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DISCUSSION

C. W. SABROSKY. Lectotype recognition is critical here. I disagree completely that a specimen not so labeled and not so designated in publication can be considered an established lectotype. Mere figuring, without designation, is not sufficient. We must rigidly construe this.

I. FOX. The authors referred to obviously intended to describe and figure the type of the species, although they may not have used the precise term lectotype.

Mycetophilidae, Chiefly from Argentina

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ABSTRACT

In the present report, 108 species are recorded for Argentina. Of these, 12 species are described as new. Keys are presented for the following subgenera: *Keroplatrus* s. str., *Cerotelion*, and *Neoplatyura*. Four species, found in the Chilean center of dispersal and endemism, were found extending their range into northern Argentina.

Through the kindness of Dr. Martin L. Aczél, we received a large collection of Mycetophilidae belonging to the Instituto Miguelo Lillo, Tucumán, Argentina. Later our friend Dr. J. P. Duret, from Buenos Aires, Argentina, kindly loaned us his personal collection of flies of this family. With the material which we had already obtained from various sources and the above mentioned collections, a study was made of the Argentinian species, and it was also found expedient to include also some species from Chile and Paraguay.

Difficulties were encountered in the determination of the material due chiefly to the fact that species of the Chilean subregion occurred in Northern Argentina. With the help given by Dr. Paul Freeman of the British Museum (Natural History) and of his excellent treatment of this family in "Diptera of Patagonia and South Chile", together with determined material in our own collections, such difficulties were surmounted.

As can be seen, the number of species now catalogued for Argentina surpasses by far all previous records. We have, however, no doubt that many more species are still to be found and also believe that the same holds true to the Neotropical region as a whole.

Names of Brazilian tribes of Indians were used, in a few cases, for our choice of specific names. The numbers mentioned are those of the entomological collections of the "Departamento de Parasitologia da Faculdade de Higiene e Saúde Pública da Universidade de São Paulo, Brazil".

We record one hundred and eight species, of which twelve are described as new. Keys were prepared for *Keroplatrus* s. str., the subgenus *Cerotelion*, and the subgenus *Neoplatyura*.

The author takes pleasure in thanking all the above mentioned gentlemen for their help in the preparation of this paper and Mr. E. B. Ferraz of our Faculty for drawing the illustrations. All drawings were made with the aid of a camera lucida.

SUBFAMILY DITOMYIINAE

Only the genus *Australosynmmerus* is represented in the material examined.

Australosynmmerus brittatus (Freeman, 1951)

1951. *Australomyia* Freeman, *Dipt. Pat. & S. Chile*, 3: 9.

DISTRIBUTION. Two specimens. Terr. Neuquen, Pucará, Parque Nacional Lanin, XI. 1953. (Schajovskoi col.).

Australosynmmerus insolitus (Walker, 1837)

1837. *Platyura* Walker, *Trans. Linn. Soc. London*, 17: 335.

1899. Johannaen, *Gen. Ins.*, 9: 23.

1921. *Centromeris* Edwards, *Am. & Mag. N.H.* (9), 7: 435.

1951. *Australomyia* Freeman, *Dipt. Pat. & S. Chile*, 3: 9.

DISTRIBUTION. One specimen. Terr. Santa Cruz, Lago Argentino, II. 1950 (Willink col.).

Australosynmmerus stigmaticus (Philippi, 1865)

1865. *Centromeris* Philippi, *Verh. zool. bot. Ges. Wien*, 15: 619.

1909. Synmmerus Johannaen, *Gen. Ins.*, 9: 12.

1951. *Australomyia* Freeman, *Dipt. Pat. & S. Chile*, 3: 8.

DISTRIBUTION. One specimen Terr. Neuquen, Pucará, Parque Nacional Lanin, XI. 1953 (Schajovskoi col.); one specimen Tierra del Fuego, III. 1948 (Budini col.).

Australosymmerus lupi (Lane, 1946)1946. *Centrocnemis* Lane, Rev. Ent., 17: 341.

Two specimens doubtfully determined as this species.

DISTRIBUTION. Prov. Misiones, Cataratas, Oberá, X. 1948 (J. P. Duret col.).

SUBFAMILY MANOTINAE

Manota palpalis Lane, 1948

DISTRIBUTION. One specimen. Prov. Misiones, Alta Pose, III. 1951 (J. P. Duret col.).

SUBFAMILY KEROPLATINAE

All Neotropical genera are represented in this collection.

Heteropterna trileuca Edwards, 1940

1940. Edwards, Rev. Ent., 11: 447; 1948 Lane, ibid., 19: 447.

DISTRIBUTION. One specimen. Prov. Misiones, Aristobulo del Valle, II. 1951 (J. P. Duret col.).

