posterior surface covered with hair-like setae as long as femoral width, that extend up to preapex. T3 with 1 long submedial and a slightly shorter subapical *d*; with a submedial and apical *ad*, lacking medial row; 2 medial and 1 apical *av*; ventral and posteroventral surfaces with a weak ctenidium at apex.

Wing: Faintly smoky. Lower calypter slightly oval, the uppermost rounded, both dark brown to black, black

on distal margin; knob of halter black, dark brown at base.

Abdomen: Heart-shaped, tergite 2 more than 2x width of tergite 4, black to steely blue, mainly shining.

Postabdomen: Posterior margin of sternite 5 indented and covered with setae (Fig. 3B). Hypandrium thin; postgonites inconspicuous; aedeagus membranous (Fig. 3C). Posterior margin of epandrium slightly broadened, bell-shaped; cercal plate fused, tapering at apex; baciliform process corkscrew shaped; surstyli simple, long and central respect to epandrium (Fig. D).

Female: body length 4.5-4.7 mm. Differs from male as follows:

Head: Ocellar triangle short, extending up to the third *fr*. Fron and frontal vitta broad, the distance between eye margins wider than 0,33x width of the head. Ten strong *fr*; slightly longer than flagellum and bearing 6 to 7 setulae half as long, in between. Upper and lower *orb* present, and 2 rows of fronto-orbital setulae.

Legs: F1 with 1 row of short *p*. Fore tarsi normal in shape, dark brown to black. F2 with 1 row of very short and setulose *av* in basal half; row of *pv* setae very short. T3 cone-shaped, the base narrower than the apex, pubescence on ventral surface absent. F3 with 1 row of short *av*, and 2 subapical long *av*; posteroventral surface bare.

Abdomen: Heart-shaped, tergite 2 more than 2x width of tergite 4, this shaped more pronounced than in male. Dark grey to black, with metallic blue reflections.

Postabdomen: Cerci normal, short; anal plate longer than broad and uniformly covered with setulae; sternite 8 reduced to an anterior pair of circular plates bearing two setae and 4 to 5 setulae; postabdominal spiracles 7 and 8 on tergite 6. Three pear-shaped spermathecae slightly grooved, with partially sclerotized ducts.

Distribution: ANDEAN: Argentina, Chile.

***Fannia bigoti* Stein, 1907**

Figs. 4A-D

Fannia bigoti Stein, 1907b:287; 1919:131; Malloch, 1934:204; Séguy, 1937:165; Ortiz, 1946:156; Pont, 1972:3; Carvalho *et al.*, 1993:8; Pont &

Carvalho, 1994:234; Pont, 2000a:97; 2000b:7; Carvalho *et al.*, 2003:9.

Diagnosis: Frontal vitta at narrowest point 2.5x width of anterior ocellus. Eye slightly setulose. Parafacial bare. Antenna and palpus black. Thorax black, dark blue shining. One *pral* near *spal*, shorter than surrounding setulae but stouter, and a second very reduced *pral* near the transverse suture. Fore tarsomere 1 expanded and white at tip, fore tarsomeres 2-5 expanded, flattened and partially white. T2 strongly curved, with a very conspicuous subbasal protuberance. Mid tarsomere 1 with a basal ventral crest, followed by 1 short strong setae. C3 bare at apex of posterior surface. F3 normal to thin with a strong preapical protuberance on ventral surface, as wide as femoral width; 1 row of hair-like and a preapical tuft of long *pv*, 1.5x width of femur, coinciding with the ventral protuberance. Wing faintly smoky. Halter black. Abdomen elongated, slightly lighter coloured at middle and posterior margin of tergites 2, 3 and 4.

Type material examined: Paralectotype ♂, "Chile" (ZMHU).

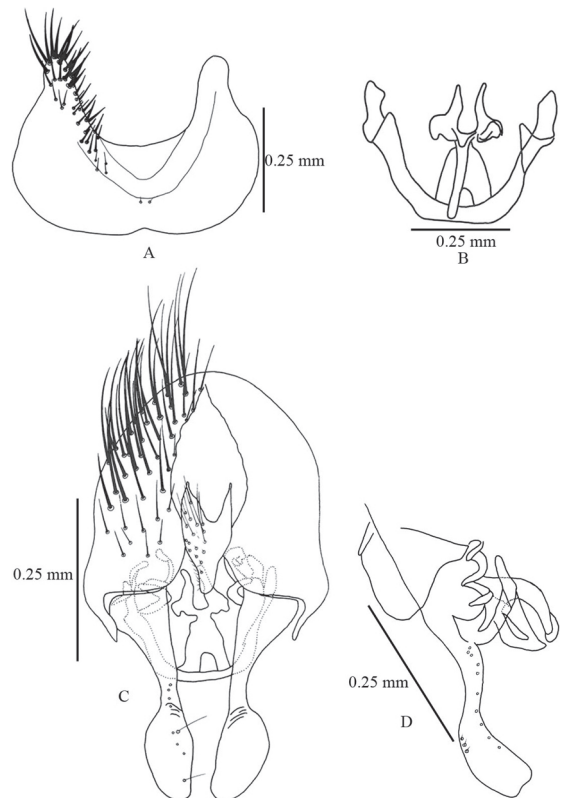


FIGURE 4: *Fannia bigoti* Stein. A. Male fore tarsi, dorsal. B. Male sternite 5, ventral. C. Male hypandrium, ventral. D. Male terminalia external structures, ventral.

Other material examined: Chile Magallanes, 1 ♂, 1 ♀, Ojo Bueno, 15-XII-1974/20-I-1975, col. G. Cerda (MNCN). Arauco, 1 ♂, Isla Mocha, 15/19-III-1971 (CEUC).

Description

Male (female unknown): body length 6-7 mm

Head: Frontal vitta dark brown pruinose, at narrowest point 2.5x width of anterior ocellus. Fronto-orbital plate grey, heavily pruinose, at uppermost *fr* 0.75x width of anterior ocellus. Seventeen long *fr* 1.5x length of flagellum. Eye slightly setulose, antero-internal facets larger than remaining; *poel* of irregular length, slightly shorter than outer vertical setae, becoming shorter further from the vertex. Face and parafacial silvery grey; parafacial at base of flagellum 0.75x width of same and bare. Facial carina and gena dark grey. Scape and pedicel black, flagellum grey, 2.3x as long as broad. Arista dark brown at base, black at apex, short pubescent. Palpus black, straight to slightly clavate, the apex 1.5 to 2x width of base. Lower oral margin weakly concave and groove less.

Thorax: Scutum and scutellum black to dark blue shining, apex of scutellum slightly brown; 3+4 *acr*; 1 strong *acrs*; 2+3 *dc*; *pprn* covered with setulae; 1 *pral* near *spal*, shorter than surrounding setulae but stouter, and a second very reduced *pral* near the transverse suture; prealar region covered with setulae; 2 *prepm* surrounded by numerous hair-like setulae.

Legs: Dark brown to black. F1 normal (length/width = 6.1); 1 row of *pd* as long as femoral width; with 5 to 6 rows of thin *p*, longer than femoral width; 1 row of thin and spaced *pv* at base, stouter at apex. T1 with 1 subapical *pd*; 1 apical *v*; 1 apical *pv*; 1 submedian and 1 apical *ad*. Fore tarsomere 1 expanded and white at tip, fore tarsomeres 2-5 expanded, flattened and partially white. F2 with 1 row of *ad*; 1 row of very short *a*; 1 row of stout and straight *av* at base, shorter and curled apically; 1 row of thin *pv* in basal fourth, and a preapical tuft of short and stout *pv*: 1 row of *p* stouter and ventrally directed towards apex. T2 strongly curved, with a very conspicuous subbasal protuberance; pubescence on ventral surface longer than 0.5x tibial width; 3 apical, 1 submedian and 2 medial *a*; 1 subapical *ad*; 1 apical *av*; 1 apical and two submedian *pd*; 1 very long apical *pv*; 1 very long apical *p*. Mid tarsomere 1 with a basal ventral crest, followed by a short strong seta. C3 bare at apex of poste-

rior surface. F3 normal to thin (length/width = 7.2); with a strong preapical protuberance on ventral surface; with 1 row of *ad*, dorsally directed towards apex; 1 row of very short, and 3 stouter medial *av*, longer than femoral width; 1 row of hair-like and a preapical tuft of long *pv*, 1.5x width of femur, coinciding with the ventral protuberance. T3 with 1 submedian and 1 subapical *d*; 1 stronger submedian, 1 apical and 1 row of 5 weaker medial *ad*; 2 medial and 1 apical *av*; ventral and posteroventral surfaces with a strong ctenidium at apex.

Wing: Faintly smoky. Uppermost calypter rounded and lower oval, white with dark brown outer margins. Knob of halter black, dark brown at base.

Abdomen: Elongated, tergites of equal width throughout. Black to steely blue, slightly lighter coloured at middle and posterior margin of tergites 2, 3 and 4.

Postabdomen: Posterior margin of sternite 5 profoundly indented and covered with setae (Fig. 4A). Hypandrial arms thin, postgonite inconspicuous; aedeagus membranous (Fig. 4B). Posterior margin of epandrium broadened, bell shaped; cercal plate fused, tapering at apex; bacilliform process cork-screw shaped; surstyli simple, long and central to the epandrium, and clavate (Fig. 4C-D).

Distribution: ANDEAN: Chile.

Fannia canicularis (Linnaeus, 1761)

Figs. 5A-E

Musca lateralis Linnaeus, 1758:597. Suppressed by I.C.Z.N. 1969, Opinion 884.

Musca canicularis Linnaeus, 1761:454; *nom. nov.* for *Musca lateralis* Linnaeus, 1758.

Anthomyia chilensis Macquart, 1843a:328; 1843b:171; Gay, 1852:442; Reed, 1888:33.

Anthomyia introducta Walker, 1853:362. Synonymy by Stein, 1901:199.

Myantha canicularis; Rondani, 1863:34; 1864:34.

Homalomyia canicularis; Rondani, 1866:132; 1877:48; Wulp, 1883:47; Bigot, 1885:284; Wulp, 1896:331; Coquillett, 1901:375; Stein, 1901:199; 1904:458; 1907a:216.

Homalomyia mexicana Bigot, 1885:284. Synonymy by Stein, 1907b:279; Giglio-Tos, 1896:27; Wulp, 1896:332; Pont, 2000a:104; 2000b:18.

Fannia canicularis; Stein, 1911:108; 1919:131; Shannon & Del Ponte, 1926:566, 571; Gaminara,

1930:1253; 1931:1253; Curran, 1932:359; Séguy, 1932:22; Malloch, 1934:203; Roberts, 1934:353; Séguy, 1937:165; Ortiz, 1946:157; James, 1947:130; Ruffinelli & Carbonell, 1954:66; Hennig, 1955a:26; Chillcott, 1961:188; Hennig, 1965 Fig. 6; Hockett, 1972:82; Pont, 1972:43-49; 1977:43-49; Linhares, 1981:232; Albuquerque *et al.*, 1981:10; Almeida *et al.*, 1985:279-284; Greenberg & George, 1985:93-96; Holloway, 1985:250; Skovronsky, 1985:84-85; Zeil, 1986:213-219; Queiroz & Carvalho, 1987:276; Mandeville *et al.*, 1988:153-159; Bruno *et al.*, 1992:55-59; Carvalho *et al.*, 1993:8; Perotti & Brasco, 1996; Rozkošný *et al.*, 1997:37; Perotti, 1998:145-154; Carvalho & Couri, 1999:211; Nachtigall, 1999a:137-143; Nachtigall, 1999b:185-193; Trentini, 2001:169-171; Carvalho *et al.*, 2002:108; Mullens *et al.*, 2002:588-593; Carvalho *et al.*, 2003:9; Iannacone, 2003:85-90; Lima Biccho *et al.*, 2004:205-210.

Fannia impura Zetterstedt, 1838. Synonymy by Pont, 2002:107.

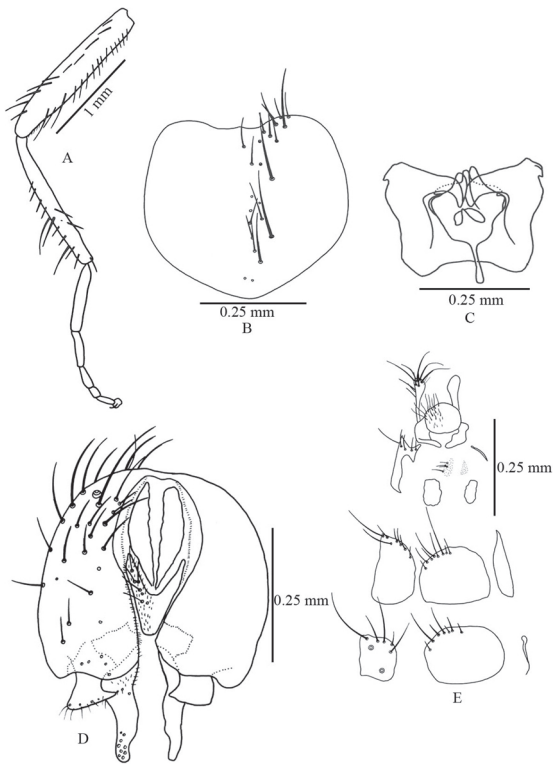


FIGURE 5: *Fannia canicularis* (Linnaeus). A. Male hind leg, anterior. B. Male sternite 5, ventral. C. Male hypandrium, ventral. D. Male terminalia external structures, ventral. E. Female terminalia external structures, ventral.

Diagnosis: Medium size yellow and grey species. Frontal vitta at narrowest point as wide as anterior ocellus. Upper *orb* present in male. Eye and parafacial bare. Scutum brown greyish, dark brown vittae visible in full length of *acr* and *dc* lines. Two to four short *pral* near the *spal*. T2 constricted at base, lacking subbasal protuberance. C3 with 3 short hair-like *p* at apex of posterior surface. F3 normal lacking posteroventral protuberance, with 10 medial *ad*, and stouter submedial and 1 apical *ad*. Wing clear. Halter yellowish-white. Abdomen brownish-grey, and yellow at apex of tergite 1, lateral margins of tergites 2 and 3 and basal half of tergite 4.

Material examined: Canadá: 1 ♂, Labrador, Big Caribou Island, Battle Harbour, IV-1926, col. A. C. Weed (FMNH). EEUU: Montana 2 ♂, 1 ♀, Bonnet's Mill, VII-1930 (FMNH). Illinois. 2 ♂, 2 ♀, Cook Co. V-1942, col. S. Camras (FMNH). 4 ♂, 8 ♀, Des Plaines, IX-1968/69 (FMNH). 2 ♂, 1 ♀, University Chicago (FMNH). 1 ♂, Chicago (FMNH). Michigan 1 ♂, Battle Creek, X-1940, col. S. Campas (FMNH). Louisiana 3 ♂, 2 ♀, Opelousas, III-1997 (FMNH). Georgia Hinesville, IV-1953, col. S. Campas (FMNH). Texas 1 ♀, Texas, XI-2000 (FMNH). Chile: Santiago 1 ♂, Providencia. II-2001, col. Domínguez (IADIZA). Isla de Chiloe 9 ♂, Ancud, II-2001, col. Domínguez (IADIZA). 1 ♂, Islotes de Puñihuil, II-2001, col. Domínguez (IADIZA). Puerto Varas 3 ♂, II-2001, col. Domínguez (IADIZA). Argentina: San Luis 8 ♂, Renca, XII-1999, Cols. Domínguez & Roig (IADIZA). Mendoza 31 ♂, 6 ♀, Guaymallén, X/XI-2001, col. Roig (IADIZA). 1 ♂, Luján de Cuyo, Chacras de Coria, I-2001, col. Roig (IADIZA). 3 ♂, Benegas, I-2001, col. E. Scheibler (IADIZA). 3 ♂, Guaymallén, San José, X-2001, col. Domínguez (IADIZA). 2 ♂ Ciudad, IX-2001, col. Domínguez (IADIZA). Chubut 3 ♂, El Bolsón, II-2001, col. Domínguez (IADIZA).

Description

Male: body length 4.5-7.0 mm

Head: Frontal vitta black pruinose, at narrowest point as wide as anterior ocellus. Fronto-orbital plate silvery pruinose, at uppermost *fr* 0.9x width of anterior ocellus. Thirteen long *fr*; slightly longer than flagellum. Upper *orb* present. Eye bare, antero-internal facets larger than remaining; *pocl* sirregular in length. Face and parafacial covered with thick shining silvery grey pruinose. Parafacial at base of flagellum 0.6x

width of same and bare. Facial carina dark grey. Gena dark grey to black. Scape and pedicel black; flagellum 2x as long as broad and covered with thick grey pruinescence. Arista black and short pubescent. Palpus black, straight, the apex as wide as base. Lower oral margin light grey, slightly concave and groove less.

Thorax: Scutum brown greyish, dark brown vittae visible in full length of *acr* and *dc* lines; pleura grey; scutellum light grey at apex; 3+4 *acr*; 1 strong prescutellar *acrs*; 2+3 *dc*; *pprn* with few short setulae; Two to four short *pral* near *spal*: prealar area with few setulae; 2 *prepm*, lacking surrounding setulae.

Legs: Dark brown to black, light brown to yellow at articulations. In some specimens tibial base is yellow. F1 normal (length/width = 6), with 1 row of *pd*; 2 rows of *p*; 1 long basal and 1 row of *pv* in apical 3/4. T1 with 1 subapical *pd*; 1 apical *v* and *pv*; 1 row of setulose *ad* and 1 submedian and 1 apical *ad*. Fore tarsomere 1 0.5x length of tibia; tarsomeres 4 and 5 short, as wide as long. F2 with 1 complete row of *ad*; 2 rows of very short *a*; 1 row of long and fine *av* at base, shorter and stouter towards apex; 1 row of hair-like *pv*, as long as femoral width; 1 row of fine *p* at base and 5 to 6 longer, stouter and ventral *p* at base. T2 constricted at base, lacking subbasal protuberance; ventral pubescence short, 0.25x width of tibia; with 1 submedial *a*; 1 subapical *ad*; 1 submedial and 1 apical *pd*; 1 apical *pv*; 1 apical *p*. C3 with 3 short and hair-like *p* at apex of posterior surface. F3 normal (length/width = 6.25), lacking posteroventral protuberance; with 1 row of *ad*, longer, stouter and dorsally directed towards apex; 1 row of *av* interrupted at preapex, and 2 apical *av*; posterior surface covered with hair-like setulae (Fig. 5A). T3 with 1 submedial and 1 subapical *d*; 10 medial *ad*, and 1 stouter submedial and apical *ad*; 2 to 3 medial *av* and 1 apical *av*; apex of ventral and posteroventral surfaces with a short ctenidium.

Wing: Clear; both calypteres rounded, white, yellowish in outer margin. Knob of halter yellowish-white, light brown at base.

Abdomen: Elongated, the width of tergites approximately uniform. Brownish-grey, and yellow at apex of tergite 1 and lateral margins of tergites 2 and 3 and basal half of tergite 4.

Postabdomen: Posterior margin of sternite 5 straight, with setae forming a central longitudinal line (Fig. 5B). Hypandrium broad, strongly sclerotized, hypandrial arms directed inwards; postgonite horn-

shaped, strongly sclerotized surrounding the membranous aedeagus (Fig. 5C). Cercal plate small and fused; bacilliform process absent; surstyli near outer margin of epandrium and formed by a flattened, parallel sided, principal process and a ventral, lateral, smaller and depressed process, that bears a group of setulae at apex, each surstylus is directly and broadly connected to the hypandrium (Fig. 5D).

Female: body length 4.8-5.2 mm. Differs from male as follows:

Head: Ocellar triangle short, extending up to the fourth *fr*. Frons and vitta broad, the distance between eye margins is 1/3 of head width. Parafacial with 1 row of short setulae reaching base of flagellum. Seven to eight *fr* as long as flagellomere and 1 row of orbital setulae.

Thorax: Light grey with thinner brown vittae along *acr*, *dc* and *ia* lines; 3+4-5 *acr*; 2 short and thin *pral* near *spal*, lacking setulae in prealar area.

Legs: Dark brown, yellow in articulations, trochanter yellow and tibiae reddish. F2 with very short and thin row of *av* in basal fourth; row of *pv* very short with a long setae at base and setulose towards apex. T2 narrow at base, broader at apex; ventral pubescence absent.

Abdomen: Heart-shaped, tergite 4 approximately half as wide as tergite 2. Tergite 1 dark grey brownish to grey purplish, tergite 2 completely yellow, tergite 3 yellow at base and tergites 4 and 5 brown-purplish.

Postabdomen: Cerci normal, short; anal plate slightly broader than long, uniformly covered with setae; sternite 8 reduced to an anterior pair of plates covered with setulae and two posterior bare plates slightly larger than anterior; postabdominal spiracles 7 and 8 on tergite 6 (Fig. 5E). Two rounded spherical soft surfaced spermathecae, with unsclerotized ducts.

Distribution: Cosmopolitan.

Fannia confusa Pont & Carvalho 1994

Figs. 6A-G

Fannia confusa Pont & Carvalho, 1994:234; Carvalho *et al.*, 2003:10.

Diagnosis: Medium size dark black-bluish species. Frontal vitta at narrowest point 0.33x width of ante-

rior ocellus. Eye slightly setulose. Parafacial bare. Antenna brown. Palpus dark brown. Thorax black, slightly bluish. One *pra* near *spal*, 0.33x length of

same and a second *pra* near the transverse suture, slightly longer than first. Fore tarsomere 1 flattened and expanded, partially yellowish-white; tarsomere

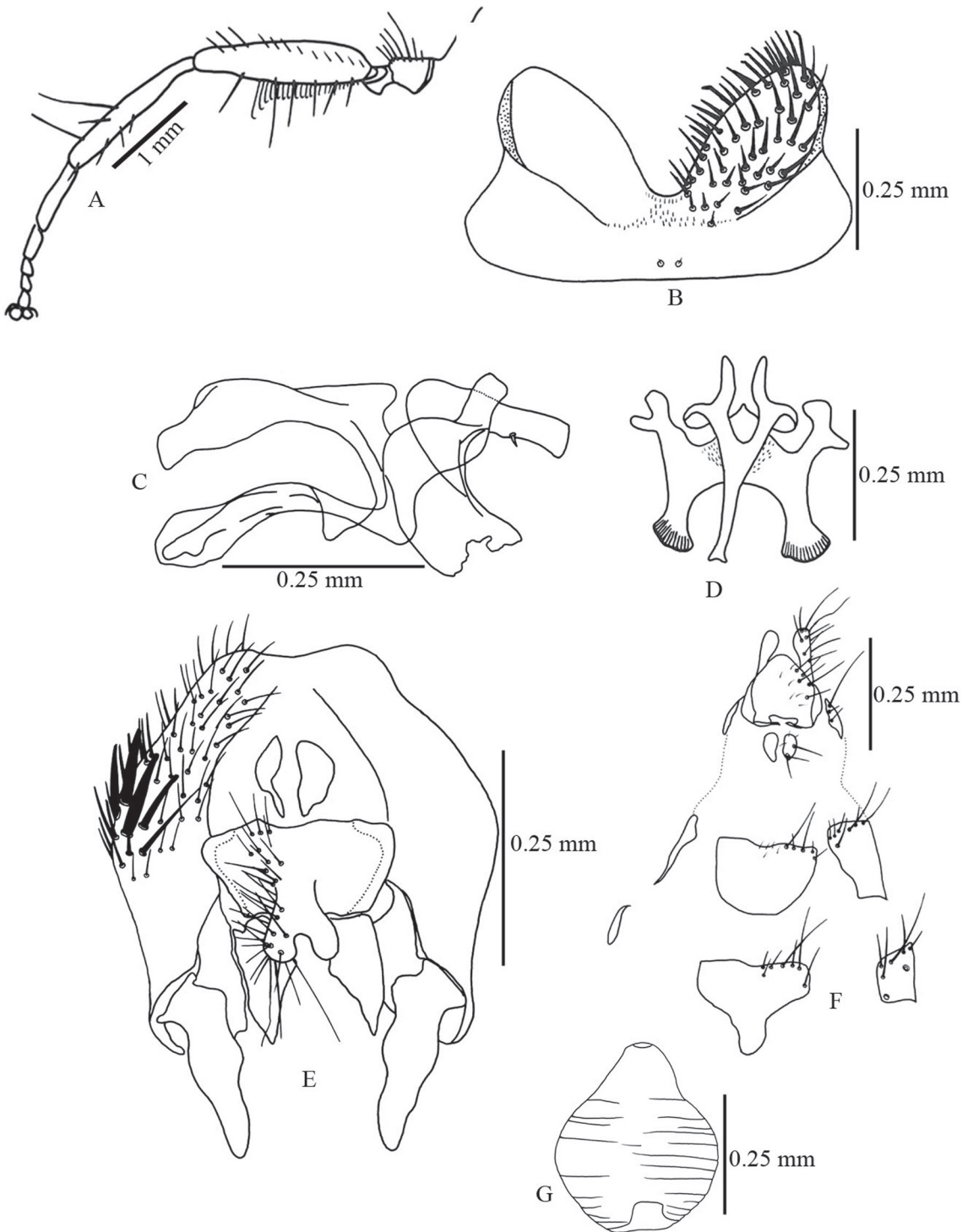


FIGURE. 6: *Fannia coxata* Shannon & Del Ponte. A. Male hind leg, anterior. B. Male sternite 5, ventral. C. Male hypandrium, ventral. D. Male hypandrium, lateral. E. Male terminalia external structures, ventral. F. Female terminalia external structures, ventral. G. Spermatheca.

2 completely yellowish white; tarsomeres 3 and 4 as long as wide and partially yellowish-white. F2 constricted at apex. T2 very curved, constricted at base and with a very conspicuous subbasal protuberance. Mid tarsomere 1 with a basal ventral crest followed by short seta. C3 bare at apex of posterior surface. F3 normal with a very conspicuous preapical protuberance on ventral and posteroventral surfaces; with a subapical tuft of curled hair-like *pv*, 1.5x width of hind femur. T3, lacking medial row of *ad*. Wing clear. Halter dark brown. Abdomen heart-shaped, entirely black blue.

Type material examined: Holotype ♂, Rio Negro, Lake Gutierrez, 3/14-XI-1926, cols F. W. Y. M. Edwards. Paratypes 4 ♀ (same data as holotype) (BMNH).

Description

Male: body length 6.3 mm

Head: Frontal vitta brown, at narrowest point 0.33x width of anterior ocellus. Fronto-orbital plate silvery pruinose, at uppermost *fr* 0.5x width of anterior ocellus. Seventeen long *fr*; 1.6x length of flagellum. Eye slightly setulose, antero-internal facets larger than remaining; *pocl* irregular in length. Face and parafacial silvery grey; parafacial at base of flagellum 0.5x width of same and bare. Facial carina brown; gena grey. Scape and pedicel brown; flagellum 1.75x as long as broad, heavily silvery grey pruinose. Arista dark brown and short pubescent. Palpus dark brown, straight, the apex approximately as wide as the base. Lower oral margin straight, slightly grooved.

Thorax: Thorax black, slightly bluish; 4+4 *acr* and 1 strong prescutellar *acrs*; 2+3 *dc*; *pprn* covered by numerous hair-like setae; 1 *pra* near the *spal*, 0.33x length of same and a second *pra* near the transverse suture, slightly longer than first; prealar area bare; 2 *prepm* surrounded by numerous setulae.

Legs: Completely dark brown, but fore tarsi yellow at apex. F1 normal (length/width = 5.3); with 1 row of *pd* as long as femoral width; 3 to 4 rows of hair-like *p*; 1 row of basally very short *pv* and 5 to 6 longer than femoral width *pv* at apex. T1 with 1 long subapical *pd*; 1 apical *v*; 1 apical *pv*; with a submedial and an apical *ad*, lacking medial row. Fore tarsomere 1 flattened and expanded, partially yellowish-white; tarsomere 2 completely yellowish white; tarsomeres 3 and 4 as long as wide and partially yellowish-white. F2 con-

stricted at apex, with 1 row of *ad*; 1 row of hair-like *av* at base, shorter and stouter at apex; 1 row of curled *pv*, and a second shorter and stouter row in apical third; 1 row of thin *p* at base, stouter and ventrally directed towards apex. T2 very curved, constricted at base and with a very conspicuous subbasal protuberance; ventral surface with long pubescence 0.96x width of mid tibia; 1 submedian and 3 apical *a*; two subapical *ad*; 1 very strong and curved apical *av-v*; 2 submedian and 1 apical *pd*; 1 apical *pv*. Mid tarsomere 1 with a basal ventral crest followed by short seta. C3 bare at apex of posterior surface. F3 normal (length/width = 6.6); with a very conspicuous preapical protuberance on ventral and posteroventral surfaces; 1 row of *ad*, longer and dorsally directed towards apex; 1 row of short *av* and two long *av* at the same level as the preapical ventral protuberance; 1 subapical tuft of curled hair-like *pv*, 1.5x width of F3. T3 with 1 submedial and 1 subapical *d*, about the same length; 1 submedial and 1 apical *ad*, lacking medial row; 2 medial 1 apical *av*; ventral and posteroventral surface with a weak ctenidium at apex.

Wing: Clear, slightly brownish at base; lower calypter slightly oval, upper calypter rounded, both creamy white with brown outer margin. Halter entirely dark brown.

Abdomen: Heart-shaped, tergite 2 more than 2x width of tergite 4; entirely black blue. Hypopygium not protruding.

Postabdomen: The dissection of the holotype was not possible.

Female: body length 4.5-5.5 mm. Differs from male as follows:

Head: Ocellar triangle long, extending up to lower *orb*. Frons and vitta broad, the distance between eye margins wider than 0.33 of head width. Four to 5 strong *fr*; slightly longer than flagellum, with 6 to 7 long setulae in between, 0.5x length of setae. Upper and lower *orb* present, with 2 to 3 irregular rows of fronto-orbital setulae.

Legs: F1 with 1 row as long as femoral width and 1 or 2 shorter rows of *p*. T1 with a conspicuous ctenidium at apex. Fore tarsi normal in shape, dark brown to black. F2 with a row of very short setulose *av*; lacking row of *pv*. T2 cone-shaped, base narrower than apex; lacking ventral pubescence; 1 apical *pv*; 1 long apical *p*. F3 lacking preapical protuberance on ventral-pos-

teroventral surfaces; lacking subapical tuft of hair-like *pv*.

Abdomen: Heart-shaped, tergite 2 more than 2x width of tergite 4, this shape much more pronounced than in male; uniformly dark grey throughout.

Postabdomen: The dissection of the holotype was not done, because it is the only male specimen of the species.

Distribution: ANDEAN: Argentina.

***Fannia coxata* Shannon & Del Ponte, 1926**

Figs. 1A, 6A-G

Fannia coxata Shannon & Del Ponte, 1926:574; Malloch, 1934:207; Séguy, 1937:167; Pont, 1972:4; Carvalho *et al.*, 1993:9; Carvalho *et al.*, 2003:10.

Diagnosis: Small to medium size, grey and yellow species. Frontal vitta at narrowest point 1.5x width of anterior ocellus. Parafacial bare. Antenna and palpus yellow-orange. Thorax grey covered with heavy light-brown pruinescence, dark brown vittae visible in full length of *acr*, broader in *dc* and postsutural *ia* lines. One *pra* near *spal*, 2x length of ground setulae. T2 cone-shaped, lacking subbasal protuberance. C3 with 4 to 5 long and stout *p* at apex of posterior surface. F3 globose with a preapical protuberance on posterior surface, imperceptible in anterior view. T3 with very long submedial and subapical *d*; and lacking medial row of *ad*. Wing clear. Halter white. Last segments of abdomen curved; most tergites laterally yellow-orange. Hypopygium projecting.

Type material examined: Holotype ♂, Argentina: San Pedro de Jujuy, 27-IV-1926, cols. Shannon & Shannon. (USNM).

Other material examined: Argentina: Neuquen 1 ♂ Lake Lacar, Hua Hum, 11/16-X-1946, col. Howard (FIML). La Rioja 67 ♀, 2 ♂, Quebrada de Olta, 14-X-2000, cols. Domínguez & Roig (IADIZA). 13 ♂, 3 Km East of Solca, 15-X-2000, cols. Domínguez & Roig (IADIZA).

Description

Male: body length 4.4-4.9 mm

Head: Frontal vitta covered with dark grey to black pruinescence, at narrowest point 1.5x width of anterior ocellus. Face, facialia and fronto-orbital plate covered with heavy silvery pruinescence. Fronto-orbital plate at uppermost *fr* 2x width of anterior ocellus. Parafacial at base of flagellum as wide as same and bare. Ten *fr* slightly longer than flagellum, with 3 to 4 short setulae in between. Eye slightly setulose; *poel* regular in length, slightly shorter than outer vertical setae, gradually shorter further away from the vertex. Facial carina dark grey to orange in some specimens. Gena grey. Scape light brownish orange, pedicel and base of flagellum yellow-orange; flagellum 2.6-2.8x as long as broad and covered with heavy grey pruinescence in apical 0.75. Arista yellow in basal third, remaining dark brown, pubescence shorter than arista width at base. Palpus clavate, apex 2.5 to 3x width of base, yellow-orange. Lower oral margin straight and grooveless.

Thorax: Scutum grey, covered with heavy light-brown pruinosity, dark brown vittae visible in full length of *acr*, broader in *dc* and postsutural *ia* lines, the latter continuing in basal 0.75 of scutellum. Apex of scutellum yellow. Pleura grey; 2+3-4 *acr* and 1 prescutellar *acrs*; 2+3 *dc*; *pprn* covered with setulae; 1 *pra* near *spal*, 2x length of ground setulae; prealar area covered with setulae; 2 *prepm* surrounded by 2 setulae.

Legs: Dark brown, but coxae, trochanters and tibiae yellow. C3 with 4 to 5 long and stout *p* at apex of posterior surface (Fig. 1A). F1 globose (length/width = 4.6); with 2 rows of *pd*; 3 rows of *p*; 2 rows of *pv*, basally short and 4 to 5 longer apical *pv*, as long as femoral width. Fore tarsomere 1 0.3x length of T1; tarsomeres 3-5, very short, about as wide as long. F2 with 1 row of *ad*; 3 rows of very short *a*; 1 row of *av*, shorter towards apex; 1 long basal *pv*, longer than femoral width, and basally 2 rows of hair-like and 3 to 4 rows of *pv* at apex; 1 row of *p* stouter and ventrally directed at apex. T2 straight, constricted at base, lacking subbasal protuberance; ventral pubescence very short, 0.2x width of T2; with 1 submedial and 3 apical *a*; 1 subapical *ad*; 1 apical *av*; 1 apical and 1 submedial *pd*; 1 apical *pv* and *p*. C3 with 4 to 5 long and stout *p* at apex of posterior surface (Fig. 1A). F3 globose, (length/width = 4.6); with a preapical protuberance on posterior surface, imperceptible in anterior view; 1 row of *ad* dorsally directed towards apex; 1 row of *av* as long as femoral width, interrupted preapically, and with 1 apical *av* separated from the basal row; 1 row of short and setulose *pv*, and a subapical tuft of curled hair-like *pv*, as long as femoral width (Fig. 6A).

T3: with 1 very long submedial and 1 subapical *d*; 1 submedial and 1 apical *ad*, lacking medial row of *ad*; 5 medial *av*; apex of ventral surface with a weak ctenidium.

Wing: Clear. Lower calypter oval-shaped, upper calypter rounded, both white. Knob of halter white, light brown at base.

Abdomen: Laterally viewed, last segments curved. Elongated, width of segments approximately uniform (Fig. 1A). Tergite 1 dark brown, yellow at apex; tergite 2 dark brown at apex, remaining yellow-orange; tergite 3 with a central and a apical dark brown stripe, laterally yellow-orange; the remaining tergites dark-brown-grey. Hypopygium projecting.

Postabdomen: Sternite 5 broader than long, butterfly-shaped, completely covered with setae on posterior margin (Fig. 6B). Hypandrial arms very short, base of hypandrium strongly indented, basal lateral margins grooved; postgonites inconspicuous; aedeagus sclerotized in basal portion (Fig. 6C-D). Composite segment lobulated in central area; epandrium bilobed and medially broadened; cercal plate fused, broader than long, with two lobes in posterior region; bacilliform process tooth-shaped; surstyli simple, long, broad and lateral respect to epandrium (Fig. 6E).

Female: body length: 4-4.5 mm. Differs from male as follows:

Head: Frontal vitta shiny grey, anterior margin (towards lunula) reddish, viewed from above matt black. Ocellar triangle extending up to lowermost *fr*. Frons and vitta broad, the distance between eye margins exceeds 0.3x head width. Eye bare. Four to 5 strong *fr* slightly shorter than third flagellomere, with setulae half as long as *fr* in between. Upper and lower *orb* present, with 1 row of fronto-orbital setulae; *pocl* less than 0.3x length of outer and inner verticals, longer than in male.

Legs: F2 with 1 very short row of setulose *av*; row of *pv* absent. T2 cone-shaped, the base narrower than apex; ventral pubescence absent; with 1 apical and 2 submedial *v-av*. C3 bare at apex of posterior margin. F3: preapical posteroventral protuberance absent; with a row of short *av*, 1 longer medial and 1 longer subapical *av*; posterior and posteroventral surfaces bare. T3: with 1 submedial *ad*, lacking apical *ad*; 3 medial and 1 short apical *av*; ventral and posteroventral apical ctenidium inconspicuous.

Abdomen: Heart-shaped, tergite 2 more than 2x width of tergite 4. Yellow, with brown markings at apex of tergite 1, and at apex and central line of tergites 2, 3 and 4; tergite 5 grey with apical and central brown markings.

Postabdomen: Cerci normal, short; anal plate longer than broad; sternite 8 reduced to two anterior plates bearing three setulae and short spinules; sternite 6 reduced to a central and posterior line ("T" shaped); post abdominal spiracles situated on ventral margins of tergite 6 (Fig. 6F). Two pear-shaped very globose spermathecae, with partially sclerotized ducts (Fig. 6G).

Distribution: ANDEAN: province of Neuquén, Argentina; NEOTROPICAL: provinces of La Rioja and Jujuy, Argentina.

Fannia femoralis (Stein, 1898)

Figs. 7A-C

Homalomyia femoralis Stein, 1898:282.

Fannia femoralis; Stein, 1911:108; 1919:131; Curran, 1928:89; Engel, 1931:136; Curran, 1934:467; Wollcott, 1936:369; Séguy, 1937:167; Beatty, 1944:151; Wollcott, 1948:496; Seago, 1954:6; Chillcott, 1961:214; Pont, 1972:4; Albuquerque *et al.*, 1981:10; Alayo & García, 1983:110; Couri & Pamplona, 1991:119; Carvalho *et al.*, 1993:9; Carvalho *et al.*, 2002:108; Carvalho *et al.*, 2003:11.

Diagnosis: Frontal vitta at narrowest point 0.6x width of anterior ocellus. Eye bare. Parafacial setulose. Antenna dark grey. Palpus dark brown. Thorax dark brown to black. Two short and strong *pra*, one near the transverse suture and another near *spal*. T2 thin, constricted at base, lacking subbasal protuberance. C3 with 2 *p* at apex of posterior margin. F3 normal with a weak preapical protuberance on posteroventral surface with subapical tuft of long-hair-like *pv*, twice femoral width. T3 with 4 to 5 submedial *ad*. Wing clear. Halter yellowish-white. Abdomen elongated dark grey to black; tergites 2, 3 and 4 trimaculated.

Type material examined: *Homalomyia femoralis* – 2 *Sintypes* ♂, Opelousas, Louisiana, V-97 (FMNH).

Other material examined: USA: Georgia 1 ♂, Mt Kennesaw, Cobb. CO., 8-V-1952 (USNM). Arizona 1 ♂, Phoenix, XII-1952 (USNM). Argentina. Men-

doza. 1 ♂, 5 ♀ Valles fértiles, XI-2001 (IADIZA). 1 ♂, Luján, Pedriel, 28-XII-1996, col. G. Debandi (IADIZA). 1 ♂, 23 ♀ Ciudad. 14/20-V-1997, col. S. Roig (IADIZA).

Description

Male: body length: 4-4.2 mm.

Head: Frontal vitta black, at narrowest point 0.6x width of anterior ocellus. Fronto-orbital plate heavily silvery-grey pruinose, at uppermost *fr* 0.8x width of anterior ocellus. Eleven to 12 short *fi*; 0.7x length of flagellum. Eye bare, *poel* of irregular length. Face and parafacial silvery grey; parafacial at base of flagellum 0.2x width of same and setulose. Facial carina grey; gena dark grey. Scape and pedicel dark grey; flagellum short and thin, 2 to 2.2x as long as broad and covered with heavy silvery-grey pruinescence. Arista completely dark brown and short pubescent. Palpus dark brown, the apex about as broad as base. Lower oral margin convex and groove less.

Thorax: Scutum and scutellum dark brown to black; pleura grey; 3+3 *acr* and 2 prescutellar *acrs*; *pprn* covered with short setulae; 2 short and strong *pra*, one

near the transverse suture and other near *spal*; lacking setulae in the prealar area; 2 *prepm* lacking surrounding setulae.

Legs: Brown throughout. F1 normal (length/width = 5.3), with 1 row of *pd*; 2 rows of *a*; 1 row of hair-like *pv* at base, stouter towards apex. T1 with 1 subapical *pd*; 1 apical *v* and 1 apical *pv*; lacking row of *ad* as well as submedial and apical *ad*. Fore tarsomere 1 slightly shorter than 0.3x length of fore tibia; tarsomere 4 as long as broad. F2 with 1 row of *ad*; 2 to 3 rows of short *a*; 1 row of strong *av* setae; 1 row of thin *pv* at base, and 2 to 3 rows of shorter stouter and distally hooked *pv* at apex; 1 row of hair-like *p*, stouter and ventrally directed towards apex. T2 thin, constricted at base, lacking subbasal protuberance; ventral pubescence long, slightly shorter than tibial width; with 1 subapical *ad*; 3 apical *a* lacking submedial *a*; 1 strong apical *av* setae; 1 submedial and 1 apical *pd*, both long; 1 apical *pv* and *p*. C3 with 2 *p* at apex of posterior margin. F3 normal (length/width = 5.4) with a weak preapical protuberance on posteroventral surface; with 1 row of *ad* longer and dorsally directed towards apex; 1 complete row of *av* as long as femoral width and 4 to 5 longer *av* in apical fourth; posteroventral surface bare, except for a subapical tuft of long hair-like *pv*, twice femoral width. T3 with 1 submedial and 1 subapical *d*; 4 to 5 submedial *ad*, lacking apical *ad*; 1 submedial and 1 apical *av*; posteroventral and ventral surfaces with a weak ctenidium at apex.

Wing: Clear. Both calypteres rounded, yellowish-white. Knob of halter yellowish-white, base light brown.

Abdomen: Elongated, the width of tergites approximately uniform. Dark grey to black; tergites 2, 3 and 4 trimaculated. Hypopygium not protruding.

Postabdomen: Posterior margin of sternite 5 straight, with setae situated on central longitudinal line and short and fine setae on posterior margin (Fig. 7A). Hypandrial arms directed inwards, directly connected to surstyli; postgonites reduced to small protuberances at both sides of aedeagus; epiphallus present, projecting dorsad, beyond cercal plate; aedeagus membranous (Fig. 7B). Epandrium narrow at anterior margin; cercal plate weakly fused; bacilliform process absent; surstyli marginal, formed by a central and a lateral process, broadly connected to epandrium (Fig. 7C).

Female: body length 4.8-5.2 mm. Differs from male as follows:

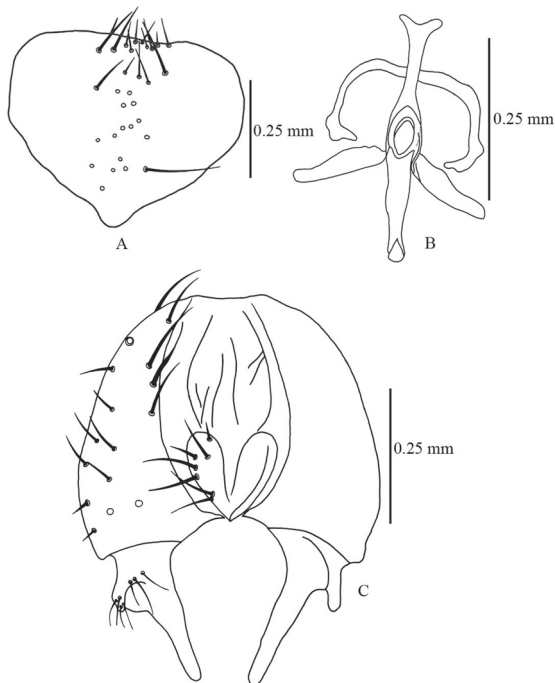


FIGURE 7: *Fannia femoralis* (Stein). A. Male sternite 5, ventral. B. Male hypandrium, ventral. C. Male terminalia external structures, ventral.

Head: Frontal vitta heavy grey-brown pruinose. Ocellar triangle long, extending up to third *fr*; Frons covered with silvery pruinescence throughout. Frons and vitta broad, the distance between eye margins is 0.33x of head width. Three to 4 short *fr*; 0.7x length of flagellum, and 4 to 5 shorter setulae. Upper and lower fronto-orbital setae present, with a single row of fronto-orbital setulae; *pocl* of regular length and short, less than 0.5x length of inner and outer vertical setae; the latter longer than in male.

Legs: F2 with 5 to 6 rows of short and thin *a*; 1 row of very short and fine *av* setae; 1 short row of *pv*. F3 lacking preapical protuberance on ventral and posteroventral surfaces; with 1 row of short *av* and 1 to 2 subapical *av*, longer than femoral width. T3 with 1 submedial and 1 apical *ad* setae; 2 medial and 1 short apical *av*.

Postabdomen: Cerci normal, short; anal plate broader than long and covered with setulae; sternite 8 reduced to an anterior pair of plates bearing 2 to 3 setae; postabdominal spiracles on tergite 6. Two oval and ridged spermathecae, with partially sclerotized ducts.

Distribution: NEARCTIC: USA, México; NEOTROPICAL: Cuba, Virgin Is., Puerto Rico, Haiti, Dominican Republic, Guyana, Peru, Bolivia, Argentina and Brazil.

Fannia flavicornis Stein, 1911

Fannia flavicornis Stein, 1911:102; 1919:131; Engel, 1931:136; Séguy, 1937:167; Pont, 1972:4; Pont, 2001:460; Carvalho *et al.*, 1993:10; 2003:11.

Fannia euchaetophora Carvalho, 1991:35; Carvalho & Couri, 1991:38; Carvalho *et al.*, 1993:11; 2003:11. Syn. Nov.

Diagnosis: Small yellow species. Frontal vitta at narrowest point 1.5x width of anterior ocellus. Eye bare. Parafacial covered with short setae throughout. Antenna and palpus yellow. Scutum and pleura light grey, apex of scutellum yellow. One *pra* near and dorsal *spal*, 0.33x length of same. T2 straight, constricted at base, gradually broadened towards apex. C3 bare at apex of posterior margin. F3 normal to globose; lacking preapical posteroventral protuberance. T3, lacking medial row of *ad*. Wing clear. Halter yellow. Abdomen slightly elongated, light grey with dark brown markings on posterior margin and central longitudinal line of tergites 2, 3 and 4; yellow at base of

tergite 1 and lateral margins of tergites 2 to 4. Sternite 1 densely covered with long setae.

Type material examined: *Fannia flavicornis*. Lectotype ♂. Peru: Urubamba, Ft. Umahuankilia, 19-IX-1903, col. W. Schnuse (SMTD). Paralectotype ♀ *Fannia flavicornis*. Bolivia: Mapiiri, S. Ernesto 800 mts, 21-II-1903, col. W. Schnuse (SMTD).

Fannia euchaetophora. Paratype ♂. Brazil: Roraima, Rio Uraricoera, Ilha de Maracá, 02/13-V-1987, col. J. A. Rafael, J. E. B. Brazil, L. S. Aquino (DZUP).

Description

Male: body length 4.5 mm.

Head: Frontal vitta light brown, at narrowest point 1.5x width of anterior ocellus. Fronto orbital plate silvery pruinose; at uppermost *fr* as wide as anterior ocellus. Five to six *fr*; as long a flagellum. Eye bare; *pocl* of irregular length. Face and parafacial silvery grey, parafacial at base of flagellum 0.7x width of same and covered with short setae throughout. Facial carina light brown. Gena grey. Scape and pedicel yellow, flagellum 2.3x as long as broad and covered with heavy silvery-grey pruinescence. Arista short pubescent, yellow at base, remaining light brown. Palpus clavate and yellow, the apex 2.5 to 3x width of base. Lower oral margin convex and grooveless.

Thorax: Scutum and pleura light grey, apex of scutellum yellow; 3+3 *acr*, 1 *acrs*; *pprn* with few short setulae; 1 *pra* near and dorsal *spal*, 0.33x length of same; prealar area with few setulae; 2 *prepm* surrounded by 2 setulae.

Legs: Light brown, tarsi black. F1 normal to globose (length/width = 4.6); 1 row of *pd* setae as long as femoral width; 2 rows of *p*, superior row as long as femoral width and inferior shorter; 1 row of *pv* short at base, as long as femoral width at apex. T1 with 1 subapical *pd*; 1 apical *v*; 1 apical *pv*. Fore tarsomere 1 0.3x length of tibia; tarsomeres 4 and 5 short, as wide as long. F2 with 1 row of *ad* as long as femoral width; 1 row of long and straight *av* at base, short and stout at apex; 1 row of hooked *pv*, and a second row at apex; 1 row of *p* setae thin at base, stouter and ventrally directed at apex. T2 straight, constricted at base, gradually broadened towards apex; ventral pubescence very long, 1.2x tibial width; 1 submedial and 3 apical *a*; 3 subapical *ad*; 1 strong *av-v*; 2 sub-

medial and 1 apical *pd*; 1 very long apical *p* and *pv*. C3 bare at apex of posterior margin. F3 normal to globose (length/width = 5); lacking preapical posteroventral protuberance; with 1 row of *ad*, longer and dorsally directed towards apex; 1 row of very short *av* and 1 or 2 preapical *av* as long as femoral width; posteroventral surface bare. T3 with very long subapical and submedial *d*; 1 submedial and 1 apical *ad*, lacking medial row of *ad*; 4 medial *av*; 1 apical *av*; ventral and posteroventral surfaces and with a weak apical ctenidium.

Wing: Clear. Uppermost calypter oval, lower calypter rounded, both white. Halter yellow.

Abdomen: Slightly elongated, tergite 2 more than 2x width of tergite 4. Light grey with dark brown markings on posterior margin and central longitudinal line of tergites 2, 3 and 4; yellow at base of tergite 1 and lateral margins of tergites 2 to 4. Sternite 1 densely covered with long setae.

Postabdomen: Posterior margin of sternite 5 strongly indented, and scarcely covered with setae. Cercal plate fused, with very long setae on anterior region; surstyli simple, marginal (respect to epandrium) as long as epandrium.

Female: body length 3.6-4.2 mm. Differs from male as follows:

Head: Ocellar triangle very long, extending up to lower *orb*. Frons and vitta broad, the distance between eye margins wider than 0.33x of head width. Six to seven strong *fr*; slightly longer than flagellum. Upper and lower *orb* present.

Postabdomen: Cerci normal, short; anal plate as broad as long and uniformly covered with setae; sternite 8 formed by a single rounded plate, bearing 4 setulae on posterior margin; postabdominal spiracles on tergites 6 and 7. Two elongated spermathecae, with partially sclerotized ducts.

Distribution: NEOTROPICAL: Peru, Bolivia, Argentina and northern Brazil.

Remarks: The male paratype of *F. euchaetophora* matches the original description of the external morphology of *F. flavicornis*, and there are no differences in genitalic structures, which had not been described by Stein (1911). Based on this evidence, I consider *F. euchaetophora* a synonym of *F. flavicornis*.

Fannia flavipalpis Stein, 1911

Fannia flavipalpis Stein, 1911:103; 1919:131; Séguy, 1937:167; Ortiz, 1946:157; Albuquerque, 1957:21; Hockett, 1965:894; Pont, 1972:4; Pont, 2001:460; Albuquerque *et al.*, 1981:10; Carvalho *et al.*, 1993:10; 2003:11-12.

Diagnosis: Small grey and yellow species. Frontal vitta at narrowest point 0.8x width of anterior ocellus. Eye bare. Parafacial bare. Antenna light brown to yellow. Palpus yellow. Thorax light grey, light brown vittae visible in full length of *acr*, *dc* and *ia*. Two *pra*, one very thin and short near the *spal* and the other stouter and longer, near the transverse suture. T2 constricted in medial half. C3 with two setulae at apex of posterior margin. F3 normal to globose lacking posteroventral protuberance; posteroventral surface bare. T3 lacking medial row of *ad*. Wing clear. Halter yellow. Abdomen heart-shaped, light grey, and trimaculated.

Type material examined: Lectotype ♂, Chile, 15-X-1902, col. Schnuse (SMTD). Paralecotype ♀, Chile, Palca, 15-X-1902, col. W. Schnuse (SMTD).

Description

Male: body length 3.9 mm.

Head: Frontal vitta light grey, at narrowest point 0.8x width of anterior ocellus. fronto-orbital plate heavy silvery pruinose, at uppermost *fr* as wide as anterior ocellus. Ten very long *fr*; 1.6x length of flagellum. Eye bare, antero-internal facets much larger than remaining; *pocl* of irregular length. Face and parafacial silvery grey; parafacial at base of flagellum 0.7x width of same and bare. Facial carina light brown. Gena grey. Scape and pedicel light brown to yellow, flagellum 1.8x as long as broad and heavy silvery grey pruinose. Arista light brown, short pubescent. Palpus yellow and slightly clavate, apex 1.5x width of the base. Lower oral margin slightly concave and groove less.

Thorax: Scutum light grey, light brown vittae visible in full length of *acr*, *dc* and *ia*; pleura grey; 3+3 *acr*, 1 prescutellar *acrs*; 2+3 *dc*; *pprn* with few short setulae; 2 *pra*, one very thin and short near the *spal* and the other stouter and longer, near the transverse suture; prealar area bare; 2 *prepm* lacking surrounding setulae.

Legs: Light brown, tibiae yellow and tarsi black. F1 normal to thin (length/width = 6.1); with 1 row of *pd*

as long as femoral width; 2 rows of long hair-like *p*; 1 row of *pv*, short at base and slightly longer than femoral width at apex. T1 with 1 subapical *pd*; 1 apical *v* and 1 apical *pv*. Fore tarsomere 1 0.3x length of fore tibia; tarsomere 4 as broad as long. F2 with 1 row of *ad*; 1 row of *a*; 1 row of *av* hair-like at base, stouter and shorter at apex; 1 row of hooked *pv*, doubled at apex; 1 row of *p* thin at base, stouter and ventrally directed at apex. T2 constricted in medial half, lacking preapical protuberance; ventral pubescence median, 0.6x width of tibia; 1 submedial and 3 apical *a*; 1 subapical *ad*; 1 strong apical *av* setae; 1 submedial and 1 reduced apical *pd*; 1 apical, short and stout *p*. C3 with two setulae at apex of posterior margin. F3 normal to globose (length/width = 5.4), lacking posteroventral protuberance; with 1 row of *ad* longer and dorsally directed towards apex; 1 row of very short *av* and 2 long preapical *av*; posteroventral surface bare. T3 with 1 long submedial and 1 subapical *d*, 0.5x length of submedial; 1 submedial and 1 apical *ad*, lacking medial row; 2 medial and 1 apical *av* setae; ventral and posteroventral surface with a weak apical ctenidium.

Wing: Clear. Lower calypter oval, upper rounded, both white. Halter yellow.

Abdomen: Heart-shaped, tergite 2 over 2x width of tergite 4. Light grey, trimaculated with lighter brown central and lateral markings in tergites 2, 3 and 4. Hypopygium not protruding.

Postabdomen: Posterior margin of sternite 5 indented and covered with setae. Cercal plate fused; baciliform process twisted at base and forked at apex; surstyli short, simple and median (respect to epandrium) and strongly curved.

Female: body length 3.6 mm. Differs from male as follows:

Head: Ocellar triangle long, extending up to lower *orb*. Frons and vitta broad, the distance between eye margins wider than 0.33x head width. Seven to eight *fr* with few shorter setulae in between. Upper and lower *orb* present, with 1 irregular row of fronto-orbital setulae.

Legs: F2 with 1 row of very short and thin *av* and *pv*. T2 straight, cone-shaped, the base narrower than apex; pubescence on ventral surface absent.

Abdomen: Heart-shaped, tergite 2 over 2x width of tergite 4, this shape more pronounced than in male.

Grey, trimaculated with brown markings on tergites 2 to 4.

Postabdomen: Cerci normal, short. Anal plate broader than long and covered with setae throughout; sternite 8 reduced to an anterior plate bearing three to four setae; post abdominal spiracles 7 and 8 on tergite 6. Two pear-shaped spermathecae, with partially sclerotized ducts.

Distribution: NEOTROPICAL: Northern Chile and Brazil.

Fannia fusconotata (Rondani, 1868)

Figs. 1D, 8A-G

Myiantha fusconotata Rondani, 1868:27.

Fannia fusconotata; Stein, 1919:131, 167; Mazza & Joerg, 1939:43; Mazza & Oribe, 1939:66; James, 1947:130; Pont, 1972:4; Carvalho *et al.*, 1993:10; 2003:12.

Diagnosis: Small yellow and grey species. Frontal vitta at narrowest point reduced to a thin line. Eye bare. Parafacial bare. Antenna light brown and orange-yellow. Palpus orange-yellow. Thorax grey-brown, thin brown vittae visible in full length of *acr* and at base of *dc* lines. Two strong *pra* near *spal*. T2 constricted in basal half, lacking preapical protuberance. F3 normal with a preapical posteroventral protuberance only evident in posterior view; with 1 row of very short setulose *pv* and a subapical tuft of short hair-like *pv*. T3 lacking medial row of *ad*. Wing clear. Halter yellowish-white. Abdomen heart-shaped, grey-brown in ground colour, heavily yellow pruinose on laterals of tergites 2-4.

Type material examined: Holotype ♀: Argentina, Mendoza. Rondani (MZLS).

Other material examined: Argentina. Mendoza. 44 ♂, 31 ♀, Ñacuñan, I/III-1997, col Guillermo Debandi (IADIZA). 2 ♂, Lavalley, Telteca, XII-1997/II-1998, col. Sergio Roig. (IADIZA). 17 ♀, Uspallata, Arroyo San Alberto, 29-XII-2000, col. Domínguez (IADIZA). 2 ♂, 21 ♀, Uspallata, desembocadura Arroyo Uspallata, XII-2000/II-2001, col. Domínguez (IADIZA). 27 ♂, 10 ♀, Lavalley, Costa de Araujo, XI-2001, col. Domínguez (IADIZA). 4 ♀, Potrerillos, Quebrada de los Gateados, XII-2001, col. Domínguez (IADIZA). 4 ♀, Uspallata, Quebrada del Río Seco, XII-2001, col. Domínguez (IADIZA). 15 ♀, Mendoza, Río Mendoza

Km 1137, XII-2001, col. Domínguez (IADIZA). 8 ♀, Mendoza, Ciudad. CRICYT, X-2001, col. Domínguez (IADIZA).

Description

Male: body length 3.2-3.5 mm

Head (Fig. 1F): Frontal vitta black, at narrowest point reduced to a thin line. Fronto-orbital plate heavily silvery grey pruinose, at uppermost pair of *fr* 1.5x width of anterior ocellus. Six to seven *fr*; slightly shorter than flagellum. Eye bare, antero-internal facets 2x diameter of remaining; *poel* of uniform length. Face and parafacial silvery grey; parafacial at base of flagellum 0.5x width of same and bare. Facial carina dark grey. Gena grey. Scape light brown, pedicel and base of flagellum orange-yellow; flagellum short and broad 1.2 to 1.7x as long as broad, heavily silvery grey pruinose. Arista light brown at base, black at apex and short pubescent. Palpus orange-yellow, slightly spatulated, the apex 2x width of base. Lower oral margin, slightly concave and grooveless.

Thorax: Scutum grey-brown, thin brown vittae visible in full length of *acr* and at base of *dc* lines, also visible at base of scutellum; pleura grey; 3+3 *acr*; 1 prescutellar *acrs*; 2+3 *dc*; *pprn* with few setulae; 2 strong *pra* near *spal*; prealar area bare; 2 *prepm*, lacking surrounding setulae.

Legs: Coxae brown, trochanters yellow, femora brown; tibiae yellow at apex and base, remaining brown, tarsi dark-brown to black. F1 normal (length/width = 4.7); 1 row of *pd* as long as femoral width; 1 row of *p* as long as femoral width; 1 row of *pv* short in apical fourth but 8 to 9 longer *pv* at apex. T1 with 1 subapical *pd*; 1 apical *v* and *pv*; 1 submedial and 1 apical *ad*. Fore tarsomere 1 0.3x length of fore tibia, tarsomeres 4 and 5 as wide as long. F2 with 1 row of *ad*; 2 rows of *a*, one in full length and other in medial 1/3; with 1 row of *av* sparse at base, denser and shorter at apex; 2 rows of *pv*, upper row as long as femoral width and lower short at base, longer at apex; 1 row of *p* longer and ventrally directed at apex. T2 constricted in basal half, lacking preapical protuberance. Ventral pubescence sparse, as long as femoral width; 1 submedial and 4 apical *a*; 1 subapical *ad*; 1 strong apical *av-v*; 1 submedial and 1 apical *pd*; 1 apical *pv* and *p*. C3 bare at apex of posterior margin. F3 normal (length/width = 5.4), with a preapical posteroventral protuberance only evident in posterior view; 1 row of *ad* longer and ven-

trally directed towards apex; 1 row of very short *av*, and 2 preapical *av* longer than femoral width; with a row of very short setulose *pv* and a subapical tuft of short hair-like *pv*, slightly longer than femoral width (Fig. 11A, B). T3 with 1 submedial and 1 subapical *d*; 1 submedial and 1 apical *ad*, lacking medial row; 2 to 3 medial and 1 apical short *av*; apex of ventral and posteroventral surface with a weak ctenidium.

Wing: Clear. Lower calypter oval, upper rounded, both white. Knob of halter yellowish-white, light brown at base.

Abdomen: Heart-shaped, tergite 2 over 2x width of tergite 4. Grey-brown in ground colour, heavily yellow pruinose on laterals of tergites 2-4. Hypopygium not protruding.

Postabdomen: Posterior margin of sternite 5 profoundly indented and covered with setae (Fig. 11C). Hypan-drial arms directed outwards and expanded at apex; postgonites inconspicuous; aedeagus membranous (Fig. 11D). Epandrium slightly broadened at posterior margin; cercal plate fused, slightly bilobed at base; bacilliform process cork-screw shaped; surstily long and simple, marginal respect to epandrium (Fig. 11E, F).

Female: body length 3.0-3.4 mm. Differs from male as follows:

Head: Frontal vitta brown. Ocellar triangle extending up to lowest *fr*. Frons and vitta broad, distance between eye margins wider than 0.33x width of head. Four to five strong *fr*; shorter than flagellum, with shorter interstitial setulae. Upper and lower *orb* present, with a single row of fronto-orbital setulae; *poel* less than 0.5x length of outer and inner verticals; the latter longer than in male.

Thorax: With two rows of presutural *acr*, and a third row before transverse suture.

Legs: F2 with 1 row of very short *ad*; posteroventral row absent. T2 straight, cone-shaped, the base narrower than apex; ventral pubescence absent; with 1 very long apical and 1 submedial *av-v*; 1 apical *p*; 1 apical and 1 subapical *pv*. C3 bare at apex of posterior margin. F3 lacking preapical protuberance on ventral surface; posterior and posteroventral surface bare. T3 with 1 submedial *ad* setae, lacking apical setae.

Abdomen: Heart-shaped, tergite 2 more than 2x width of tergite 5. Grey in ground colour, light brown-yl-

lowish at apex of tergites 1 and 2; tergites 2-5, trimaculated, with lateral and central longitudinal brown markings in posterior half.

Postabdomen: Cerci normal, short; anal plate as wide as broad and uniformly covered with setae; sternite 8 reduced to two anterior plates bearing 2 setae and 4 to

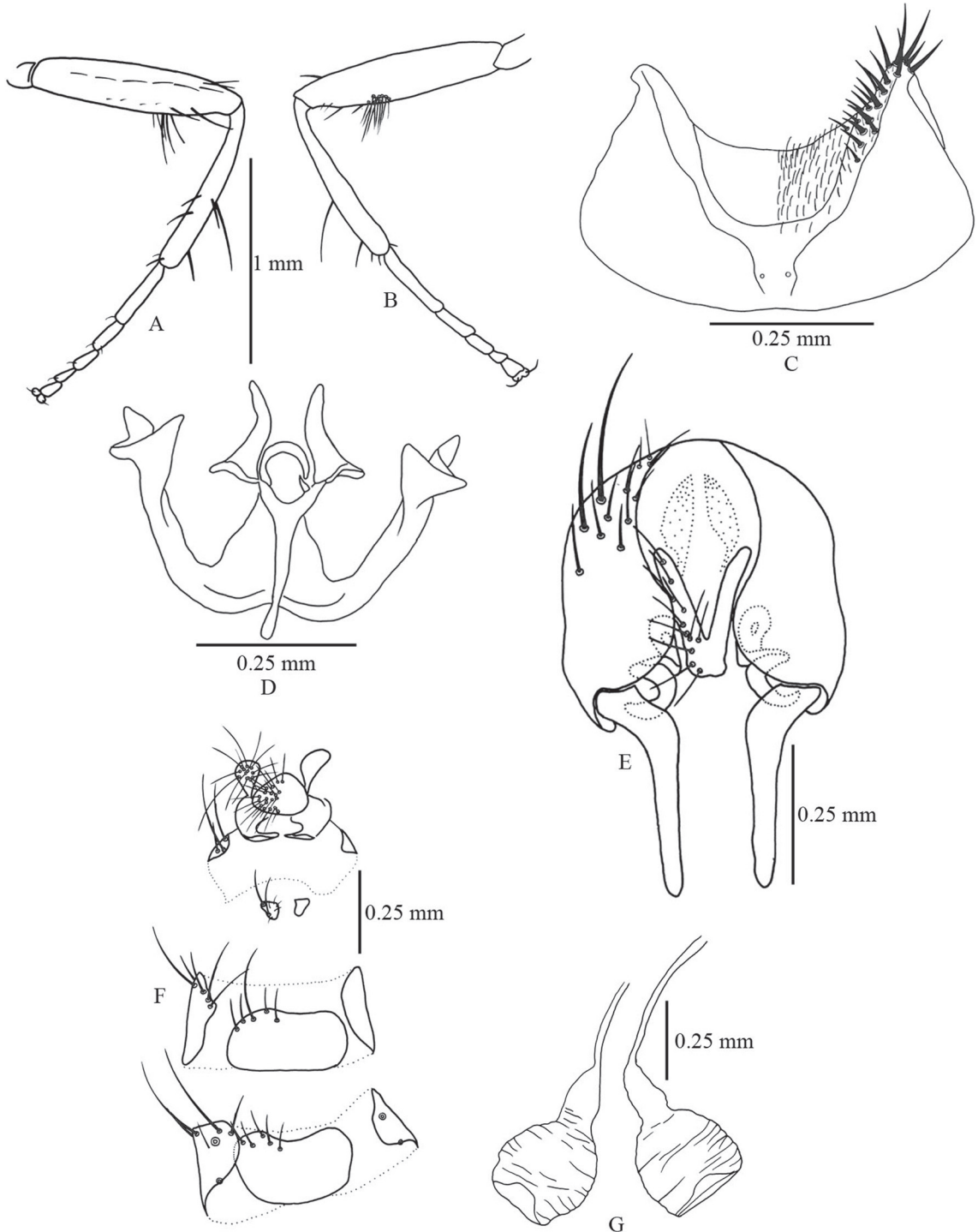


FIGURE 8: *Fannia fusconotata* (Rondani). A. Male hind leg, anterior. B. Male hind leg, posterior. C. Male sternite 5, ventral. D. Male hypandrium, ventral. E. Male terminalia external structures, ventral. F. Female terminalia external structures, ventral. G. Spermathecae.

5 setulae; postabdominal spiracles 7 and 8 on tergite 6 (Fig. 11G). Two wrinkled pear shaped spermathecae, with partially sclerotized ducts (Fig. 11H).

Distribution: NEOTROPICAL: province of Mendoza, Argentina.

Fannia hermani sp. n.

Figs. 1G, 9A-H

Diagnosis: Medium size black species. Eye weakly setulose. Parafacial bare. Antenna and palpus black. Scutum without lighter vittae. One long *pra* near the transverse suture and a second shorter *pra* near *spal*, slightly longer than surrounding setulae. T2 thin, constricted at base, with a subbasal protuberance. C3 with two *p* at apex of posterior margin. F3 thin (length/width = 9.1); with a weak protuberance on posteroventral surface, with a subapical tuft of short hair-like *pv*, slightly longer than femoral width. Wing smoky. Abdomen black throughout.

Etymology: The species name in a patronym in honour of Dr. Lee Herman, to whom it is dedicated for his help in collecting the type series.

Type material: Holotype ♂, Argentina: San Luis: El Trapiche, 16.XII.2000, cols. Domínguez & Roig (IADIZA). Paratypes: 31 ♂, 31 ♀, same data as holotype (IADIZA).

Description

Male: body length 5.7-6 mm

Head (Fig 9A): Frontal vitta black, at narrowest point 0.5x width of anterior ocellus. Frontal plate covered with dark grey to black pruinescence, at uppermost *fr* 0.5x width of anterior ocellus. Eighteen to nineteen very long *fr* 1.6x length of flagellum. Eye weakly setulose; *pocl* regular in length. Face and parafacial dark grey; parafacial at base of flagellum 0.6x width of same and bare. Facial carina black and gena dark grey. Scape and pedicel dark grey to black; flagellum short and thin, 2.1 to 2.7 as long as wide and heavily silvery-grey pruinose. Arista black, short pubescent. Palpus black, the apex about as wide as base. Lower oral margin concave, strongly grooved.

Thorax: Scutum and scutellum black throughout; 3+3 *acr* with a fourth row of postsutural *acr* in apical

half; 2 prescutelar *acrs*; *pprn* covered with long hair-like setae; 1 long *pra* near the transverse suture and a second shorter *pra* near *spal*, slightly longer than surrounding setulae; prealar area covered with setulae; 2 *prepm* surrounded by numerous long hair-like setulae.

Legs: Completely black. F1 thin (length/width = 6.3); with 1 row of *pd*; 5 to 6 rows of hair-like *p*, slightly longer than femoral width; 1 complete row of *pv*, as long as femoral width. T1 with 1 subapical *pd*; 1 apical *v* and 1 apical *pv*; 1 submedial and 1 apical *ad*, lacking medial row. Fore tarsomere 1 slightly longer than 0.3x length of tibia; tarsomere 4 as wide as long. F2 with 1 row of *ad*; 2 rows of short *a*; 1 row of *av* as long as femoral width; 1 long basal *pv* and 1 row of *pv* long at base, shorter and hooked at tip at apex; 1 row of long hair-like *p*, longer and ventrally directed towards apex. T2 thin, constricted at base, with a subbasal protuberance; ventral pubescence long, 0.5x width of tibia; 1 submedial and 3 apical *a*; 1 subapical *ad*; 1 very long and stout apical *av*; 1 apical and 1 long submedial *pd*; 1 apical *pv* and 1 apical *p*, the *p* as long as *av*. C3 with two *p* at apex of posterior margin (Fig 8B). F3 thin (length/width = 9.1); with a weak protuberance on posteroventral surface; with 1 row of *ad* longer and dorsally directed at apex; 2 rows of *av*, anterior row long and ventral row, short and hair-like; with a subapical tuft of short hair-like *pv*, slightly longer than femoral width (Fig. 8B). T3 with 1 submedial and 1 apical *d*; 1 submedial and 1 apical *ad*, lacking medial row; 4 to 5 medial and 1 apical *av* (Fig. 8B).

Wing (Fig. 1G): Smoky, from superior margin up to half the space between the first radial vein (R1) and the second and third radial vein (R 2+3). The space between the costal and subcostal vein is clear. Lower calypter oval, uppermost rounded, both yellow whitish. Knob of halter black, pedicel and base brown.

Abdomen: Elongated, width of tergites uniform; black, slightly lighter coloured on anterior lateral margins of tergites 2, 3 and 5. Hypopygium not protruding.

Postabdomen: Posterior margin of sternite 5 profoundly indented and covered with setae (Fig. 8C). Hypandrial arms directed outwards and thickened; postgonites inconspicuous; aedeagus membranous (Fig. 8D). Cercal plate fused; bacilliform process corkscrew-shaped; surstyli simple and marginal, with a basal lobated process bearing very short setulae (Fig. 12E-F).

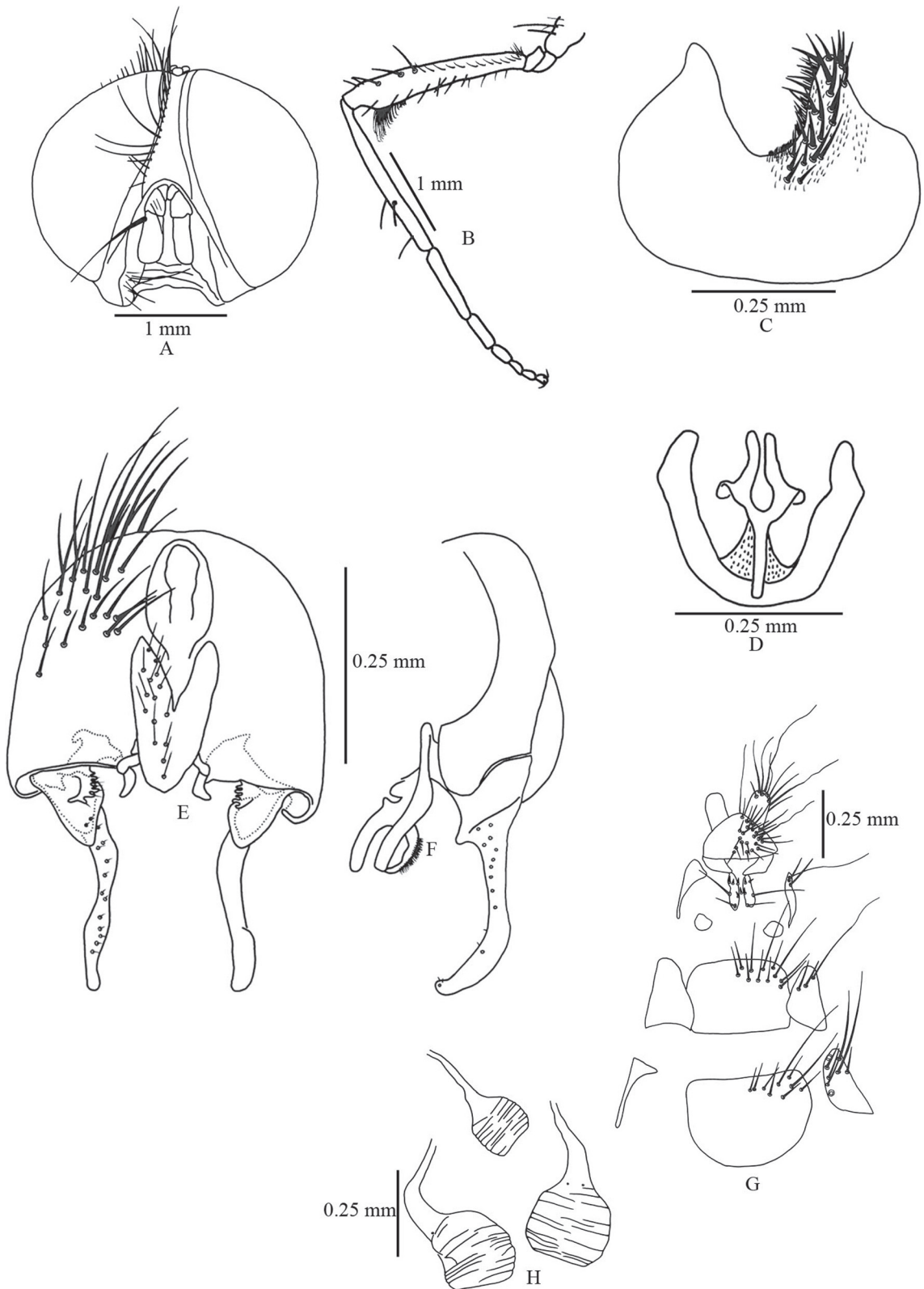


FIGURE 9: *Fannia hermani* sp. nov. A. Male head, anterior. B. Male hind leg, anterior. C. Male sternite 5, ventral. D. Male hypandrium, ventral. E. Male terminalia external structures, ventral. F. Male terminalia external structures, lateral. G. Female terminalia external structures, ventral. H. Spermathecae.

Female: body length: 5.0-5.7 mm. Differs from ale as follows:

Head: Frontal vitta heavily black pruinose. Ocellar triangle extending up to sixth *fr*. Frons and vitta broad, the distance between eye margins wider than 0.33x head width. Ten to eleven long *fr*; 1.3x length of flagellum. Upper and lower *orb* present, and 1 row of fronto-orbital setulae; *pocl* short, less than 0.3x length of outer and inner verticals, the latter longer than in male.

Legs: F1 with 1 row of *pv* as long as femoral width in apical half. T1 with 1 submedial *ad*, lacking apical *ad*. F2 with 1 row of very short *av*; 1 row of *pv* as long as femoral in basal half. T2 straight, cone-shaped, the base narrower than the apex; pubescence on *v* absent; with 1 submedial and 2 apical *pd*. F3 preapically dilated on anterior and anteroventral surface; 1 row of short *av* and two subapical *av*, longer than femoral width; posterior and posteroventral surfaces bare. T3 with 1 submedial *ad* setae, lacking apical *ad*; 2 medial *av* and 2 short apical.

Abdomen: Heart-shaped, tergite 4 less than 0.5x width of tergite 2; greyish black throughout.

Postabdomen: Cerci normal, short; anal plate broader than long and uniformly covered with setulae; sternite 8 reduced to 2 posterior plates bearing 2 setae and 4 to 5 setulae, and two anterior bare plates; post abdominal spiracles 7 and 8 on tergite 6 (Fig. 8G). Three pear-shaped grooved spermathecae with partially sclerotized ducts; 2 normal in size and a third reduced (Fig. 8H).

Distribution: NEOTROPICAL: Province of San Luis, Argentina.

Discussion: *Fannia hermani* possibly belongs to the *obscurinervis* species group (Albuquerque *et al.*, 1981), because it shares many characters with the species of this species groups. It can easily be separated from the remaining species of this group by the presence on F3 of two complete rows of *av* (one row long and the other short and hair-like) and the presence of a lobate process bearing very short setulae in basal region of surtylus.

***Fannia heydenii* (Wiedemann, 1830)**

Figs. 10A-H

Anthomyia heydenii Wiedemann, 1830:429.

Genus? *Heydenii*; Stein, 1902:131 (genus uncertain) *Homalomyia heydenii*; Stein, 1904:454.

Fannia heydenii; Stein, 1911:10; 1918:234; 1919:131; Shannon & Del Ponte, 1928:142; Gaminara, 1930:1253; 1931:1253; Engel, 1931:137; Lins de Almeida, 1933:1274; Séguy, 1937:169; Lopes, 1938:427; Albuquerque, 1957:6; Pont, 1972:4; Albuquerque *et al.*, 1981:10; Almeida *et al.*, 1985:279-284; Couri, 1992a:59-67; Carvalho *et al.*, 1993:11; Guimarães & Papavero, 1999:266; Carvalho *et al.*, 2002:112; Gomes *et al.*, 2002:114-118; Carvalho *et al.*, 2003:12.

Diagnosis: Medium brown and yellow species. Frontal vitta at narrowest point as wide as anterior ocellus. Parafacial with 3 to 4 setulae in basal first quarter. Antenna and palpus brown. Scutum grey with brown vittae along *acr*, *dc* and *spal* lines. One *pra* very near *spal*, almost indistinguishable from ground setulae. T2 constricted in basal half, lacking subbasal protuberance. C3 with 2 *p* at apex of posterior margin. F3 slightly curved, with a conspicuous preapical protuberance on posteroventral surface and 1 row of long and thin hair-like *pv* forming a long and curled preapical tuft, 3x femoral width, coinciding with the preapical protuberance. T3 lacking medial row of *ad*. Abdomen heart-shaped and yellow at base of tergite 1, and anterior lateral margins of tergites 2, 3, and 4.

Material examined: Argentina: Tucumán 1 ♂, V. Padre Monti, Burruyacú, 17-I/7-II-1948, col. R. Golbach (FIML). 1 ♂, Aconquija, 6/10-XII-1950, col. R. Golbach (FIML). Jujuy 1 ♂, Perales, 12-II-1951, col. A. Willink (FIML). 6 ♀, Quebrada la Toma, 21-XII-1950, col. R. Golbach (FIML). 1 ♀, Quebrada de Gainza, 18/19-XI-1951 (FIML). San Luis. 4 ♂, 9 Km norte del Trapiche, 6-XII-2000, cols. Domínguez & Roig (IADIZA). Mendoza 22 ♂, 15 ♀, Santa Rosa, Ñanúñan, 23-III-2001, cols. Debandi & Domínguez (IADIZA).

Description

Male: body length 5-6 mm

Head: Frontal vitta light brown pruinose, at narrowest point as wide as anterior ocellus. Fronto-orbital plate and facialia heavy silver pruinose; frons at uppermost *fr* 0.6x width of anterior ocellus. Eye bare; *pocl* of uniform length. Ten *fr*; as long as flagellum. Parafacial silvery, at base of flagellum 0.75x width of same, and bearing 3 to 4 setulae in basal first quarter.

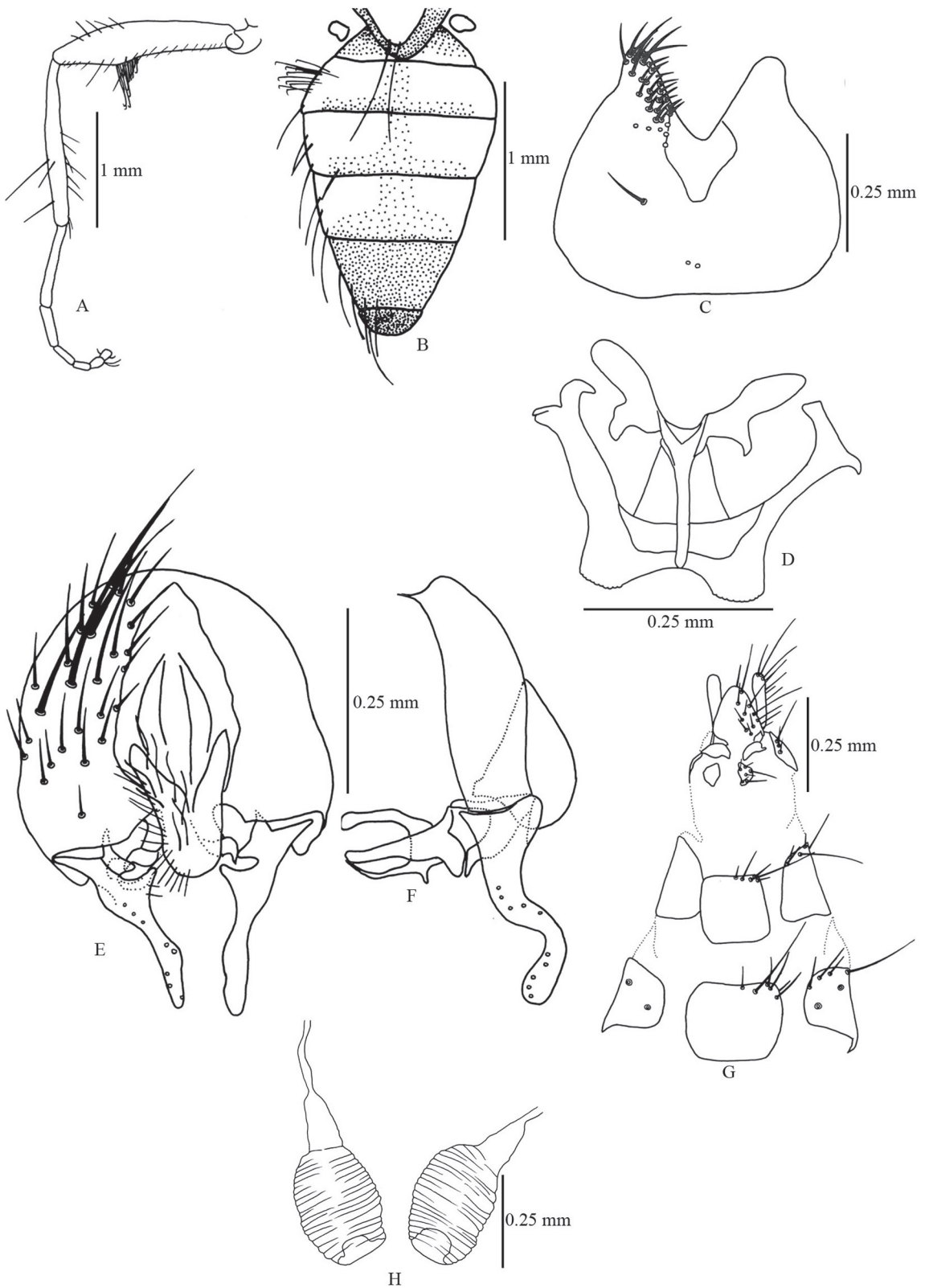


FIGURE 10: *Fannia heydenii* (Wiedemann). A. Male hind leg, anterior. B. Male abdomen, dorsal. C. Male sternite 5, ventral. D. Male hypandrium, ventral. E. Male terminalia external structures, ventral. F. Male terminalia external structures, lateral. G. Female terminalia external structures, ventral. H. Spermathecae.

Facial carina and gena dark grey. Scape and pedicel light brown, flagellum 2.5x as long as wide and light brown, light grey pruinose at apex. Arista light brown, short pubescent. Palpus dark brown, spatulated, the apex 3x width of base. Lower oral margin slightly convex and grooveless.

Thorax: Scutum grey with brown vitta along *acr* line that continues in scutellum forming a transverse line, broader brown vittae along *dc* lines which disappear between 4th and 5th *dc*, and brown postsutural vittae along *spal* lines; apex of scutellum light brown; pleura grey; 3+3 *acr*, a fourth postsutural *acr* before scutellum and 1 prescutellar *acrs*; 2+3 *dc*; *pprn* covered with setulae; 1 *pra* very near *spal*, almost indistinguishable from ground setulae; 2 *prepm* surrounded by 3 or 4 setulae.

Legs: Light brown, tibiae slightly yellowish and tarsi black. F1 slightly globose (length/width = 5.8); with 1 row of *pd*; 2 rows of *p*; 2 to 3 rows of very short *pv* and 4 to 5 long *pv* in apical fourth. T1 with 1 preapical *pd*; 1 apical *v* and *pv*. Fore tarsomere 1 0.3x length of T1; tarsomere 4 as long as broad. F2 with 1 row of *ad*; 3 rows of very short *a*; 1 row of long *av* at base, shorter towards apex; 1 basal long *pv* and two rows of *pv* spaced at base, grouped at apex, posterior row long and hooked, and ventral row shorter and hooked; 1 row of hair-like *p* spaced at base, stouter and ventrally directed at apex. T2 constricted in basal half, lacking subbasal protuberance; ventral pubescence long, slightly longer than 0.5x femoral width; with 1 submedial and 3 apical *a*; 1 subapical *ad*; 1 very long apical *av*; with 1 submedial and 1 apical *pd*; 1 apical *p* and 1 apical *pv*. C3 with 2 *p* at apex of posterior margin. F3 normal (length/width = 6.38), slightly curved, with a conspicuous preapical protuberance on posteroventral surface; 1 row of *ad*, dorsally directed towards apex; 1 row of *av* longer towards apex, interrupted at sub apex and 1 apical *av*; 1 row of long and thin hair-like *pv*, forming a long and curled preapical tuft, 3x femoral width, coinciding with the preapical protuberance (Fig. 10A). T3 with 1 submedial and shorter preapical *d*; 1 submedial and 1 apical *ad*, lacking medial row; 4 medial, 1 stronger preapical and 1 apical *av* (Fig. 10A).

Wing: Translucid, slightly brown yellowish. Upper calypter rounded and lower one oval, both white. Knob of halter yellow-whitish, base light brown.

Abdomen (Fig. 10B): Heart-shaped, tergite 2 twice as broad as tergite 4; heavily grey brown pruinose, yellow

at base of tergite 1, and anterior lateral margins of tergites 2, 3, and 4. Hypopygium not protruding.

Postoabdomen: Posterior margin of sternite 5 bilobed, and bearing most setae (Fig. 10C). Hypandrial arms directed outwards; postgonites inconspicuous; aedeagus membranous (Fig. 10D). Cercal plate fused; baciliform process tooth-shaped; surstyli very broad at base, thin and curved at apex, emerging from dorsal basal area (Fig. 10E-F).

Female: body length 4.9-5.1 mm. Differs from male as follows:

Head: Frontal vitta dark brown to reddish brown. Ocellar triangle extending up to lower *orb*. Frons and vitta broad, the distance between eye margins is broader than 0.33x head width. Eight to nine *fr* of irregular length. Upper and lower *orb* present, and 1 row of fronto-orbital setulae.

Legs: F1 with 1 row of *p* as long as femoral width and 1 or 2 shorter rows of *p*; 1 row of very short *pv* at base, and 4 to 5 longer *pv* at apex. F2 anteroventral surface bare; row of *pv* very short, less than 0.25x width of femur. T2 cone-shaped, base narrower than apex; pubescence on ventral surface absent; 2 submedial and 1 apical *av-v*. C3 with 1 *p* at apex of posterior margin. F3 lacking ventral protuberance; with 1 row of *av* and 2 apical *av*, longer than femoral width; lacking preapical tuft of *pv*.

Abdomen: Heart-shaped, tergite 2 more than 2x width of tergite 4, this shape much more pronounced than in male; dark brown in ground colour, anterior lateral margins of tergites 2, 3, and 4 yellow or light grey.

Postabdomen: Cerci normal, short; anal plate longer than broad and uniformly covered with setulae; sternite 8 reduced to a posterior pair of plates bearing two setae and four to five setulae; post abdominal spiracles 7 and 8 in tergite 6 (Fig. 10G). Two pear-shaped and grooved spermathecae, with partially sclerotized ducts (Fig. 10H).

Distribution: NEOTROPICAL: Peru, Bolivia, Brazil, Uruguay, Paraguay, and Northeastern Argentina.

Fannia hirtifemur (Stein, 1904)

Figs. 11 A-F

Homalomyia hirtifemur Stein, 1904:457.

Fannia birtifemur; Stein, 1911:109; 1919:131; Séguy, 1937:169; Pont, 1972:5; Albuquerque *et al.*, 1981:10; Carvalho *et al.*, 1993:11; 2003:13.

Diagnosis: Medium size black species. Frontal vitta black, at narrowest point as broad as anterior ocellus. Parafacial bare. Eye scarcely setulose. Antenna

and palpus dark grey to black. Sctutum and scutellum black throughout. One long *pra* near the transverse suture and 1 shorter near *spal*, slightly longer and stouter than surrounding setulae. Wing smoky. Halter black. T2 thin, constricted at base, with a sub-basal protuberance. C3 with 2 *p* at apex of posterior margin. F3 thin, with a weak preapical protuberance

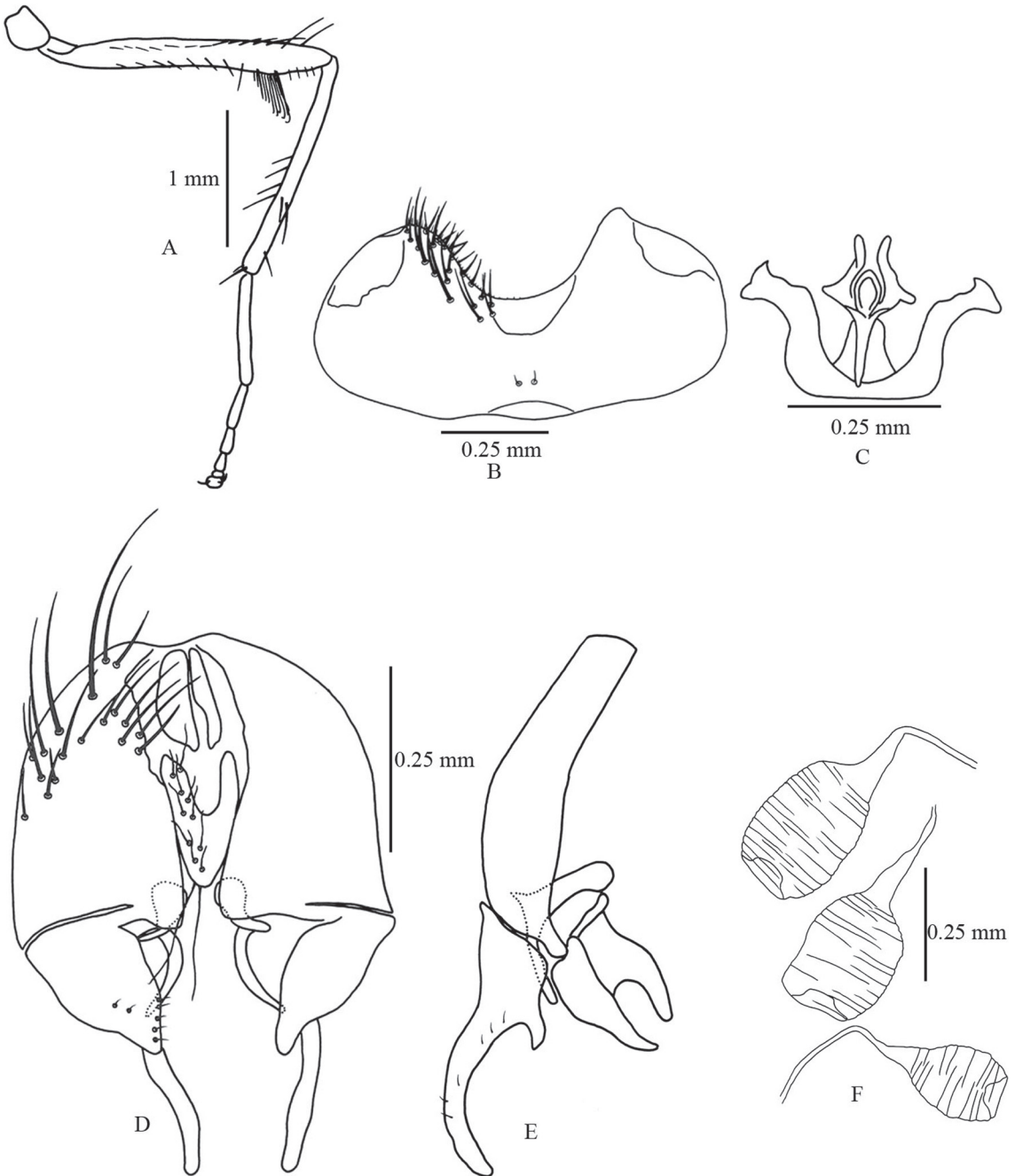


FIGURE 11: *Fannia birtifemur* (Stein). A. Male hind leg, anterior. B. Male sternite 5, ventral. C. Male hypandrium, ventral. D. Male terminalia external structures, ventral. E. Male terminalia external structures, lateral. F. Spermathecae.

on posteroventral surface, and with a subapical tuft of short hair-like *pv* slightly longer than femoral width, coinciding with the preapical protuberance. Abdomen elongated, black, lateral anterior margins of tergites 2-5, slightly lighter coloured.

Material examined: Argentina: Tucumán 3 ♂, 1 ♀, Qda. La Toma, 21-XII-95, col. R. Golbach (FIML). 1 ♀, Qda. Cainzo, Tucumán, 18/19-XI-95, col. R. Golbach (FIML).

Description

Male: body length 6-6.5 mm

Head: Frontal vitta black, at narrowest point as broad as anterior ocellus. Fronto-orbital plate heavily covered with dark grey to black pruinescence, at uppermost *fr* 0.5x length of flagellum. Seventeen to 18 long *fr*; 1.6x length of flagellum. Eye scarcely setulose; *poel* of uniform length. Face and facialia dark grey, parafacial at base of flagellum 0.6x width of same and bare. Facial carina black, gena dark grey. Scape and pedicel dark grey to black; flagellum short and thin, 2 to 2.4x as long as broad, heavily covered with dark-grey silvery pruinescence. Arista completely black, arisal pubescence shorter than arisal width at base. Palpus black and straight, the base about as broad as apex. Lower oral margin strongly convex, and deeply grooved.

Thorax: Sctutum and scutellum black throughout; 3+3 *acr*; with a fourth row in posterior third and 2 prescutellar *acr*s; 2+3 *dc*; *pprn* densely covered with long hair-like setae; 1 long *prn* near the transverse suture and a shorter near *spal*, slightly longer and stouter than surrounding setulae; prealar area covered with setulae; 2 *prepm* surrounded by numerous long setulae.

Legs: Completely black. F1 thin (length/width = 6.3); with 1 row of *pd*; 5 to 6 rows of hair-like *p*, slightly longer than femoral width; 1 row of *pv* as long as femoral width. T1 with 1 subapical *pd*; 1 apical *v*; 1 apical *pv*; 1 submedial and 1 apical *ad*, lacking medial row. Fore tarsomere 1 slightly longer than 0.3x length of T1, tarsomere 4 as long as broad. F2 with 1 row of *ad*; 2 rows of short *a*; 1 row of strong *av*; 1 long basal *pv* and 1 row of long *pv* at base, shorter and hooked at apex; 1 row of *p* long hair-like at base, stouter and ventrally directed at apex. T2 thin, constricted at base, with a subbasal protuberance. Pubescence on ventral surface long, slightly shorter than femoral width; 1 submedial and 3 apical *a*; 1 subapical *ad*; 1 strong api-

cal *av*; 1 long submedial and 1 apical *pd*; 1 apical *p*; 1 apical *pv*. C3 with 2 *p* at apex of posterior margin. F3 thin (length/width = 11), with a weak preapical protuberance on posteroventral surface; with 1 row of *ad*, longer and dorsally directed towards apex; 1 row of long *av*; with a subapical tuft of short hair-like *pv* slightly longer than femoral width, coinciding with the preapical protuberance (Fig. 11A). T3 with a submedial and subapical *d*; 1 submedial and 1 apical *ad*, lacking medial row; 2 to 3 medial *av* and 1 short apical *av*; ventral and posteroventral surfaces with a weak ctenidium at apex (Fig. 11A).

Wing: Smoky, the anterior margin dark brown up to half the space between R1 and R 2+3, the space between C and Sc is clear. Lower calypter oval, upper rounded both yellowish-white. Knob of halter black, stalk and base brown.

Abdomen: Elongated, the width of tergites approximately equal; black, lateral anterior margins of tergites 2-4, slightly lighter coloured. Hypopygium not protruding.

Postabdomen: Sternite 5 twice as long as broad, bilobed and bearing setae on anterior margin (Fig. 11B). Hypandrium arms directed outwards and thickened; postgonites inconspicuous; aedeagus membranous (Fig. 11C). Cercal plate fused; bacilliform process hook-shaped; surstyli simple, long and marginal respect to epandrium (Fig. 11D-E).

Female: body length: 4.8-5.2 mm. Differs from male as follows:

Head: Frontal vitta heavily dark-brown to reddish pruinoso. Ocellar triangle short, extending up to third *fr*. Frons and vitta broad, the distance between eye margins 0.33x head width. Ten to eleven strong *fr*; 1.3x length of flagellum. Upper and lower *orb* present, with a single row of fronto-orbital setulae. Inner and outer vertical setae longer than in male.

Legs: F1 with 1 row of *p* as long as femoral width, and 3 to 4 rows of very short *p*. T1 with 1 submedial *ad*, the apical *ad* absent. F2 with 1 row of very short *av*; row of *pv* very short, only in basal half. T2 cone-shaped, the base narrower than the apex; ventral pubescence absent; with 1 submedial and 2 apical *pd*. F3 lacking preapical protuberance on posteroventral surface; with a short row of *av* and 3 subapical *av* as long or slightly longer than femoral width; posterior and posteroventral surfaces bare.

Abdomen: Heart-shaped to slightly elongated, tergite 4 less than 2x width of tergite 2.

Postabdomen: Cerci normal, short; anal plate broader than long and uniformly covered with setulae; sternite 8 reduced to 1 anterior pair of plates bearing 2 setae and 4 to 5 setulae, and 1 posterior pair of bare plates; post abdominal spiracles 7 and 8 on tergite 6. Three pear-shaped and grooved spermathecae, two normal in size and one reduced, with partially sclerotized ducts (Fig. 11F).

Distribution: NEOTROPICAL: Colombia, Ecuador, Peru, Brazil, and Northern Argentina.

Fannia incisurata (Zetterstedt, 1838)

Fig. 12

Anthomyza incisurata Zetterstedt, 1838:679.

Fannia incisurata; James, 1947:128; Hennig, 1955b; 1955c; Chillcott, 1961:55; Pont, 1972:5; Carvalho *et al.*, 1993:11; Rozkošný *et al.*, 1997:40; Carvalho *et al.*, 2003:13.

Fannia pruinosa Shannon & Del Ponte, 1926:572. [Junior secondary homonym in *Fannia* of *Anthomyia pruinosa* Meigen, 1826]; Gaminara 1930:1253; 1931:1253; Malloch 1934:203; Séguy 1937:173. Synonymy by Malloch 1934:203.

Diagnosis: Medium dark grey species. Frontal vitta at narrowest point 0.6x width of anterior ocellus. Eye and parafacial bare. Antenna and palpus dark-brown. Scutum dark-grey in ground colour, covered with light blue-grey pruinosity, brown vitta visible in full length between *acr* and *dc*, *dc* and *ia* and between *ia* and pleura. One *pra* near *spal*, 0.2x length of same. T2 thin, constricted at base, lacking subbasal protuberance. C3 with 1 *p* at apex of posterior margin. F3 normal, lacking preapical protuberance on posteroventral surface. T3 with 7 to 8 medial *ad*; 5 to 7 medial *av*, and 4 to 6 *pv* in medial third. Wing clear. Halter yellow. Abdomen elongated, dark grey, slightly lighter on anterior lateral margins of tergites 2, 3, and 4.

Type material examined: *Fannia pruinosa*: co-type ♂ Argentina: Buenos Aires, San Isidro. 25-VIII-1926. Shannon & Del Ponte (USNM).

Other material examined: Argentina. Catamarca 1 ♂, 2 ♀, 31-V-1927, col. Kisliuk (USNM). 1 ♂, *Homomyia incisurata* (FMNH).

Description

Male: body length 6.5 mm

Head: Frontal vitta dark grey, at narrowest point 0.6x width of anterior ocellus. Frontoorbital plate heavily silvery-grey pruinose, at uppermost *fr* 0.75x width of anterior ocellus. Nine to 12 long *fr*; 2.6x length of flagellum, with several interstitial setulae. Eye bare, antero-internal facets larger than remaining; *pocl* in two well defined rows. Face and parafacial silvery-grey; parafacial at base of flagellum as wide as same and bare. Facial carina silvery-brown. Gena grey. Scape and pedicel dark brown, flagellum short, 2.3x as long as wide, heavily silvery-grey pruinose. Arista dark-brown, short pubescent. Palpus dark-brown, apex about 1.5x width of base. Lower oral margin straight, grooveless.

Thorax: Scutum dark-grey in ground colour, covered with light blue-grey pruinosity, brown vitta visible in full length between *acr* and *dc* lines, *dc* and *ia* lines and between *ia* lines and pleura; pleura light grey; 3+4

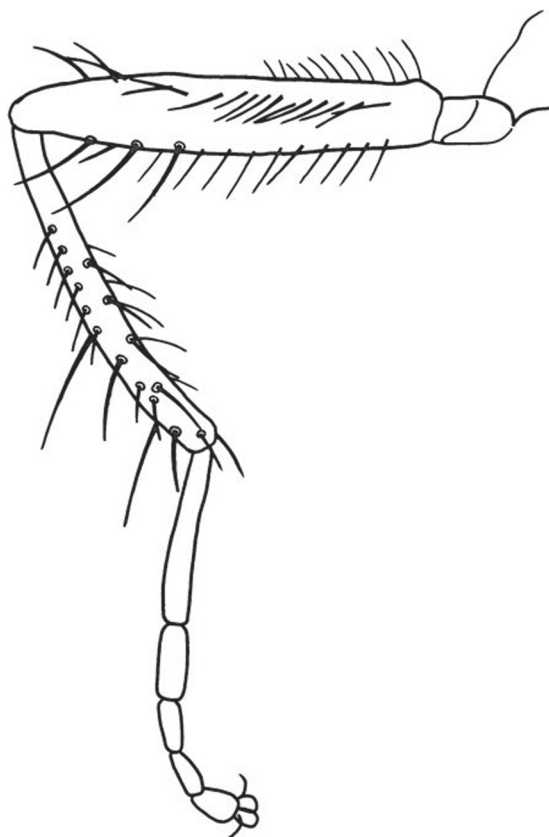


FIGURE 12: *Fannia incisurata* (Zetterstedt). A. Male hind leg, anterior.

acr; 1 prescutellar *acrs*; *pprn* covered with setulae; 1 *pra* near *spal*, 0.2x length of *spal*; prealar area covered with setulae; 2 *prepm* surrounded with setulae.

Legs: Brown to dark-brown, tibiae yellow at base. F1 normal (length/width = 5); with 1 row of *pv*; 2 rows of *p*; 1 row of *pv* in apical half. Fore tibia with 1 subapical *pd*; 1 apical *v* and 1 apical *pv*; 1 submedial and 1 apical *ad*, lacking medial row. Fore tarsomere 1 slightly longer than 0.3x tibial length; tarsomere 4 as broad as long. F2 with 1 row of *ad* and 2 rows of short *a*; 1 row of short and thin *av*; 1 row of hair-like *pv*, duplicated in medial third, simple at apex; 1 row of long and hair like *p*, stouter and ventrally directed at apex. T2 thin, constricted at base, lacking subbasal protuberance, ventral pubescence very short, 0.2x femoral width; 1 submedial and 3 long apical *a*; 1 subapical *ad*; 1 very strong apical *av*; 1 long submedial and 1 apical *pd*; 1 apical *pv* and 1 long *p*. C3 with a single setae at apex of posterior margin. F3 normal (length/width = 5.4); lacking preapical protuberance on *pv*; 1 row of *ad* longer and dorsally directed towards apex; 1 row of short *av* and 4 *av* as long or longer than femoral width in apical fourth; 1 row of very short *pv*, less than 0.25x femoral width (Fig. 12). T3 with 1 submedial and 1 subapical *d*; 1 submedial, 1 apical and 7 to 8 medial *ad*; 5 to 7 medial and 1 short apical *av*; 4 to 6 *pv* in medial third; ventral and posteroventral surface with a weak ctenidium (Fig 12).

Wing: Clear. Lower calypter slightly oval, lower rounded, both yellowish-white. Knob of halter yellow, pedicel and base yellow.brown.

Abdomen: Elongated, width of tergites approximately equal. Dark grey, slightly lighter on anterior lateral margins of tergites 2, 3, and 4. Hypopygium not protruding.

Postabdomen: Posterior margin of sternite 5 straight or very slightly indented, setae grouped on central longitudinal line and posterior margin. Anterior margin of epandrium narrower than central region. Cercal plate fused. Bacilliform process cork-screw shaped. Surstily short, simple, and marginal. Hypandrium arms directed outwards. Postgonites inconspicuous. aedeagus membranous.

Female: body length 6.7 mm. Differs from male as follows:

Head: Vitta grey-brown. Ocellar triangle very short, extending up to uppermost *fr*: Frons and vitta broad,

the distance between eye margins wider than 0.33x head width. Seven *fr*; variable in length, 2 to 3 longer than flagellum, remaining shorter. Upper and lower *orb* present, with 2 rows of fronto-orbital setulae; *pocl* short and of irregular length, less than 0.33x length of inner and outer verticals, the latter longer than in male.

Thorax: Lacking vitta.

Legs: F1 with 4 rows of *p*, 1 row as long as row of *pd*, remaining 3 short. F2 with 5 to 6 rows of short and thin *a*; 1 row of *av*, long at base, shorter at apex; 1 row of *pv*, 0.5x width of femur at base, shorter at apex. T2 cone-shaped, lacking ventral pubescence. C3 with 2 hair-like *p* at apex of posterior margin. T3 with 1 apical and 4 medial short *av*.

Abdomen: Heart-shaped, elongated, tergite 4 less than 0.5x width of tergite 2, dark grey throughout.

Postabdomen: Cerci normal, short; anal plate broader than long and uniformly covered with setulae; sternite 8 reduced to 1 posterior pair of plates bearing two setulae; post abdominal spiracle 7 situated beyond posterior margin of tergite 6 and spiracle 8 on anterior margin of tergite 6). Three smooth pear-shaped spermathecae, with partially sclerotized ducts.

Distribution: Cosmopolitan.

Fannia losgateados sp. n.

Figs. 13 A-F

Diagnosis: Small dark species. Frontal vitta at narrowest point 1.9x width of anterior ocellus. Eye bare. Parafacial bare. Antenna and palpus black. Scutum dark brown to black, with broad dark brown shining vitta along space between *dc* and *ia* lines. Two very short and thin *pra* near *spal*. T2 constricted at base, with a weak subbasal protuberance and 3 submedial *a*. C3 with three *p* at apex of posterior margin. F3 thin, with a preapical protuberance 1.5x width of femur, on posteroventral surface, ventral and posteroventral surfaces covered with long hair-like setae, 1.5x femoral width and a tuft of long *pv*, 2x femoral width, coinciding with the posteroventral protuberance. T3 with 3 to 4 medial *ad*. Wing clear with brown tint. Halter yellow. Abdomen heart-shaped, dark brown to black, base and lateral margins of tergites 3, 4, and 5 light blue-greyish.

Etimology: The species name is an apposition that refers to Los Gateados ravine, in Potrerillos, province of Mendoza, where the holotype was collected.

Type material examined: *Holotype* ♂: Argentina: Mendoza, Potrerillos, Quebrada de los Gateados, X-2001, col. Domínguez (IADIZA). *Paratypes*: 4 ♀, same data as holotype (IADIZA); 1 ♂, Quebrada Aguas Buenas, XII-2000, cols. Domínguez & Roig (IADIZA).

Description

Male: body length 3.5-3.8 mm.

Head: Frontal vitta black, at narrowest point 1.9x width of anterior ocellus. Fronto-orbital plate silvery pruinose, at uppermost *fr* lightly narrower than width of anterior ocellus. Twelve long *fr*; 1.4x length of flagellum. Eye bare; *poel* uniform in length. Facialia dark

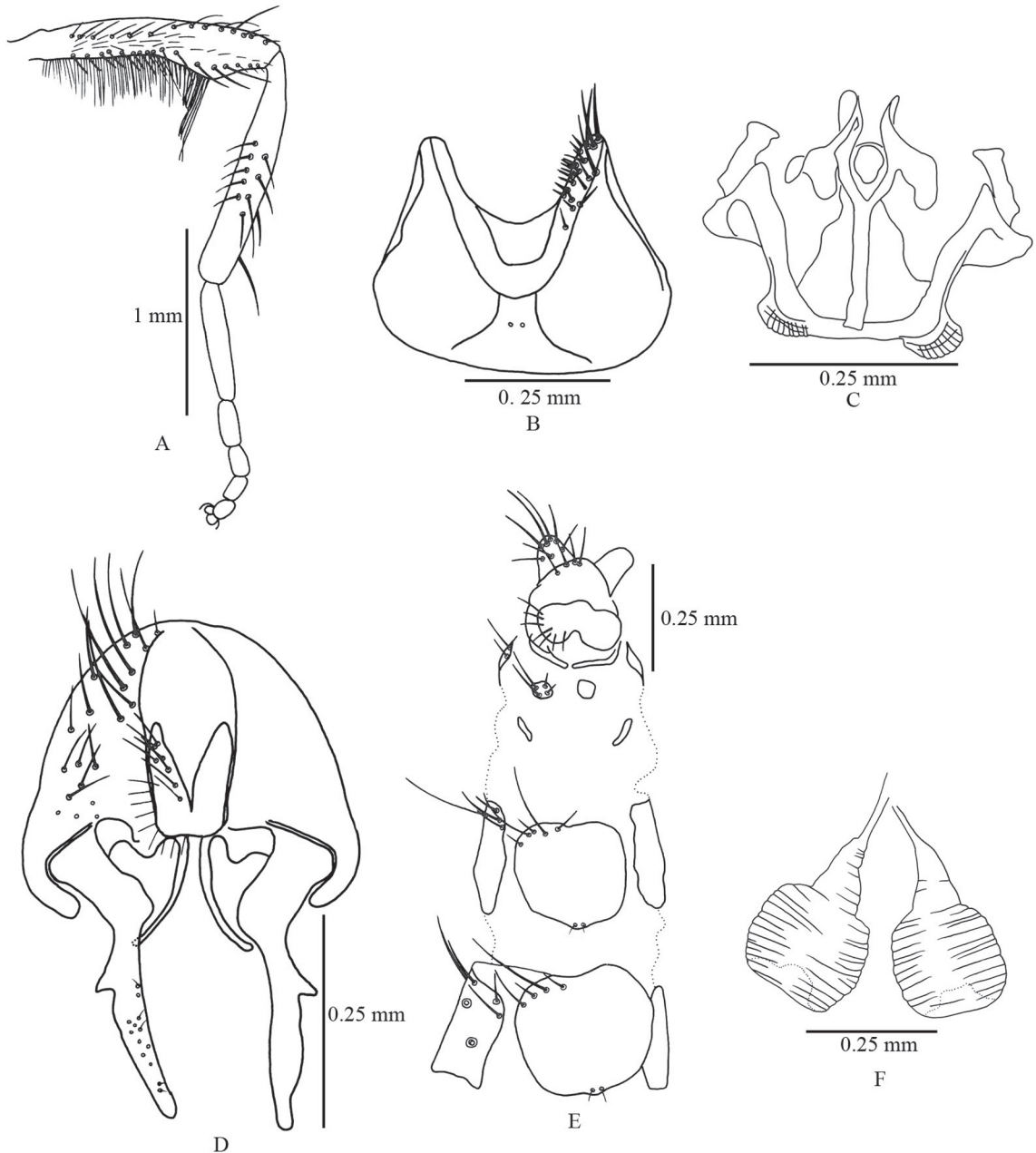


FIGURE 13: *Fannia losgateados* sp. nov. A. Male hind leg, anterior. B. Male sternite 5, ventral. C. Male hypandrium, ventral. D. Male terminalia external structures, ventral. E. Female terminalia external structures, ventral. F. Female terminalia, spermathecae.

grey. Parafacial silvery, at base of flagellum 0.7x width of same and bare. Facial carina black. Gena dark grey. Scape and pedicel black, flagellum 2 to 2.25x as long as wide, heavily dark grey pruinose. Arista completely black, short pubescent (pubescence shorter than arista width at base). Palpus black and spatulated, the apex more than 2x width of base. Lower oral margin slightly concave and grooveless.

Thorax: Scutum dark brown to black, dark brown shining vitta along space between *dc* and *ia* lines; pleura and apex of scutellum dark grey; 3+3 *acr* and 1 precutellar *acrs*; 2+3 *dc*; *pprn* covered with setulae; 2 very short and thin *pra* near *spal*, almost indistinguishable from ground setulae; prealar area covered with setulae; 2 *prepm* surrounded by numerous setulae.

Legs: Dark brown, tarsi black. F1 normal to thin (length/width = 5.5), with 1 row of *pd* and 2 rows of *p* as long as femoral width, the most ventral row of *p* is hair-like; 1 row of *pv* short and spaced at base, as long as femoral width at apex. T1 with a subapical long *pd*; one apical *v* and *pv*. Fore tarsomere 1 0.3x length of *t1*, tarsomere 4 as wide as long. F2 with 1 row of *ad* and 1 row of *a*; 1 row of *av*, spaced at base and grouped at apex; 1 long basal *pv* and a complete row of *pv* that is doubled at apex with a second hooked row; 1 row of *p*, longer and ventrally directed towards apex. T2 constricted at base, with a weak subbasal protuberance; ventral pubescence short, shorter than 0.5x width of T2; 3 submedial and 3 apical *a*; 1 subapical *ad*; 1 apical *av*; 2 submedial and 2 apical *pd*; 1 apical *pv*; apical *p* absent. C3 with 3 *p* at apex of posterior margin. F3 thin (length/width = 8), with a preapical posteroventral protuberance, 1.5x femoral width; 1 row of *ad* longer and dorsally displaced towards apex; 3 row of short *a*, 2 occupying basal half, third complete; 2 rows of *av*, the most dorsal as long as femoral width, the ventral row short and thin; ventral and posteroventral surfaces covered with long hair-like setae, 1.5x femoral width; tuft of long *pv*, 2x femoral width, coinciding with protuberance (Fig. 13A). T3 with 1 submedial and 1 subapical *d*; 3 to 4 medial *ad*, apical *ad* absent; 1 apical and 5 subapical *av*; apex of ventral and posteroventral surfaces with a strong ctenidium (Fig. 13A).

Wing: Clear with brown tint. Lower calypter slightly oval, upper rounded, both yellowish-white and dark brown in outer margin. Knob of halter yellow, base light brown.

Abdomen: Heart-shaped, tergite 2 2x width of tergite 4; dark brown to black, base and lateral margins of

tergites 3, 4 and 5 light blue-greyish. Hypopygium not projecting.

Postabdomen: Posterior margin of sternite 5 bilobed, with scarce setae on central line, numerous on posterior margin (Fig. 13B). Lateral margins of hypandrium grooved; hypandrial arms expanded at apex and directed outwards; postgonite inconspicuous; aedeagus membranous (Fig. 13C). Epandrium anteriorly broadened, bell-shaped; cercal plate fused, bilobed at base; bacilliform process straight in apical and medial portion, semicircular at base; surstyli long, simple and medial respect to epandrium (Fig. 13D).

Female: body length 3.4-3.6 mm. Differs from male as follows:

Head: Frontal vitta light brown and partially grey pruinose. Ocellar triangle very long, extending up to sixth *fr*. Frons and vitta broad, the distance between eye margins wider than 0.33x head width. Five to six strong *fr*; shorter than flagellum, with interstitial setulae, 0.5x length of *fr*. Upper and lower *orb* present, and 1 row of frontoorbital setulae; *poel* uniformly short, less than 0.5x length of outer and inner vertical setae, the latter longer than in male.

Thorax: Grey in ground colour, brown vitta along full length of *acr*, *dc* and *ia* lines.

Legs: F2 with 1 row of very short *ad*; 1 row of *pv* in basal half. T2 cone-shaped; pubescence on ventral surface absent; with 1 submedial and 1 apical *av*; 1 submedial and 2 apical *pd*; 1 apical *pv*, apical *pv* absent. F3 slightly broadened at preapex, with 1 row of short *av* and 2 to 3 subapical *av* as long as femoral width; ventral and posteroventral surfaces bare. T3 with 2 medial *ad*, apical *ad* absent; 2 apical and 3 subapical *av*.

Postabdomen: Cerci normal, short; anal plate as broad as long and covered with setulae; sternite 8 reduced to 1 posterior pair of rounded plates bearing 2 setae and 2 to 3 setulae and 2 smaller anterior plates; post abdominal spiracles 7 and 8 on tergite 6 (Fig. 13E). Two pear-shaped, slightly quadrate and grooved spermathecae with partially sclerotized ducts (Fig. 13F).

Distribution: NEOTROPICAL: Provinces of San Luis and Mendoza, Argentina.

Discussion: *Fannia losgatedos* does not seem to belong to any of the previously proposed Neotropical species

groups of *Fannia*. It can be easily separated from the remaining species of *Fannia* of southern South America because of its small size, black colouration and the presence of a row of long and hair-like *pv*, visible in anterior view on F3.

***Fannia petrocchia* Shannon & Del Ponte, 1926**

Figs. 14A-F

Fannia petrocchia Shannon & Del Ponte, 1926:574; 1928:142; Malloch, 1934:207; Séguy, 1937:173; Lopes, 1938:427; Albuquerque, 1945a:1-4; Pont, 1972:5; Albuquerque *et al.*, 1981:17; Carvalho *et al.*, 1993:13; Guimarães & Papavero, 1999:266; Carvalho *et al.*, 2002:112; 2003:16. *Fannia solitaris* Shannon & Del Ponte, 1926:565. Synonymy by Shannon & Del Ponte 1928:142.

Diagnosis: Small light grey species. Frontal vitta at narrowest point 2x width of anterior ocellus. Parafacial with very strong setulae throughout. Antenna and palpus yellowish-brown. Thorax light grey, with very thin brown vitta along *acr* and *dc* lines. 2 *pra* near *spal*, one strong, the second shorter and thinner. T2 cone shaped, gradually broadened towards apex. C3 with two *p* at apex of posterior surface. F3 lacking preapical protuberance of posteroventral surface. T3 with very long submedial and subapical *d*. One submedial *ad*. Abdomen elongated, tergites 1 to 4 yellow on anterior lateral margins and trimaculated.

Material examined: Brazil: 1 ♀ Amazonas Manaus, V-1931, col. R. C. Shannon (BMNH). 1 ♂ Goiás, Campinas 1 ♂, XII-1935, cols. Borgmeier & S. Lopez (BMNH). 1 ♀ Mato Grosso, Base camp, 15-II a 8-III-1968, col. B. E. Freeman (BMNH).

Description

Male: body length 3.5 mm.

Head: Frontal vitta dark brown, yellow near lunula, at narrowest point 2x width of anterior ocellus. Frontorbital plate heavily silvery pruinose, at uppermost *fr* as wide as anterior ocellus. Six short *fr*; 1.9x length of flagellum. Eye bare; *pocl* of irregular length in first quarter. Face and parafacial silvery-grey; parafacial at base of flagellum as wide as same, with very strong setulae throughout. Facial carina light brown, gena silvery-grey. Scape and pedicel yellowish-brown, flagellum 2.4x as long as broad and covered with dark-

yellow pruinescence. Arista yellowish-brown, short pubescent. Palpus yellowish-brown, clavate, the apex 1.5x width of base. Lower oral margin straight and grooveless.

Thorax: Light grey, with very thin (almost imperceptible) brown vitta along *acr* and *dc* lines; pleura grey; apex of scutellum slightly yellowish; 2+2 *acr*, with additional *acr* in apical 1/3 and 1 prescutellar *acrs*; 2+3 *dc*; *pprn* with numerous short setae; 2 *pra* near *spal*, one strong, the second shorter and thinner; prealar area bare; 2 *prepm* surrounded by 5 setulae.

Legs: Coxae and tibiae yellow, femora light brown and yellow at apex, tarsi black. F1 globose (length/width = 4.7); 1 row of *pd* as long as femoral width; 2 rows of *p*, dorsal row longer; 1 row of *pv*, short at base and longer than femoral width at apex. T1 with 1 subapical *pd*, 1 apical *v* and 1 apical *pv*; 1 row of very short *ad*. Fore tarsomere 1 0.3x length of t1, tarsomere 4 as long as wide. F2 with 1 row of *ad*; 3 apical and 1 row of *a*; 1 row of *av*, hair-like at base, stouter and shorter at apex; 1 row of *pv*, duplicated or triplicated and hooked at apex, forming a ctenidium; 1 row of *p*, thin at base, stouter and ventrally displaced at apex. T2 cone-shaped, gradually broadened towards apex; long and very thin ventral pubescence, as long as femoral width; 3 submedial *a*; 3 submedial *ad*; 1 strong apical *av-v*; 2 submedial and 1 reduced apical *pd*; 1 apical *p*; 1 apical *pv*. C3 with 2 *p* at apex of posterior surface. F3 normal to globose (length/width = 5.5), lacking preapical protuberance of posteroventral surface; 1 row of *ad*, longer and dorsally directed at apex; 1 row of *av* shorter than femoral width and 2 to 3 longer preapical *av*; 1 row of delicate *pv*, which forms a weak preapical tuft. T3 with 1 long submedial and 1 subapical *d*; 1 submedial and 1 apical *ad*, lacking medial row; 1 to 3 medial and 1 apical *av*; apex of ventral and posteroventral surface with a weak ctenidium.

Wing: Clear, yellow tinted. Lower calypter strongly oval, upper rounded, both white. Halter whitish-yellow.

Abdomen: Elongated, tergites approximately of same width, except for tergites 2 and 3 which are broader. Tergites 1 to 4 translucent yellow on anterior lateral margins and trimaculated; tergite 5 grey with brown markings. Hypopygium not projecting.

Postabdomen: Sternite 5 heart-shaped, posterior margin profoundly indented, with few setulae on central longitudinal line and posterior margin (Fig. 14A). Hypandrial arms directed inwards; hypandrial base

very broad, with grooved lateral margins; postgonite conspicuous at base of aedeagus, covered with setulae; aedeagal apodeme tube-shaped, forming a curved and bifid structure above cercal plate; phalic guide very short, almost indistinguishable, aedeagus sclerotized (Fig. 14B-D). Cercal plate weakly fused; bacilliform process very small, tooth-shaped; surstyli short, simple and on internal margin of epandrium; (Fig. 17C-D).

Female: body length 3.1 mm. Differs from male as follows:

Head: Ocellar triangle long, extending up to lower *orb*. Frons and vitta broad, the distance between eye margins less than 0.33x width of head. Four to five strong *fr*; slightly longer than flagellum, with 6 to 7 long interstitial setulae, 0.5x length of setae. Upper and lower *orb* present, with 1 irregular row of fronto-orbital setulae.

Legs: F2 with 1 row of short *av*; lacking row of *pv*. T2 straight, cone-shaped, the base narrower than apex; ventral pubescence absent; 1 apical *pv*; 2 submedial *p*.

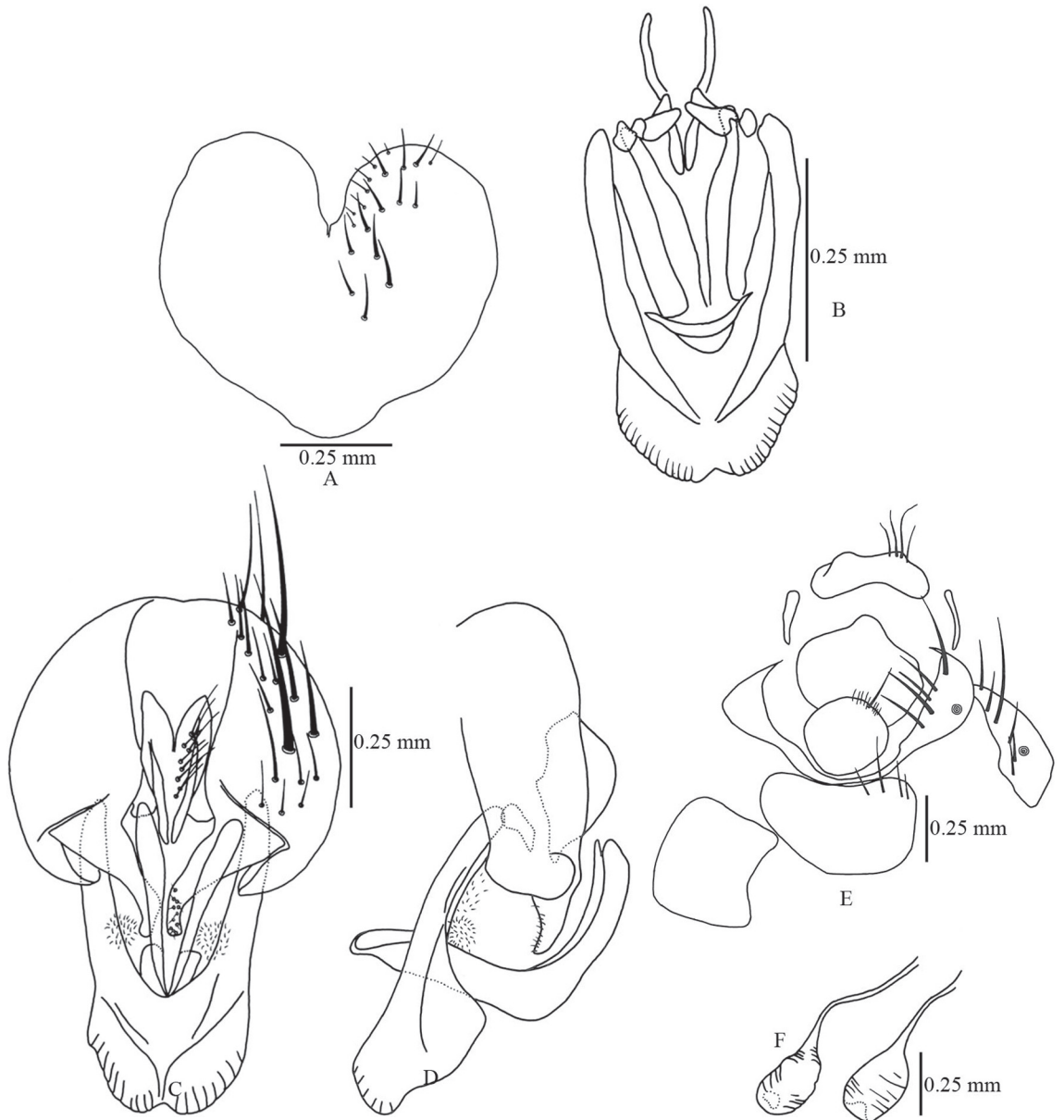


FIGURE 14: *Fannia petrocchiaie* Shannon & Del Ponte. A. Male sternite 5, ventral. B. Male hypandrium, ventral. C. Male terminalia external structures, ventral. D. Male terminalia external structures, lateral. E. Female terminalia external structures, ventral. F. Spermathecae.

F3 preapical protuberance on posteroventral surface absent; lacking preapical tuft of *pv*.

Postabdomen: Cerci very short; anal plate very broad and uniformly covered with setulae; sternite 8 forming a single plate, lobated on posterior margin; sternite 7 rounded, with a crescent-shaped structure in anterior region, which connects ventral margins of tergite 7; post abdominal spiracles 7 and 8 on tergite 6 and 7, respectively (Fig. 14E). Two very grooved and pear-shaped spermathecae, with partially sclerotized ducts (Fig. 14F).

Distribution: NEOTROPICAL: Argentina, Brazil.

Fannia punctiventris Malloch, 1934

Figs. 15A-F

Fannia punctiventris Malloch, 1934:207; Ortiz, 1946:157; Seago, 1954:7; Hennig, 1955a:26; Pont, 1972:6; Carvalho *et al.*, 1993:13; 2003:16.

Diagnosis: Small dark brown species. Frontal vitta at narrowest point reduced to a very thin line, 0.25x width of anterior ocellus. Eye scarcely setulose. Antenna and palpus dark brown to black. Thorax dark brown. Two strong *pra* near *spal*. T2 constricted in basal half. C3 with 2 hair-like *p* at apex of posterior surface. F3 with a preapical protuberance only conspicuous on posterior surface, with 1 row of very short *pv*, and a subapical tuft of hair-like *pv* as long as femoral width. T3 lacking medial row of *ad*. Wing clear. Halter yellow-whitish. Abdomen heart-shaped and trimaculated.

Type material examined: Holotype ♂: Chile, Santiago (BMNH).

Other material examined: 1 ♂ Chile, Archipiélago Juan Fernández, Masatierra Yunque 12-II-51 (CEUM). 2 ♀, B° Cumberland, 13-III-51 (CEUM).

Description

Male: body length 3.9 mm.

Head: Frontal vitta black, at narrowest point reduced to a thin line, 0.25x width of anterior ocellus. Frons covered with heavy silvery pruinescence, at uppermost *fr* 0.3x width of anterior ocellus. Twelve long *fr*; 2x

length of flagellum. Eye scarcely setulose, antero-internal facets more than 2x diameter of remaining; 2 rows of *poel* in first quarter. Face and parafacial silvery grey; parafacials at base of flagellum 0.4x width of same and bare. Facial carina grey, gena dark grey to black. Scape and pedicel dark brown, flagellum covered with very heavy silvery-grey pruinescence. Palpus dark brown to black, slightly clavate, the apex 2x width of the base. Lower oral margin concave, grooveless.

Thorax: Dark brown; 1 prescutellar *acrs*; 2+3 *dc*; *pprn* covered with numerous setulae; 2 strong *pra* near *spal*; prealar area bare; 2 *prepm* surrounded by five setulae.

Legs: Dark brown, tibiae slightly clearer. F1 normal (length/width = 5.5), with 1 row of *pd* hair-like and as long as femoral width; 2 rows of hair-like *p*; 1 row of *pv*, short in basal 1/4 with 8 to 9 long *pv* in remaining. T1 with 1 subapical *pd*; 1 apical *v* and *pv*; 1 submedial and 1 apical *ad*, lacking medial row of *ad*. Fore tarsomere 1 0.3x length of t1, tarsomere 4, as long as broad. F2 with 1 row of *ad*; 1 row of short *a*; 1 row of *av*, long and spaced at base, shorter and grouped at apex; 1 complete row of straight *pv*, with a second hooked row in apical 1/4; 1 row of long and hair-like *p*. T2 constricted in basal half; ventral pubescence long and scarce, 0.7x width of tibia; 1 submedial and 4 apical *a*; 1 subapical *ad*; 1 strong *av-v*; 1 submedial and 1 apical *pd*; 1 apical *pv* and 1 *p*. C3 with 2 hair-like *p* at apex of posterior surface. F3 normal (length/width = 5.9), with a preapical protuberance in posterior surface; 1 row of *ad* shorter and dorsally directed towards apex; two apical *av* as long as femoral width; 1 row of very short *pv*, and a subapical tuft of hair like *pv*, as long as femoral width. T3 with 1 submedial and 1 subapical *d*; 1 submedial and 1 apical *ad*, lacking medial row of *ad*; 2 medial *av*; 1 short apical *av*; apex of ventral and posteroventral surface with a weak ctenidium.

Wing: Clear. Lower calypter slightly oval, upper rounded, both white with dark brown margins. Knob of halter yellow-whitish, stalk and base brown.

Abdomen: Heart-shaped, tergite 2 more than 2x width of tergite 4. Dark grey, tergites 2, 3 and 4 trimaculated.

Postabdomen: Posterior margin of sternite 5 profoundly indented and bearing most setae (Fig. 15A). Hypandrium thin, hypandrial arms with apical triangular extensions and directed outwards; postgonite inconspicuous; aedeagus membranous (Fig. 15B). Epandrium slightly broadened in anterior half, bell-

shaped; cercal plate fused, slightly tapering at apex; bacilliform process cork-screw shaped; surstyli medial respect to epandrium, very long, the base narrower than apex (Fig. 15 C-D).

Female: body length 3.8 mm. Differs from male as follows:

Head: Frontal vitta dark brown. Ocellar triangle long, extending up to third *fr* or lower *orb*. Frons and

vitta broad, the distance between eye margins wider than 0.33x head width. Four to five stout *fr*; shorter than flagellum, with interstitial setulae 5x length of setae. Upper and lower *orb* present, with 1 row of long fronto-orbital setulae; *poel* of irregular length and short. Outer and inner verticals longer than in male.

Thorax: Ground colour grey, with brown vittae visible in full length of *acr*, *dc* and *ia* lines.

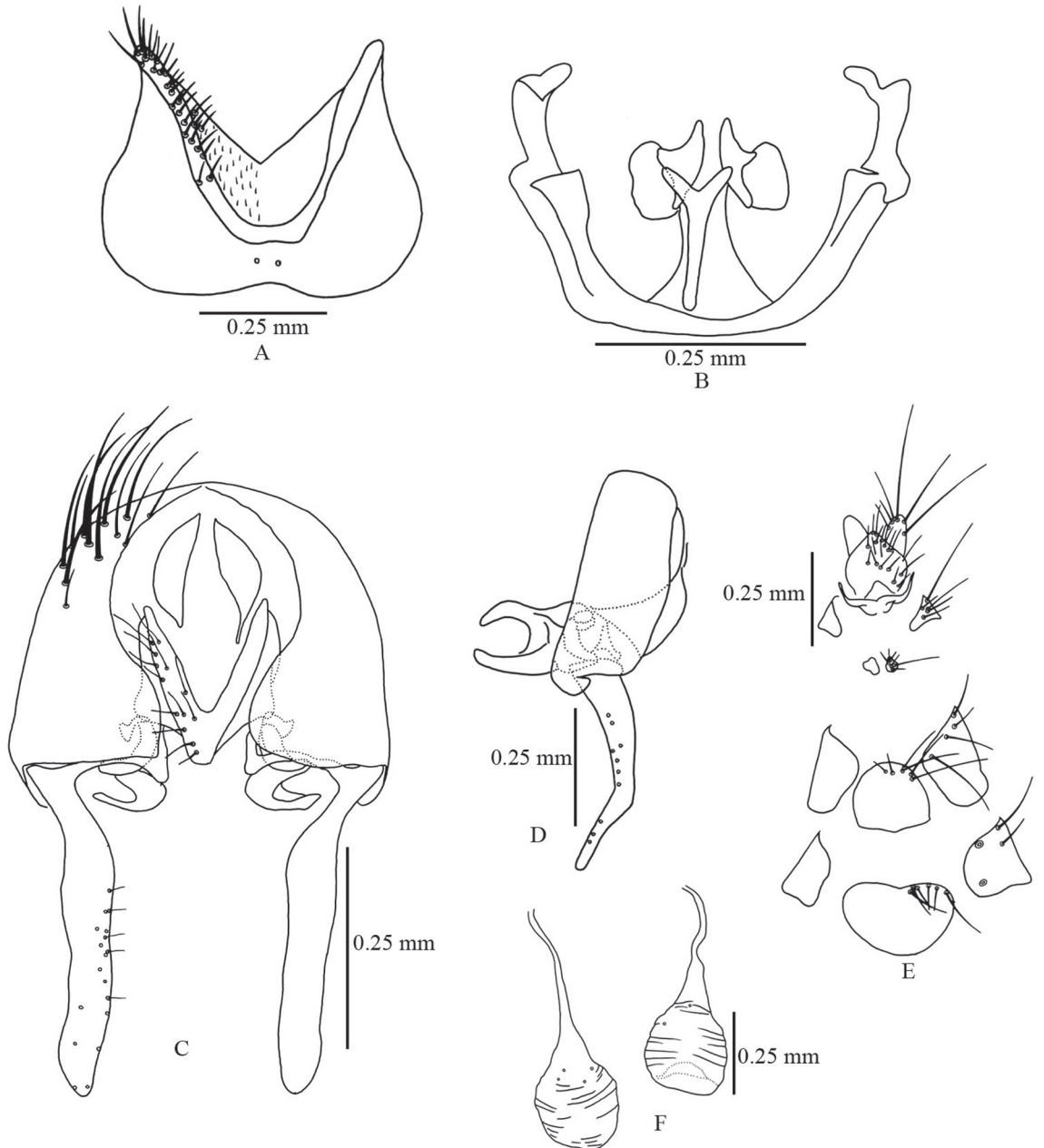


FIGURE 15: *Fannia punctiventris* Malloch. A. Male sternite 5, ventral. B. Male hypandrium, ventral. C. Male terminalia external structures, ventral. D. Male terminalia external structures, lateral. E. Female terminalia external structures, ventral. F. Spermathecae.

Legs: T1 with 1 submedial and 1 apical *ad*. F2: row of *av* absent; 2 to 3 *pv* at base. T2 straight, cone-shaped, the base narrower than apex; ventral pubescence absent; 2 apical and 1 submedial *pv-v*; 1 apical *p*; 1 apical and 1 submedial *pv*. C3 with 1 *p* at apex of posterior surface. F3 lacking preapical protuberance on posterior surface; posterior and posteroventral surfaces bare. T3 with 1 submedial *ad*, the apical *ad* absent.

Postabdomen: Cerci normal, short; anal plate as long as broad and uniformly covered with setulae; sternite 8 reduced to a pair of anterior plates bearing 2 setae and 4 to 5 setulae; post abdominal spiracles 7 and 8 on tergite 6 (Fig. 15E). Two pear-shaped, grooved spermathecae, with partially sclerotized ducts (Fig. 15E).

Distribution: ANDEAN: Chile.

Fannia pusilla (Bigot, 1885)

Ophira pusilla Bigot, 1885:304.

Homalomyia pusilla; Stein, 1907b:285; 1919:132; Séguy, 1937:173.

Fannia pusilla; Ortiz, 1946:157; Pont, 1972:6; Pont & Carvalho, 1994:236; Pont, 2000a:109; 2000b:23-24; Carvalho *et al.*, 1993:14; 2003:16-17.

Diagnosis: Black bluish medium size species. Frontal vitta at narrowest point 6.7x width of anterior ocellus. Eye bare. Parafacialia bare. Antenna and palpus brown. Thorax metallic blue in ground colour, covered with black pruinescence. Two *pra* almost indistinguishable from ground setulae, one situated near *spal* and a second near transverse suture, 3x length of first. C3 bare at apex of posterior surface. T3 with 2 submedial *av*. Wing clear. Halter black.

Type material examined: Holotype ♀, "Chili", col. J. Bigot (UMO).

Description

Female (male unknown): body length 4.0 mm.

Head: Frontal vitta covered with light brown pruinescence, at narrowest point 6.7x width of anterior ocellus. Frons dark brown, at uppermost *fr*; 4x width of anterior ocellus. Seven *fr* 0.6x flagellum. Eye bare,

antero-internal facets of same diameter as remaining; *poel* of regular length. Face and parafacial covered with brown pruinescence; parafacial at base of flagellum 0.5x width of same and bare. Facial carina and gena dark brown. Scape and pedicel light brown, flagellum 1.8x as long as broad and covered with heavy dark grey to brown pruinescence. Arista brown, short pubescent. Palpus dark brown, clavate, the apex more than 2x width of base. Lower oral margin concave, and grooveless.

Thorax: Scutum and scutellum metallic blue in ground colour, covered with black pruinosity. Pleura grey, with blue metallic reflections, and covered with brown pruinescence; 2+3 *dc*; *pprn* covered with numerous long and thin setulae; 2 *pra* almost indistinguishable from ground setulae, one situated near *spal* and a second near transverse suture, 3x length of first; prealar region bare; 2 *prepm* surrounded by numerous long setulae.

Legs: Completely black. F1 normal (length/width: 5.8), 1 row of *pd*; 2 rows of *p* in basal 1/2; 1 complete row of *pv*. T1 with 1 subapical *pd*, 1 apical *v* and *pv*; 1 complete row of setulose *ad* and 1 submedial; 1 apical *ad*. F2 with 1 row of weak *ad*. T2 straight, cone-shaped, with 1 submedial and 3 apical *a*, 1 subapical *ad*; 1 strong straight *av-v*; 1 submedial and 1 apical *pd*; 1 apical *p*; 1 apical *pv*. C3 bare at apex of posterior surface. F3 normal (length/width = 6), with 1 row of *ad*, longer, stouter and dorsally directed towards apex; 1 row of very short *av*, and 2 *av* as long as femoral width in apical 1/4. T3 with 1 submedial and 1 subapical *d*; 1 submedial and 1 apical *ad*; 2 submedial *av*.

Wing: Clear. Lower and upper calypteres rounded, both white. Knob of halter black, stalk and base dark brown.

Abdomen: Heart-shaped, tergite 2 more than 2x width of tergite 4. Metallic blue in ground colour, covered with dark brown to black pruinescence.

Postabdomen: The dissection of the holotype was not possible.

Distribution: ANDEAN: Chile.

Remarks: The original description of *Fannia pusilla* is based on a single specimen, very similar to the female of *F. schnusei*, from which it is separated by the smaller body size and the 2 *av* on T3, instead of 4.

Fannia pusio (Wiedemann, 1830)

Figs. 16A-C

- Anthomyia pusio* Wiedemann 1830:437.
Limnophora exilis Williston, 1896:369. Synonymy by Snyder 1965:273.
Atomogaster pusio; Macquart, 1843a.
Homalomyia femorata Loew, 1861:42; Johnson, 1908:77. Synonymy by Johnson, 1914:448.
Mesazelia trichopoda Blanchard, 1942:57; 1963:135. Synonymy by Carvalho *et al.*, 2003:18.
Fannia pusio; Stein 1911:108; Malloch, 1913:623; Stein, 1919:131-132; Curran, 1934:164; Roberts, 1934:253; Wollcott, 1936:369; Séguy, 1937:113; Ortiz, 1946:157; Wollcott, 1948:497; Seago, 1954:8; Berry & Vaquero, 1957:60; Chillcott, 1961:213; Garcia, 1964; Huckett, 1965:896; Pont, 1972:6; Campos & Peña, 1973:227; Gregor, 1975:58; Linhares, 1978:603; Albuquerque *et al.*, 1981:10; Linhares, 1981:232; Alayo & García, 1983:110; Oliveira, 1986:311; Monteiro-Filho & Peneireiro, 1987:293; Couri & Pamplona, 1991:119; Couri, 1992a:85-88; 1992b:59-67; Carvalho *et al.*, 1993:14; Lomônaco & Prado, 1994:71-79; Marchiori & Prado, 1995:571-575; Campos & Barros, 1995:351-354; Lomônaco & Almeida, 1995a:883-890; Lomônaco & Almeida, 1995b:891-896; Marchiori & Prado, 1996a:93-98; 1996b:573-576; Pinto & Brum, 1998:135-137; Paes-Santos & Moya Borja, 1997:253-261; Rozkošný *et al.*, 1997:45; Marchiori & Prado, 1999:557-563; Marchiori *et al.*, 2000:350-353; Marchiori *et al.*, 2000:354-356; Marchiori *et al.*, 2000a:354-356; 2000b:459-460; Marchiori & Silva, 2001:187-189; Marchiori *et al.*, 2002:101-102; Carvalho *et al.*, 2002:108; Carvalho *et al.*, 2003:17; Gomes *et al.*, 2002:114-118; Marchiori *et al.*, 2002:101-102; Mendes & Linhares, 2002:37; Freitas Al Gazi *et al.*, 2004:169-180
Fannia exilis; Stein 1919:131; Séguy, 1937:167; Pont, 1972:4.
Fannia trimaculata Stein *sensu* Albuquerque, 1945b:1-11.
Fannia trichopoda; Pont, 1972:6; Blanchard, 1975:10; Carvalho *et al.*, 1993:16.

Diagnosis: Small black species. Frontal vitta at narrowest point 0.6x width of anterior ocellus. Eye bare. Parafacial setulose. Antenna dark grey. Palpus brown. Two short and stout *pral*, near the transverse suture near *spal*. T2 thin, basally constricted and with a very

weak subbasal protuberance. C3 with 2 short hair-like setulae at apex of posterior surface, with a subapical tuft of long and curled *pv*, coinciding with protuberance. T3 with long hair-like setae, 3x width of t3, covering entire anteroventral, ventral and posteroventral surfaces. Wing clear. Halter yellowish-white. Abdomen elongated and trimaculated.

Type material examined: *Mesazelia trichopoda*. *Lectotype* (by present designation): ♂, middle specimen of three, labelled: "Argentina/Tucumán"; "Alabama/argillacea"; "3523"; "Mesazelia/trichopoda/Blanchard/Det. E. E. Blanchard" (CICVYA). – *Paralectotypes* (by present designation): 2 ♂ upper and lower specimens on same pin as lectotype (CICVYA).

Other material examined: Mexico: 1 ♀, Tampica Tan, 7-V-1931, col. R.A. Roberts (USNMNH). Bahamas: 1 ♂, Nassau, col. Fred Kanb. (USNMNH). Guatemala: 1 ♂, 1 ♀, Amatillan, 1926, col. Salas (USNMNH). Peru: 1 ♂, 1 ♀, Tingo Maria, 1-XI-1946, col. W. Weycuacn. (FIML); 2 ♂, Lima, 19-IX-1954 (FIML).

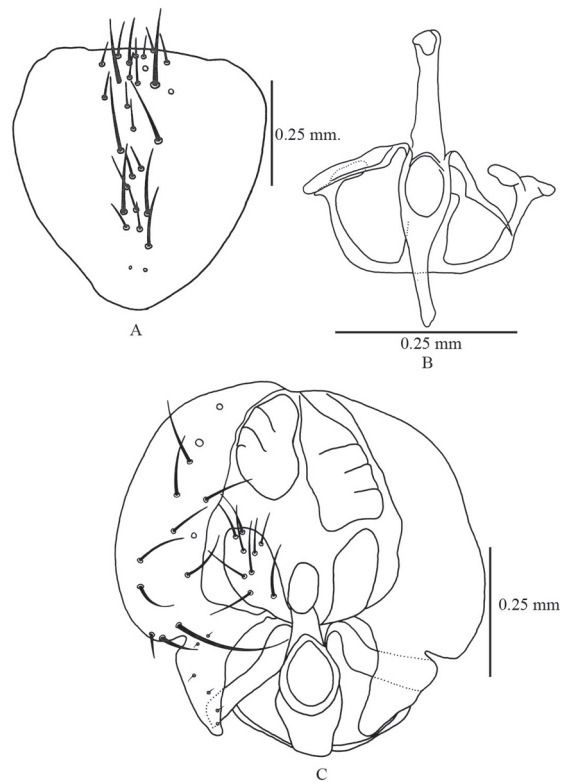


FIGURE 16: *Fannia pusio* Wiedemann. A. Male hind femur, anterior. B. Male sternite 5, ventral. C. Male hypandrium, ventral. D. Male terminalia external structures, ventral. E. Female terminalia external structures, ventral. F. Spermathecae.

Description

Male: body length 3.7-4.5 mm.

Head: Frontal vitta black, at narrowest point 0.6x width of anterior ocellus. Frons covered with heavy silvery grey pruinescence, at uppermost *fr* 0.7x width of anterior ocellus. Ten to 13 short *fr*; 0.8x length of flagellum. Eye bare, antero-internal facets larger than remaining; *pocl* in a single row and of regular length. Face and parafacial silvery grey; parafacial at base of flagellum 0.2x width of same and with short setulae throughout. Facial carina and gena dark grey. Scape and pedicel dark grey, flagellum short and thin, 2 to 2.5x as long as wide and covered with heavy silvery grey pruinescence. Palpus brown, the apex as broad as base. Arista brown, short pubescent. Lower oral margin concave, grooveless.

Thorax: Scutum and scutellum dark brown to black; 3+3 *acr*; 2 prescutellar *acrs*; 2+3 *dc*; *pprn* covered with short setulae; 2 short and stout *pra*, one near the transverse suture and other near *spal*; lacking ground setulae in prealar area; 2 *prepm* lacking surrounding setulae.

Legs: Completely brown. F1 normal to globose (length/width = 4.3), with 1 row of *pd*; 2 rows of *a*; 1 row of *pv* short and thin at base, stouter towards apex. T1 with 1 subapical *pd*; 1 apical *v* and 1 apical *pv*. Fore tarsomere 1 shorter than 0.3x length of T1, tarsomere 4 as wide as long. F2 with 1 row of *ad*; 3 rows of *a*; 1 row of *av* as long as femoral width; 1 row of *pv* thin at base and 2 to 3 rows of shorter, stouter and hooked *pv* at apex; 1 row of thin *p*, stouter and ventrally directed towards apex. T2, thin, basally constricted, with a very weak subbasal protuberance; pubescence on ventral surface very long, slightly shorter than tibial width; 1 subapical *ad*; 1 submedial and 3 apical *a*; 1 strong apical *av-v*; 1 submedial and 1 apical *pd*; 1 apical *pv*; 1 apical *p*. C3 with 2 short hair-like *p* at apex of posterior surface. F3 normal (length/width = 5.4) with a weak preapical protuberance on posteroventral surface; with 1 row of *ad*, longer and dorsally directed towards apex; 1 complete row of *av*, shorter than femoral width and 4 to 5 apical *av* longer than femoral width; 1 subapical tuft of long and curled *pv*, coinciding with protuberance. T3 with 1 submedial and 1 subapical *d*; long hair-like setae, 3x width of T3, covering entire anteroventral, ventral and posteroventral surfaces; 1 short apical *av*; ventral and posteroventral surfaces with a weak ctenidium at apex.

Wing: Clear, both calypteres rounded and yellowish-white. Knob of halter yellowish-white, stalk and base light brown.

Abdomen: Elongated, tergites width approximately equal; dark brown, tergites 2, 3 and 4 trimaculated. Hypopygium not protruding.

Postabdomen: Posterior margin of sternite 5 straight, setae occupying central longitudinal line, weak on posterior margin (Fig. 16A). Hypandrial arms directed inwards, and directly connected to hypandrium; postgonite reduced to small stubs at both sides of aedeagus; epiphallus present, projecting dorsally beyond cercal plate (Fig. 16B). Epandrium wider than long, narrower in anterior region; cercal plate weakly fused; bacilliform process absent; surstyli marginal respect to epandrium and formed by a central and a very short ventral-lateral process bearing few short setulae; surstyli broadly connected to epandrium (Fig. 16C).

Female: body length 4.8-5.2 mm. Differs from male as follows:

Head: Frontal vitta with heavy grey-brown pruinescence. Ocellar triangle long, extending up to third *fr*. Fronto-orbital plate silvery pruinose, pruinescence denser near eye margins and disappearing near vitta, where it becomes reddish-brown. Frons and vitta broad, the distance between eye margins is 0.33x head width. Antero-internal facets as large as remaining. Three to four short *fr*; 0.7x length of flagellum and 4 to 5 shorter interstitial setulae. Upper and lower *orb* present, and 1 row of long fronto-orbital setulae; *pocl* of regular length and short, less than 0.5x length of outer and inner verticals, the latter longer than in male.

Legs: F2 with 5 to 6 rows of short and thin *a*; 1 row of short *av*; row of *pv* short. T2 straight, base as broad as apex; ventral pubescence absent. F3 lacking preapical protuberance; 1 row of short *av*, 1 or 2 subapical *av* longer than femoral width. T3 with 2 medial and 1 short apical *av*; ctenidium on ventral and posteroventral surfaces conspicuous.

Postabdomen: Cerci normal, short; anal plate as broad as long and uniformly covered with setulae; sternite 8 reduced to 1 posterior pair of small plates bearing setulae; post abdominal spiracles 7 and 8 on tergite 6. Two oval and wrinkled spermathecae, with partially sclerotized ducts.

Distribution: COSMOPOLITAN.

Fannia roigi sp. n.

Fig. 1E-F, 17A-D

Diagnosis: Medium to small dark grey species. Frontal vitta 1.25x width of anterior ocellus. Eye bare. Para-facial bare. Antenna grey. Palpus yellow-orange. Scutum grey, with broad brown vitta along *acr*, *dc* and *ia* lines, *dc* line absent in apical 1/4 of scutum. T2 constricted at base, with a weak subbasal protuberance; with 1 submedial and 1 truncate apical *pd*. C3 with two hair-like setulae at apex of posterior margin. F3 thin with a preapical protuberance on anterior, ventral and posterior surface; with 1 row of distally curved *av*, as long as femoral width, forming a preapical tuft; and a tuft of long *pv*, coinciding with preapical protuberance. Hind tarsomere 1 expanded and flattened. Wing clear. Halter yellowish-white. Abdomen yellow-orange in antero-lateral margins of tergites 3 and 4.

Ethymology: The species name is a patronym in honour of Dr. Sergio Roig-Juñent, to whom it is dedicated for his help in collecting the type series.

Type material examined: *Holotype* ♂ Argentina: Córdoba, San Javier, 3-XII-2000, cols. Domínguez & Roig (IADIZA). *Paratypes*: 23 ♂ same data as holotype; 1 ♂ Argentina: Tucumán: V. Padre Monti, 7-II-1948, col. E. Golbach. (FIML); 1 ♂, 1 ♀, Tucumán: Lacavera, 23/25-XI-95, cols. Aczel & Golbach (FIML); 1 ♂, Tucumán: Qda La Loma, 21-XII-95, R. Golbach (FIML); 1 ♀, Tucumán: Qda. Cain, 18/19-XII-95, col. R. Golbach (FIML).

Description

Male (female unknown): body length 3.75-4.25 mm.

Head: Frontal vitta black, at narrowest point 1.25x width of anterior ocellus. Fronto-orbital plate covered with heavy silvery pruinescence, at uppermost *fr* slightly narrower than anterior ocellus. Twelve very long *fr*; 1.5x length of flagellum. Eye bare, antero-internal eye facets very large, more than 2x diameter of remaining; *pocl* of regular length. Face and parafacial silvery pruinose; parafacial at base of flagellum as broad as same and bare. Facial carina black, gena dark grey. Scape and pedicel dark grey, flagellum short and broad, 1.6x as long as broad and heavily covered with silvery grey to brown pruinosity. Arista light brown at base, black at apex; short pubescent. Palpus yellow-orange, slightly clavate, the apex 2x width of base. Lower oral margin concave, straight and groove less.

Thorax: Scutum grey, with broad brown vitta along *acr*, *dc* and *ia* lines, *dc* line absent in apical fourth of scutum; pleuron and apex of scutellum grey; *pprn* scarcely covered with setulae; 2 very short and thin *pra* near *spal*, almost indistinguishable from ground setulae; prealar area covered with setulae; 2 *prepm* surrounded by numerous setulae.

Legs: Completely dark brown, tarsi black. F1 thin (length/width = 6.3) with 1 row of *pd* as long as femoral width; 1 row of hair-like *p* as long as femoral width; 1 row of *pv* as long as femoral width. T1 with 1 very long subapical *pd*; 1 apical *v*; 1 apical *pv*; 1 submedial and 1 apical *ad*, lacking medial row of *ad*. Fore tarsomere 1 0.3x length of T1, tarsomere 4 as broad as long. F2 with 1 row of *ad* and 1 row of *av*; 1 row of long, curled and hair-like *pv*; 1 row of *p*, longer and ventrally directed towards apex. T2 constricted at base, with a weak subbasal protuberance; pubescence on ventral surface very long, as long as tibial width; 1 submedial and 2 apical *a*; 1 subapical *ad*; 1 strong and curved *av-v*; 1 submedial and 1 truncate apical *pd*; lacking apical *pv* and *p* (Fig. 11). C3 with

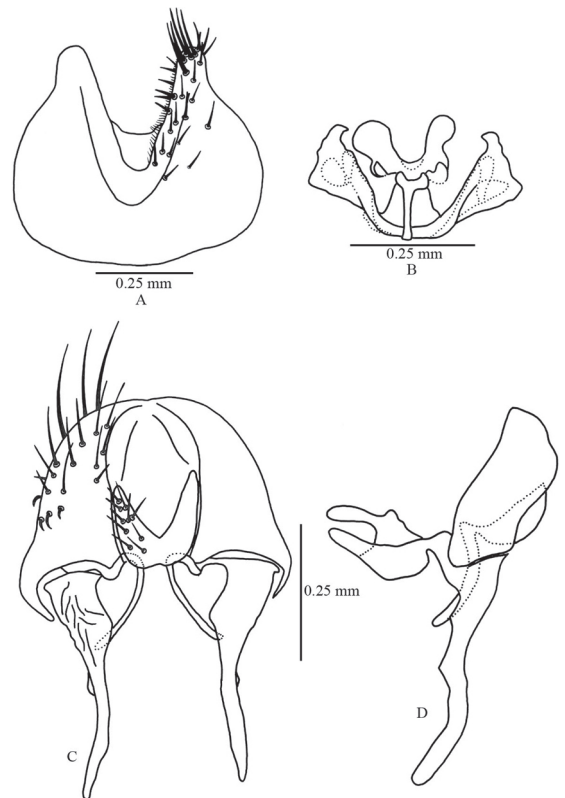


FIGURE 17: *Fannia roigi* sp nov. A. Male sternite 5, ventral. B. Male hypandrium, ventral. C. Male terminalia external structures, ventral. D. Male terminalia external structures, lateral.

two hair-like setulae at apex of posterior margin. F3 thin (length/width = 10); with a preapical protuberance on anterior, ventral and posterior surfaces, with 1 row of *ad* longer and dorsally directed towards apex; 1 row of curled *av*, as long as femoral width, forming a preapical tuft 2x width of f3 and 1 preapical *av* separated from row; tuft of long *pv*, 2.5x width of femur, coinciding with preapical protuberance (Fig. 1J). T3 with 1 submedial and 1 subapical *d*; 1 submedial and 1 apical *ad*, lacking medial row of *ad*; 1 strong apical and 3 subapical *av*; ventral and posteroventral surfaces with a strong apical ctenidium (Fig. 1J). Hind tarsomere 1 expanded and flattened (Fig. 1J).

Wing: Clear; lower calypter oval, upper rounded, both white. Knob of halter and stalk yellowish-white, light brown at base.

Abdomen: Heart-shaped, tergite 2 2x width of tergite 4. Dark brown, with yellow markings on antero-lateral margins of tergites 3 and 4.

Postabdomen: Posterior margin of sternite 5 indented and bearing most setae, with few setae on central longitudinal line (Fig. 20A). Hypandrial arms with broad lateral expansions and directed outwards; postgonite inconspicuous, aedeagus membranous (Fig. 20B). Epandrium broadened in anterior region, bell-shaped; cercal plate fused, slightly bilobed at base; bacilliform process curved at base, and straight in median and apical portion; surstyli long, simple and medial, weakly connected to epandrium (Fig. 20C, D).

Distribution: NEOTROPICAL: Northern Argentina, provinces of Córdoba and Tucumán.

Discussion: *Fannia roigi* does not seem to belong to any of the previously proposed Neotropical species group of *Fannia*. It shows similarities in the structure of the male terminalia (in the shape of surstylus) with *F. los gateados*. This species can be separated from the remaining species of *Fannia* of southern South America by the yellow colouration of the abdomen, and the shape of hind tarsomere 1, which is expanded and flattened.

Fannia scalaris (Fabricius, 1794)

Figs. 1D, 18A-H

Musca scalaris Fabricius, 1794:332; Hennig, 1955b:8-10; 1955c:81.

Fannia scalaris; Malloch, 1934:203; Séguy, 1937:174; Ortiz, 1946:157; James, 1947:127; Chill-

cott, 1961:61; Pont 1972:6; Albuquerque *et al.*, 1981:10; Almeida *et al.*, 1985:279-284; Queiroz & Carvalho, 1987:277; Carvalho *et al.*, 1993:15; Guimarães & Papavero, 1999:266; Carvalho *et al.*, 2002:108-112; 2003:18.

Diagnosis: Medium to large size grey-bluish species. Frontal vitta at narrowest point as wide as anterior ocellus. Eye bare. Parafacial bare. Antenna dark grey to black. Palpus dark grey to brown. Thorax covered with light bluish to grey pruinescence, with grey vittae along full length of *acr*, *dc*, and *ia* lines. One *pra* near *spal*, 0.2x length of same. F1 with a subapical anterior patch of very short setulae. C2 with 3 strong spines on anterior surface. T2 thin, constricted at base, lacking subbasal protuberance, with a very conspicuous preapical protuberance. C3 with 1 setulae at apex of posterior margin. F3 lacking preapical protuberance on posteroventral surface; with 1 row of very short *pv*; posterior and posterodorsal surfaces covered with hair-like setulae in basal 1/4. T3 with 4 to 5 medial *av* and 3 to 4 medial *pv*. Wing clear. Halter yellow. Abdomen elongated, greyish blue.

Material examined: Canada: Ontario 3 ♂, 3 ♀, London, 1996 (FMNH). USA: Colorado 1 ♀, (FMNH). Argentina: Mendoza, 5 ♂, 20 ♀, Valles fértiles, XI-2001. 1 ♂, Guaymallén. I-2002, Col. Domínguez (IADIZA). Neuquén 5 ♂, San Martín de los Andes, II-2001, Col. Domínguez, (IADIZA), Río Negro, 1 ♂, Isla Choel Choel, 21-I-1946, (FIML). Chile: 1 ♂, 1 ♀, Victoria, 25-X-1932, (USNMNH). 1 ♂, 1926 (USNMNH).

Description

Male: body length 6.1-6.7 mm.

Head: Frontal vitta dark grey, at narrowest point as wide as anterior ocellus. Fronto-orbital plate covered with silvery grey pruinescence, at uppermost *fr* 0.75x width of anterior ocellus. Thirteen long *fr*; 1.4x length of flagellum. Eye bare, antero-internal facets larger than remaining; *pocl* irregular in length. Face and parafacial silvery grey, parafacial at base of flagellum 0.9x width of same and bare. Facial carina and gena dark grey. Scape and pedicel dark grey to black, flagellum short, 2.2x as long as wide, heavily covered with silvery-grey pruinescence, yellowish at apex. Arista completely dark brown, short pubescent. Palpus dark grey to brown, straight, the apex 1.5x width of base. Lower oral margin straight and groove less.

Thorax: Scutum grey covered with light bluish to grey pruinescence, grey vittae along full length of *acr*, *dc*, and *ia* lines; apex of scutellum and pleura grey; 3+3 *acr*, with a fourth row of post-sutural *acrs* in apical 1/3 and 1 prescutellar *acrs*; *pprn* covered with setulae; 1

pra near *spal*, 0.2x length of same; prealar area covered with setulae; 2 *prepm* surrounded by several setulae.

Legs: Brown to dark brown, tibia yellow at base. F1 normal (length/width = 6), with a subapical anterior

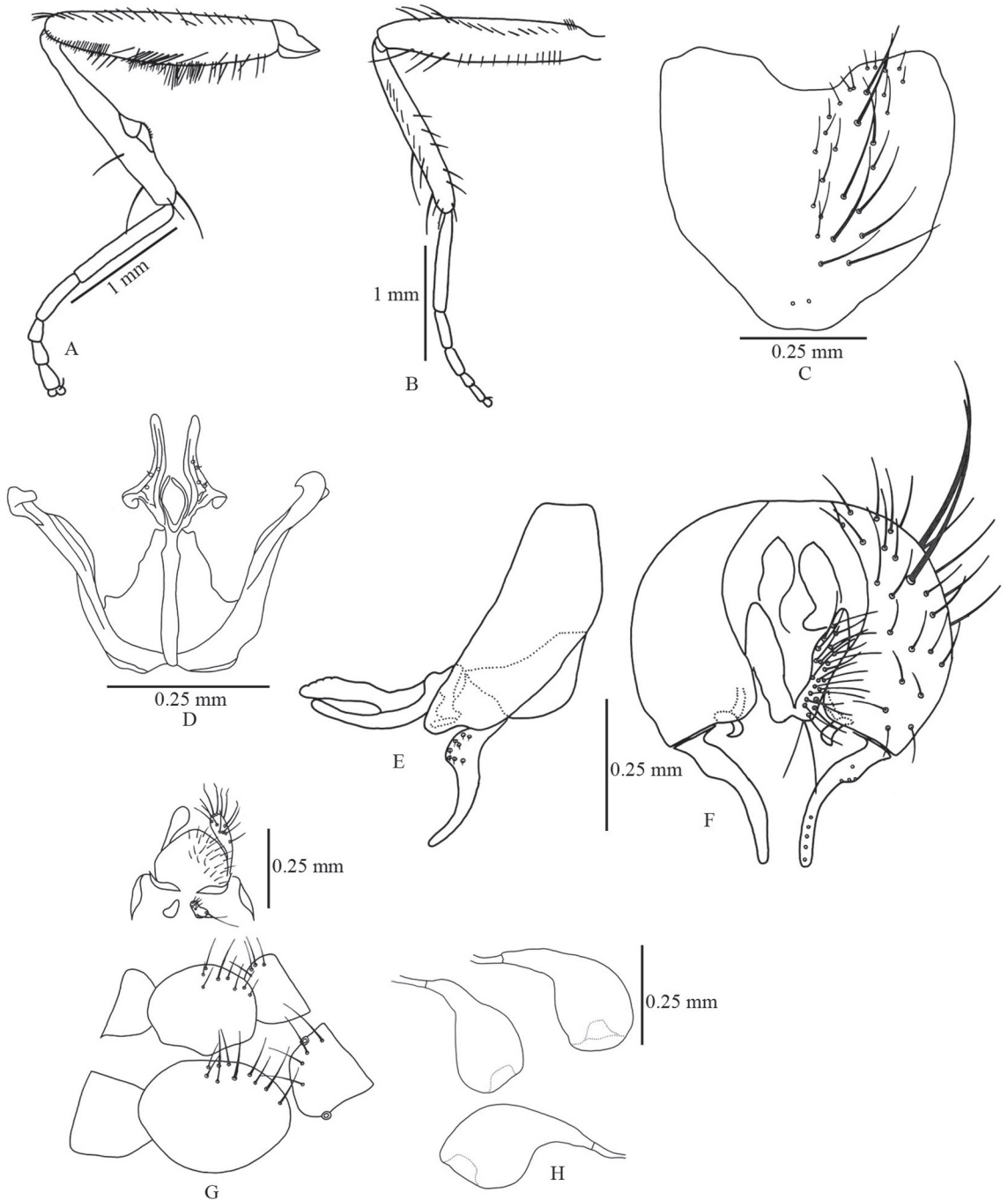


FIGURE. 18: *Fannia scalaris* (Fabricius). A. Male mid leg, posterior. B. Male hind leg, anterior. C. Male sternite 5, ventral. D. Male hypandrium, ventral. E. Male terminalia external structures, ventral. F. Male terminalia external structures, lateral. G. Female terminalia external structures, ventral. H. Spermathecae.

patch of very short setulae; 1 row of *pd*; 2 rows of *p*; 1 complete row of *pv*, longer than femoral width. T1 with 1 subapical *pd*; 1 apical *v*; 1 apical *pv*; 1 apical and 2 submedial *ad*, lacking medial row of *ad*. Fore tarsomere 1 slightly longer than 0.3x length of T1; tarsomere 4 short, as broad as long. C2 with 3 strong spines on anterior surface (Fig. 1D). F2 with 1 row of *ad*; 2 rows of short *a*; 1 row of strong *av*; 1 long basal *pv* and 1 row of distally hooked *pv*, that form a clump in medial 1/3 of posteroventral and ventral surfaces; 1 row of *p*, long and hair-like at base, which are stouter and ventrally directed towards apex (Fig. 18A). T2 thin, constricted at base, lacking subbasal protuberance, with a very conspicuous preapical protuberance, broadly glossy on its outer margin, ventral mat negligible, scarcely visible except preapically; ventral pubescence very short, 0.3x tibial width; 1 submedial and 3 apical *a*; 1 subapical *ad*; 1 very long and stout *av-v*; 1 submedial and 1 apical long *pd*; 1 apical *pv*; 1 long apical *p* (Fig. 18A). C3 with 1 setulae at apex of posterior margin. F3 normal (length/width = 5.7), lacking preapical protuberance on posteroventral surface, with 1 row of *ad*, longer and dorsally directed towards apex; 1 row of short *av* and 4 long *av* in apical 1/4, as long as femoral width; 1 row of very short *pv*; posterior and posterodorsal surfaces covered with hair-like setulae in basal 1/4 (Fig. 18B). T3 with 1 submedial and 1 subapical *d*; 1 submedial, 1 apical, and 7 medial *ad*; 1 short apical and 4 to 5 medial *av*; 3 to 4 medial *pv*; ventral and posteroventral surfaces with a weak ctenidium at apex (Fig. 18B).

Wing: Clear. Lower calypter oval, upper rounded, both yellowish-white. Knob of halter yellow, stalk and base brownish-yellow.

Abdomen: Elongated, the width of all tergites almost equal; greyish blue, covered with dark grey pruinescence, anterior margins of tergites 2, 3 and 4 with lighter colouration. Hypopygium not protruding.

Postabdomen: Posterior margin of sternite 5 weakly indented, and bearing most setae, these also in central longitudinal line (Fig. 18C). Hyandrial arms directed outwards; postgonite inconspicuous; aedeagus membranous (Fig. 18D). Cercal plate fused, slightly bilobed in anterior region; bacilliform process corkscrew shaped; surstyli short, simple and marginal, weakly connected to epandrium (Figs. 18E-F).

Female: body length 5-5.7 mm. Differs from male as follows:

Head: Frontal vitta dark brown, reddish near lunula in some specimens. Ocellar triangle very short, extending up to the space between uppermost and second *fr*. Fronto-orbital plate and vitta broad, the distance between eye margins wider than 0.33x of head width. Antero-internal eye facets slightly broader than remaining. Seven *fr*; with 2 to 3 *fr* longer than flagellum, remaining shorter. Upper and lower *orb* present, with two rows of fronto-orbital setulae; *poel* shorter than 0.3x length of outer and inner vertical setae, the latter longer than in male.

Legs: F1 lacking preapical patch of *a*; 1 row of *p* as long as *pd* and 3 shorter rows of *p*. C2 lacking spines on anterior surface. F2 with 5 rows of short and thin *a*; 1 long basal and 1 short row of *pv*, shorter than 0.5x width of F2, shorter at apex. T2 cone-shaped, the base narrower than the apex. Ventral pubescence absent. T3 with 3 short medial and 1 short apical *av*.

Abdomen: Slightly heart-shaped, tergite 4 less than 0.5x width of tergite 2. Uniformly dark grey.

Postabdomen: Cerci normal, short; anal plate as broad as long and covered with setulae throughout; sternite 8 reduced to a small pair of plates bearing 2 long setae in anterior region and 4 to 5 very short spinules on posterior region; postabdominal spiracles 7 and 8 on tergite 6 (Fig. 18G). Three pear-shaped, smooth, spermathecae; one slightly smaller than remaining, all with partially sclerotized ducts (Fig. 18H).

Distribution: COSMOPOLITAN.

Fannia schnusei Stein, 1911

Figs. 1B-C, 19 A-F

Fannia schnusei Stein, 1911:106; 1919:132; Malloch, 1934:205; Séguéy, 1937:174; Ortiz, 1946:157; Pont, 1972:6; Albuquerque *et al.*, 1981:10; Carvalho *et al.*, 1993:15; Pont & Carvalho, 1994:236; Pont, 2001:461; Carvalho *et al.*, 2003:18-19.

Diagnosis: Large black bluish species. Frontal vitta at narrowest point 1.5x width of anterior ocellus. Eye densely covered with long setulae. Parafacial bare. Antenna and palpus black. Thorax lacking vittae. Two *pra*, 1 near *spal* and 1 near transverse suture. Fore tarsi yellowish white, fore tarsomeres 1-4, strongly expanded and flattened, bearing 1 apical thorn on posterior margin. F2 strongly curved, with a preapi-

cal protuberance on anteroventral surface. T2 curved, constricted at base, with a prominent subbasal protuberance. Mid tarsomere 1 with a strong ventral basal crest, followed by a long seta. C3 bare at apex of posterior surface. F3 normal to thin strongly bent, with a medial ventral protuberance as broad as femoral width, with a preapical tuft of hair-like and curled *pv*, 2x femoral width. T3 expanded and flattened at

sub apex, anteroventral and ventral surfaces densely covered with very long and curled setae. Wing lightly tinted. Halter black. Abdomen heart-shaped, metallic blue in ground colour covered with dark brown to black pruinescence.

Type material examined: Paralectotype ♀. *Fannia schnusei* Chile, Valparaiso, 12-IX-1902 (SMTD)

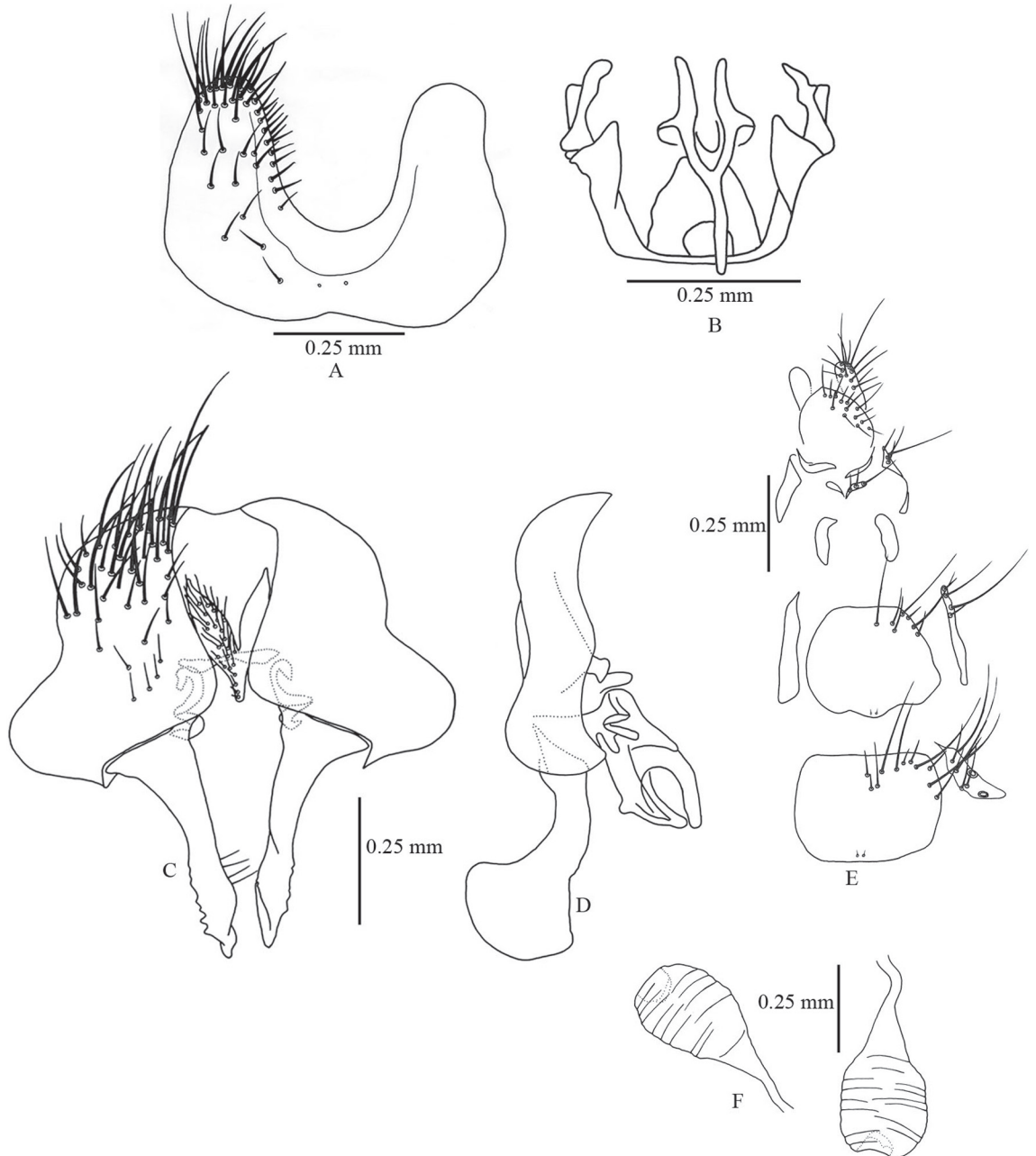


FIGURE 19: *Fannia schnusei* Stein. A. Male sternite 5, ventral. B. Male hypandrium, ventral. C. Male terminalia external structures, ventral. D. Male terminalia external structures, lateral. E. Female terminalia external structures. F. Spermathecae.

Other material examined: Argentina: Neuquén 1 ♂, Pucará, Parque Nacional Lanín, X-1952/II-1953, col. Schajiovski (FIML). V Región 7 ♂, 7 ♀, Melipilla, Curacavi, Lligues de Miraflores, 23-XI-2001, col. J. Solervicens (CEUM). 2 ♂, Valparaíso, Quinta Vergara, 23-X-1963, col. N. Hinchin (CEUM). 1 ♂, EL Salto, Valparaíso, 3-I-1963, col. C. Vivar (CEUM). 2 ♂, Valparaíso, El Granizo, 3-I-1964, col. N. Hinchin (CEUM). 1 ♂, Santiago, Caleu, 8-XII-1987, col. Cerda (MNCN); 1 ♀, Santiago, Caleu, 9-IV-1988, col. Cerda (MNCN). 1 ♂, Santiago, Tiltil, Caleu, 26-IX-1992, col. Cerda (MNCN). X Región. 1 ♂, 1 ♀, Angol, 9-VII-1928 (from decayed squash) (USNMNH); 1 ♂, Puerto Varas, Llanquihue, 1-XII-1926, cols. Shannon & Del Ponte (USNMNH). Arauco 1 ♂, Isla Mocha, 15/19-III-1971, (CEUC).

Description

Male: body length 7-7.6 mm.

Head: Frontal vitta covered with brown pruinescence, at narrowest point 1.5x width of anterior ocellus. Fronto-orbital plate dark grey, at uppermost *fr*; 0.33x width of anterior ocellus. Twenty long *fr*; 1.4x length of flagellum. Eye densely covered with long setulae, antero-internal facets larger than remaining; *poel* of irregular length in first 1/4. Face and parafacial covered with dark grey pruinescence; parafacial at base of flagellum 0.7x width of same and bare. Facial carina reddish-brown. Gena dark grey to black. Scape and pedicel black, flagellum 2.1x as long as wide and covered with dark grey pruinescence. Arista dark brown at base, lighter brown at apex, short pubescent. Palpus dark brown to black, the apex about as wide as base. Lower oral margin light grey, slightly concave and grooveless.

Thorax: Scutum and scutellum metallic blue in ground colour, covered with black pruinescence. Pleuron grey with blue metallic reflections and covered with brown pruinescence; 4 (3)+4 (6) *acr*; 1 prescutelar *acrs*; *pprn* covered with several long setulae; 2 *pra*, 1 short, almost indistinguishable from ground setulae, near *spal* and a second, 3x length of first, near transverse suture; prealar region covered with long setulae; 2 *prepm* surrounded by numerous long setulae.

Legs: Completely black. F1 normal to thin (length/width = 6.5); 1 row of *pd*; 5 to 6 rows of hair-like *p*; 1 row of *pv*. T1 with 1 subapical *pd*; 1 apical *v* and *pv*; 1 row of setulose *ad* and 1 submedial and 1 apical *pd*. Fore tarsi yellowish white, tarsomeres 1-4,

strongly modified, expanded and flattened and bearing 1 apical thorn on posterior margin (Fig. 1B). F2 strongly curved and with a preapical protuberance on anteroventral surface, 1 row of weak *ad*; 1 row of *a*; 1 row of hair-like *av*, as long as femoral width at base, shorter and hooked at apex; 2 rows of *pv*, one row long and stout, the other shorter and thinner and a third row of shorter row of *pv* in apical third, where 3 rows are hooked; 1 row of *p*. T2 curved, constricted at base, with a prominent subbasal protuberance; ventral pubescence very dense and thin, 0.5x tibial width; 1 long and curved submedial and 3 long apical (the central seta longer) *a*; 1 subapical *ad*; 1 strong and straight apical *av-v*; 1 submedial and 1 apical *pd*, both reduced; 1 apical short and stout *p*; apical *pv* absent. Mid tarsomere 1 with a strong ventral basal crest, followed by a long seta. C3 bare at apex of posterior surface. F3 normal to thin (length/width = 9.8), strongly curved, with a medial ventral protuberance as broad as femoral width; 1 row of *ad*, longer, stouter and dorsally directed towards apex; 1 row of *av*, interrupted preapically and 1 *av* at apex; a preapical tuft of hair-like and curled *pv*, 2x width of femur (Fig. 1C). T3 expanded and flattened at subapex; 1 submedial and 1 subapical *d*; 1 submedial and 1 apical *ad*, lacking medial row of *ad*; anteroventral and ventral surfaces densely covered with very long and curled setae (Fig. 1C).

Wing: Clear, lightly tinted. Lower calypter rounded, upper oval, both white with brown outer margins. Knob of halter black, stalk and base dark brown.

Abdomen: Heart-shaped, tergite 2 more than 2x width of tergite 4; metallic blue in ground colour covered with dark brown to black pruinosity; tergites 2-4, darker in central longitudinal line and posterior margins. Hypopygium not protruding.

Postabdomen: Posterior margin of sternite 5 profoundly indented, and bearing most of setae (Fig. 19A). Hypandrial arms directed outwards; postgonite inconspicuous; aedeagus membranous (Fig. 19B). Epandrium strongly broadened on posterior region, bell-shaped; cercal plate fused, tapering towards anterior region; bacilliform process cork-screw shaped; surstylus medial, long, broad at base and strongly clavate, weakly connected to epandrium (Figs. 19C-D).

Female: body length 6-6.5 mm. Differs from male as follows:

Head: Ocellar triangle short, extending up to second *fr*. Frontal vitta light brown to reddish-brown. Frons

and vitta broad, distance between eye margins wider than 0.33x head width. Ten to 12 *fr*; 7 longer than flagellum. Upper and lower *orb* present, with 3 to 4 rows of orbital setulae. Eye sparsely pubescent; *pocl* of irregular length throughout. Facial carina and gena reddish-brown.

Legs: Fore tarsi unmodified in shape and colour, black; fore tarsomere 1 less than 0.33 length of T1, tarsomere 4 as long as broad. F2 with 3 rows of *a*; lacking rows of *av* and *pv*. T2 cone-shaped, narrow at base and broadened towards apex, ventral pubescence absent; 1 apical *pv*; 1 apical *p*. Mid tarsomere 1 lacking basal spine and seta on ventral margin. F3 lacking medial posteroventral protuberance; 1 short row of *av*, 1 sub-apical, and 1 apical *av*; lacking subapical tuft of *pv*. T3 not modified in shape and lacking long and curled setae on anteroventral surface, with 2 to 3 medial *av*.

Postabdomen: Cerci normal, short; anal plate longer than broad and covered with setulae; sternite 8 reduced to a pair of circular posterior plates bearing 2 setae and 4 to 5 setulae; post abdominal spiracles 7 and 8 on tergite 6 (Fig. 19E). Two pear-shaped spermathecae, slightly grooved, with partially sclerotized ducts (Fig 19F).

Distribution: ANDEAN: Southern Chile and Argentina.

***Fannia setosa* (Bigot, 1885)**

Figs. 20A-D

Dasyphima armata Bigot, 1882:254 (& 1883: clxxxviii). [Junior secondary homonym in *Fannia* of *Anthomyia armata* Meigen, 1826]

Ophira setosa Bigot, 1885:303.

Fannia setosa; Stein, 1907b:286-287; Schnabl & Dziedzicki, 1911:208; Malloch, 1934:204; Pont, 1972:6; Carvalho *et al.*, 1993:15; Pont & Carvalho, 1994:231-236; Pont, 2000a:110; 2000b:25-26; Carvalho *et al.*, 2003:19.

Fannia armata; Stein, 1907a:212; 1907b:286-287; Malloch, 1934:203; Séguy, 1937:167; 1938:119; Pont, 2000a:96; 2000b:5.

Fannia errata Malloch, 1934:203; Ortiz, 1946:157.

Fannia steinella Albuquerque, 1953:496.

Diagnosis: Large species, dark brown with blue reflections. Frontal vitta at narrowest point 0.6x width of anterior ocellus. Parafacial bare. Antenna and palpus dark brown to black. One *pra dorsad spal*, 0.33x length

of same. Fore tarsi partially yellowish-white, tarsomeres 2-4, slightly expanded and flattened. T2 thin, with strong subbasal protuberance. Mid tarsomere 1 with a basal ventral crest, followed by a short and stout seta. C3 bare at apex of posterior margin. F3 very thin (length/width = 10), and bent, with a preapical protuberance on ventral surface, lacking medial row of *ad*. Wing brown tinted. Halter dark brown to black. Abdomen slightly elongated, dark brown with metallic blue reflections, and darker markings on posterior margin and central longitudinal line of tergites 2, 3 and 4.

Type material examined: *Dasyphima armata*. Lectotype ♂, Chile, Col. J. Bigot (UMO); *Paralectotype* ♂ “chilensis” J. Bigot (UMO). *Ophira setosa*. Lectotype ♂, Bigot (UMO); *Ophira setosa*. 2 *Paralectotypes* ♂, Col. Bigot (UMO).

Description

Male (female unknown): body length 8.8-9.5 mm.

Head: Frontal vitta dark brown, at narrowest point 0.6x width of anterior ocellus. Frons covered with silvery

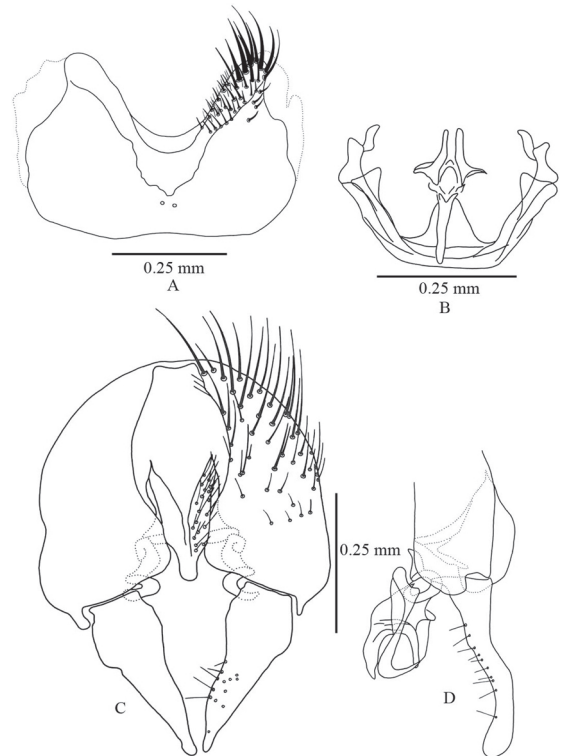


FIGURE 20: *Fannia setosa* (Bigot). A. Male sternite 5, ventral. B. Male hypandrium, ventral. C. Male terminalia external structures, lateral. D. Male terminalia external structures, ventral.

pruinescence, at uppermost *fr* 0.5x width of anterior ocellus. Seventeen to 18 *fr*; 1.4x length of flagellum. Eye scarcely pilose, antero-internal facets much larger than remaining; *poel* of irregular length. Face and parafacial silvery grey; parafacial at base of flagellum 0.6x width of same and bare. Facial carina black. Gena dark grey to black. Scape and pedicel dark brown; flagellum 2.3x as long as wide and heavily covered with silvery-grey pruinescence. Arista dark brown, short pubescent. Palpus dark brown to black, the apex 1.5 to 2x width of base. Lower oral margin slightly convex and grooveless.

Thorax: Dark brown with blue reflections throughout; 3+4 *acr*; 1 prescutelar *acrs*; 2+3 *dc*; *pprn* covered with long and hair-like setae; 1 *pra* dorsad *spal*, 0.33x length of same; prealar area with few setulae; 2 *prepm* densely surrounded by long hair-like setulae.

Legs: Completely black. F1 thin (length/width = 7.3); with 1 row of *pd* as long as femoral width; 3 to 4 rows of long and hair-like *p*; 1 row of *pv*, short at base and as long as femoral width at apex. T1 with a subapical *pd*; 1 apical *v* and 1 apical *pv*. Fore tarsi partially yellowish-white, fore tarsomeres 2-4, slightly expanded and flattened. F2 with 1 row of *ad* as long as femoral width; 1 row of *av* as long as femoral width, straight at base, stouter, shorter and hooked at apex; 1 row of *pv* hair-like in basal 3/4, shorter and stouter towards apex, 3 to 4 very short and stout apical *pv*; 1 row of *p*, long and thin at base, stouter and ventrally directed at apex. T2 thin, with a strong subbasal protuberance; ventral pubescence long, as long as tibial width; 1 submedial and 4 apical *a*; 1 subapical *ad*; 1 strong apical *av-v*; 1 submedial and 1 apical *pd*; 1 apical *p*; 1 very long apical *pv*. Mid tarsomere 1 with a basal ventral crest, followed by a short and stout seta. C3 bare at apex of posterior margin. F3 very thin (length/width = 10), and bent, with a preapical protuberance on ventral surface; 1 row of *ad* longer and dorsally directed towards apex; 1 row of *av* as long as femoral width at base, longer at apex; with a preapical tuft of long *pv* 2x femoral width, coinciding with protuberance; basal hair-like *pd*. T3 with 2 very long *d*, the submedial *d* 1.55x length of subapical; 1 submedial and 1 apical *ad*, lacking medial row; 2 medial and 1 apical *av*; apex of ventral and posteroventral surfaces with a weak ctenidium.

Wing: Brown tinted. Lower calypter broad and oval, upper rounded, both white with dark brown outer margins. Halter dark brown to black.

Abdomen: Weakly elongated, tergite 2 slightly broader than tergite 4. Dark brown with metallic blue reflec-

tions, with darker markings on posterior margin and central longitudinal line of tergites 2-4. Sternite 1 covered with long hair-like setae.

Postabdomen: Posterior margin of sternite 5 bilobated and bearing stout setae (Fig. 20A). Hypandrium thin, hypandrial arms with lateral triangular extension; postgonite inconspicuous; aedeagus membranous (Fig. 20B). Epandrium slightly broadened in anterior margin, bell-shaped; cercal plate fused tapering at apex (anterior); bacilliform process cork-screw shaped; surstyli simple, marginal, shorter than epandrium and slightly clavate; weakly connected to internal margin of epandrium (Fig. 20C-D).

Distribution: ANDEAN: Chile.

Fannia tucumanensis Albuquerque, 1957

Figs. 21A-D

Fannia tucumanensis Albuquerque, 1957:2; Pont, 1972:6; Albuquerque *et al.*, 1981:10 19 and 22; Carvalho *et al.*, 1993:16; Lopes *et al.*, 1997:8; Carvalho *et al.*, 2003:20.

Diagnosis: Frontal vitta at narrowest point as wide as anterior ocellus. Eye bare. Parafacial bare. Antenna and palpus dark brown. Scutum grey with brown vitta visible along *acr*, *dc* and postsutural *spal*. One *pra* very near *spal*, almost indistinguishable from ground setulae. F2 with 1 very long basal *pv* followed by 2 medial rows of hooked *pv*, and 5 to 6 rows of same forming a thick ctenidium in apical 1/4. T2 constricted in basal half, lacking subbasal protuberance. F3 thin, slightly curved, with a weak preapical protuberance on posteroventral surface, and with 1 row of long, thin and hair-like *pv* and a preapical tuft of long and curled *pv*, 3 to 4x femoral width. T3 lacking medial row of *ad*. Wing clear, slightly light brown-yellowish tinted. Halter yellowish-white. Abdomen heart-shaped, grey-brown pruinoso, with yellow markings at base of tergite 1, and in lateral anterior margins of tergites 2-4.

Material examined: Argentina: Tucumán 5 ♂, Quebrada La Toma, 21-XII-1950, Col. R. Golbach (FIML). La Rioja 9 ♂, Dique de Olta, 14-XII-2000, Cols. Domínguez & Roig (IADIZA).

Description

Male (female unknown): body length 6-6.75 mm.

Head: Frontal vitta covered with light brown shining pruinescence, at narrowest point as wide as anterior ocellus. Fronto-orbital plate heavy silvery-grey pruinose, at uppermost *fr* 0.5x width of anterior ocellus. Eye bare, antero-internal facets much larger than remaining. Twelve *fr* slightly longer than flagellum; *poel* of uniform length. Face and parafacial silvery grey; parafacial at base of flagellum 0.8x width of same and bare. Facial carina dark grey. Gena brown-grey. Scape and pedicel light brown, flagellum 2.6x as long as broad, light grey pruinose at base, light brown in remaining. Arista completely light brown, short pubescent. Palpus dark brown, clavate, the apex 3x width of base. Lower oral margin slightly convex and grooveless.

Thorax: Grey with brown vitta visible along *acr*, *dc* and postsutural *spal*; *acr* vittae reaching scutellum where it is crossed by a transverse line, *dc* vittae reaching space between fourth and fifth *dc*, broader anteriorly; apex of scutellum and pleura grey; 3+3 *acr*, with a fourth *acr* in apical 1/3 and 1 prescutellar *acrs*; *pprn* covered with setulae; 1 *pra* very near *spal*, almost indistin-

guishable from ground setulae; 2 *prepm* surrounded by 4 to 5 setulae.

Legs: Dark brown, slightly lighter brown at base of tibia, tarsus black. F1 slightly globose (length/width = 5), with 1 row of *pd*; 2 rows of *p*; 2 to 3 rows of *pv*, very short at base and 4 to 5 longer and stouter rows of *pv* in apical 1/4. T1 with 1 preapical *pd*; 1 apical *v* and *pv*, lacking medial row of *ad*. Fore tarsomere 1 0.3x length of T1, tarsomere 4 very short, as long as broad. F2 with 1 row of *ad*; 3 rows of very short *a*; 1 row of *av*, long at base and shorter towards apex; 1 very long basal *pv* followed by 2 medial rows of hooked *pv*, and 5 to 6 rows of same forming a thick ctenidium in apical 1/4; 1 row of hair-like *p*, spaced at base, stronger and ventrally directed towards apex. T2 constricted in base half, lacking subbasal protuberance, pubescence on ventral surface shorter than 0.5x tibial width; with 1 submedial and 3 apical *a*; 1 subapical *ad*; 1 very long *av*; 1 submedial and 1 apical *pd*; 1 apical *pv*; 1 apical *p*. C3 with two hair-like setae at apex of posterior surface. F3 thin (length/width = 9.5) slightly curved, with a weak preapical protuberance on posteroventral surface, 1 row of *ad* dorsally directed towards apex; 1 row of *av* in basal 3/4, longer towards apex and 1 apical *av* separated from row; 1 row of long, thin and hair-like *pv* and a preapical tuft of long and curled *pv*, 3 to 4x femoral width. T3 with 1 submedial and 1 subapical *d*; 1 submedial and 1 apical *ad*, lacking medial row; 5 medial *av* the last (towards apex) stronger; 1 apical *av*; ventral and posteroventral surfaces with a weak ctenidium at apex.

Wing: Clear, slightly light brown-yellowish tinted. Lower calypter rounded and upper oval, both white. Knob of halter yellowish-white, stalk and base light brown.

Abdomen: Heart-shaped, tergite 2 2x width of tergite 4. Grey-brown pruinose, with yellow markings at base of tergite 1, and in lateral anterior margins of tergites 2, 3 and 4. Hypopygium not protruding.

Postabdomen: Posterior margin of sternite 5 bilobed and bearing most setae (Fig. 21A). Hypandrial arms directed outwards, basal lateral margins grooved; postgonite inconspicuous; aedeagus membranous (Fig. 21B). Cercal plate fused; bacilliform process tooth shaped; surstylus broad at base, thin at apex, weakly connected to epandrium (Figs. 21 C-D).

Distribution: NEOTROPICAL: Northern Argentina: Tucumán, Jujuy and La Rioja provinces.

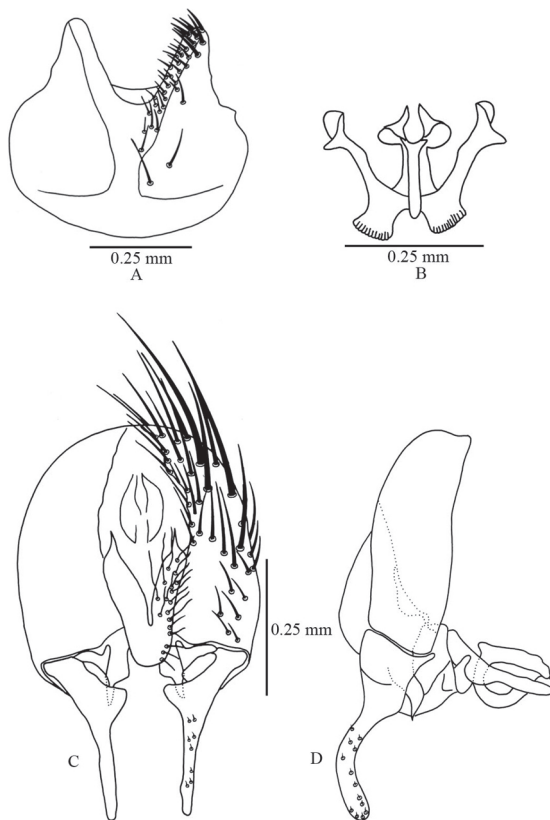


FIGURE 21: *Fannia tucumanensis* Albuquerque. A. Male sternite 5, ventral. B. Male hypandrium, ventral. C. Male terminalia external structures, ventral. D. Male terminalia external structures, lateral.

Fannia tumidifemur Stein, 1911

Figs. 22A-D

Fannia tumidifemur Stein, 1911:104; 1918:235; 1919:133; Séguy, 1937:176; Albuquerque, 1957:12; Pont, 1972:6; Albuquerque *et al.*, 1981:10, 19 and 21; Almeida *et al.*, 1985:279-284; Carvalho *et al.*, 1993:16; 2002:112; 2003:20.

Diagnosis: Frontal vitta as wide as anterior ocellus. Eye bare. Parafacial bare. Antenna light brown. Palpus dark brown. Thorax brown, with dark brown vitta along *pprn* and *ia* lines, light grey in prescutellar area and apex of scutellum. One *pra* very near *spal*, almost indistinguishable from ground setulae. F2 with 1 long basal *pv* and a row of *pv* spaced at base, shorter, stouter, denser and hooked forming 2 rows at apex. T2 constricted in medial half. C3 with 2 hair-like setae at apex of posterior margin. F3 normal and slightly curved; with a weak preapical posteroventral protuberance; 1 row of long, thin hair-like *pv* and a preapical tuft of long and curled *pv* 3x femoral width. T3 lacking medial row of *ad*. Wing clear. Halter yellowish-white.

Abdomen heart-shaped, grey brown pruinose in ground colour, yellow at base of tergite 1, and antero-lateral margins of tergites 2, 3 and 4.

Material examined: Argentina: Tucumán 1 ♂, La Caverna, 23/28-XI-1951, Cols. Aczel & Gollbach (FIML); 15 ♂, Quebrada la Toma, 21-XII-1950, Col. R. Gollbach (FIML).

Description

Male: body length 5-5.3 mm.

Head: Frontal vitta covered with dark brown pruinescence, at narrowest point as wide as anterior ocellus. Fronto-orbital plate heavily silvery grey shining pruinescence, at uppermost *fr* 0.5x width of anterior ocellus. Eye bare, antero-internal facets much larger than remaining. Twelve *fi*; 1.25x length of flagellum; *pocl* setae in single uniform row. Face and parafacial silvery grey pruinose; parafacial at base of flagellum 0.6x width of same and bare. Facial carina and gena grey-brown. Scape and pedicel light brown, flagellum light grey, 2.5x longer than wide. Arista brown, short pubescence. Palpus dark brown, clavate, the apex 3x width of base. Lower oral margin slightly convex.

Thorax: Brown, with dark brown vitta along *pprn* and *ia* lines, light grey in prescutellar area and apex of scutellum; pleura grey; 3+3 *acr*, with a 4th row of *acr* in posterior 1/3; 1 prescutellar *acrs*; 2+3 *dc*; *pprn* covered with setulae; 1 *pra* very near *spal*, almost indistinguishable from ground setulae; 2 *prepm* surrounded by 5 to 6 setulae.

Legs: Dark brown, tibia light brown and tarsi black. F1 slightly globose (length/width = 5.8); 1 row *pd*; 2 rows of *p*; 2 to 3 of very short rows of *pv* at base, and 4 to 5 long and stout rows of *pv* in apical fourth. T1 with 1 preapical *pd*; 1 apical *v* and *pv*; lacking *ad* row. Fore tarsomere 1 0.3x length of T1; tarsomere 4 short, as long as broad. F2 with 1 row of *ad*; 2 to 3 rows of very short *a*; 1 row of basally long *av*, shorter towards apex; 1 long basal *pv* and 1 row of *pv* spaced at base, shorter, stouter, denser and hooked forming 2 rows at apex; 1 row of *p*, hair-like and sparse at base, stouter and ventrally directed towards apex. T2 constricted in medial half; lacking subbasal protuberance; ventral pubescence short, less than 0.5x tibial width; 1 submedial and 3 apical *a*; 1 subapical *ad*; 1 very long apical *av*; 1 submedial and 1 apical *pd*; 1 apical *pv* and *p*. C3 with 2 hair-like setae at apex of posterior margin.

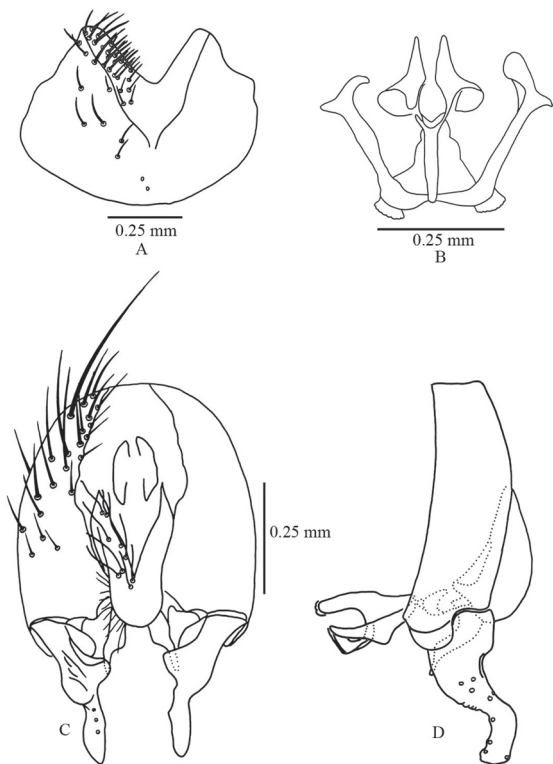


FIGURE 22: *Fannia tumidifemur* Stein. A. Male sternite 5, ventral. B. Male hypandrium, ventral. C. Male terminalia external structures, ventral. D. Male terminalia external structures, lateral.

F3 normal (length/width = 6.25) slightly curved; with a weak preapical posteroventral protuberance; with 1 row of *ad*, dorsally directed towards apex; 1 row of *av* in basal $\frac{3}{4}$, longer towards apex and 1 apical *av* separated from row; 1 row of long, thin hair-like *pv* and a preapical tuft of long and curled *pv* 3x femoral width. T3 with 1 submedial and 1 shorter subapical *d*; 1 subapical *ad* and 1 submedial *ad*, lacking medial row of *ad*; 3 to 4 medial *av*, apical *av* longer than remaining; 1 apical *av*; ventral and posteroventral surfaces with a very weak apical ctenidium.

Wing: Clear, slightly yellow-brown tinted. Lower calypter rounded and upper oval, both white. Knob of halter yellowish-white, stalk and base light brown.

Abdomen: Heart-shaped, tergite 2 2x width of tergite 4. Grey brown pruinose in ground colour, yellow at base of tergite 1, and anterior lateral margins of tergites 2, 3 and 4. Hypopygium not protruding.

Postabdomen: Posterior margin of sternite 5 strongly indented, and bearing most setae (Fig. 22A). Hypandrial arms directed outwards, basal lateral margins grooved; postgonite inconspicuous; aedeagus membranous (Fig. 22B). Cercal plate fused; bacilliform process tooth-shaped; surstylus very broad at base and thin at apex, weakly connected to epandrium. (Fig. 22C-D).

Distribution: NEOTROPICAL: Mexico, Bolivia, Brazil, Argentina (new record), Tucumán province.

RESUMEN

Las especies de Fannia de America del Sur Austral son revisadas. Se reconocen 25 especies para la region en el presente estudio: Fannia albitarsis Stein, Fannia anthracina (Walker), Fannia bigoti Stein, Fannia canicularis (Linnaeus), Fannia confusa Pont & Carvalho, Fannia coxata Shannon & Del Ponte, Fannia femoralis (Stein), Fannia flavicornis Stein, Fannia flavipalpis Stein, Fannia fusconotata (Rondani), Fannia heydenii (Wiedemann), Fannia hirtifemur (Stein), Fannia incisurata (Zetterstedt), Fannia petrocchia Shannon & Del Ponte, Fannia punctiventris Malloch, Fannia pusilla (Bigot), Fannia pusio (Wiedemann), Fannia scalaris (Fabricius), Fannia schnusei Stein, Fannia setosa (Bigot), Fannia tucumanensis Albuquerque, Fannia tumidifemur Stein y se describen tres nuevas especies para la Argentina: dos provenientes de la provincia de San Luis (Fannia roigi sp. nov. y Fannia hermani sp. nov.) y una de

la provincia de Mendoza (Fannia losgateados sp. nov.). El macho de Fannia fusconotata es descripto por primera vez. La especie neotropical Fannia euchaetophora Carvalho es sinonimizada con Fannia flavicornis Stein. Se describen todas las especies ya conocidas de Fannia, y son provistas ilustraciones de la terminalia de ambos sexos. Se proveen además claves para ambos sexos y el conocimiento geographico es actualizado y resumido.

PALABRAS-CLAVE: Descripción, redescipción, distribución, clave, sistemática.

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