Platyroptilon miersi Westwood, 1849

1849. Westwood, Trans. Ent. Soc. London, 5: 231; 1881 Westwood, ibid., 334.

1902. Kertész, Cat. Dipt., 1: 53.

1909. Johannsen, Gen. Ina., 17.

1934. Edwards, Rev. Ent., 4: 360.

DISTRIBUTION. Two specimens. Prov. Misiones, Deseado, XII. 1951; Prov. Tucumán, Acheral, XII. 1949 (J. P. Duret col.).

Macrocera peripetula Edwards, 19401940. *Macrocera* Edwards, Rev. Ent., 11: 445.

Except for slight differences in the markings at apex of wing, the single specimen agrees with the original description.

DISTRIBUTION. Prov. Misiones, Cerro Azul, V. 1949 (J. P. Duret col.).

Macrocera plausmanni Edwards, 19401940. *Macrocera* Edwards, Rev. Ent., 11: 445; 1950 Lane, Dusenla, 1: 35.

The mesonotal and wing markings are darker in some specimens.

DISTRIBUTION. Four specimens. Prov. Misiones, Bemberg, X. 1948; Prov. Corrientes, Mercedes, V. 1951 (J. P. Duret col.); Prov. Tucumán, La Angostura, Tafi del Valle, II. 1953 (M. Aczél col.).

Macrocera shannoni Lane, 1946

1946. Lane, Rev. Ent., 17: 344.

A series of nine specimens. A female from Cherém, State of Rio de Janeiro, BRAZIL, is here selected as the allotype of this species. There is variation as to the colour of mesonotum and wing.

FEMALE. Similar to male but both mesonotal and wing markings much stronger and distinct, specially three mesonotal stripes. Cerci small, rounded and dull black.

TYPE. Allotype female; registered under n. 10.385.

TYPE LOCALITY. BRAZIL, State of Rio de Janeiro, Cherém, VIII. 1953 (J. P. Duret col.).

ADDITIONAL DISTRIBUTION. BRAZIL, State of S. Paulo, Ribeirão Preto, VI. 1953; State of Pará, rio Mojiú, VIII. 1953; ARGENTINA, Prov. Misiones, Iguazú, XI. 1953 (J. P. Duret col.).

Macrocera unidens Edwards, 19311931. *Macrocera* Edwards, An. & Mag. N.H., 10 (7): 255.

DISTRIBUTION. One specimen. ARGENTINA, N.O. 125 (J. P. Duret col.).

SUBGENUS KEROPLATUS S. STR.

As our previous key only included three species (Lane, 1948), and as since then we have been able to see *K. fiebrigi* Edwards, 1934, and to describe *K. caribae* Lane, 1950,

and have also found another species described here as new, we do not think it amiss to include a key for species known at present.

Key for Neotropical adults of *Keroplatus* s. str.

1. With only two ocelli. 2
With three ocelli: haltere with white stem and black knob; fore coxa darkened at apex; abdomen with yellowish tergites leaving basolateral dark brown markings on tergites II to VI. *townsendi* Lane, 1948
2. Haltere with white stem and blackish knob. 3
Haltere whitish; fore coxa yellowish; mid and hind femora darkened only at base. *meruana* Lane, 1948
3. Fore coxa with dark marks. 4
Fore coxa yellowish; wing with three dark spots; abdomen dark brown, a longitudinal yellowish line on tergites I to IV; posterolateral margins of tergites II to apex yellowish. *caribae* Lane, 1950
4. Antenna dark brown; fore coxa with apical portion darkened; wing with only two dark spots; abdomen dark brown, segments II to V with posterolateral yellow markings. *fiebrigi* Edwards, 1934
Antenna with flagellar segments I to V mostly yellow, the rest dark; fore coxa with two apical rounded blackish spots; abdomen with the posterior marks on segments II to V forming bands. *golbachii*, n. sp.

Keroplatus (Keroplatus) fiebrigi Edwards, 19341934. *Ceroplatus* Edwards, Rev. Ent. 4: 357.

We have a male specimen which agrees with the original description except that the wing markings, which show the mesial spots, are slightly larger than the apical one. Mesonotal markings are quite distinct in our specimen and show a brown colour traversed longitudinally by four stripes, the externals being broadest while there is also an additional indistinct mesial line.

DISTRIBUTION. A single specimen. Prov. Misiones, Deseado, 20. III. 1951 (J. P. Duret col.).

Keroplatus (Keroplatus) golbachii n. sp.

MALE. Head: Mouth parts very small and whitish. Palpus one segmented, the segment large, whitish. Frons yellowish-white, narrow. Antenna with broad, flat scape and torus which are yellowish but externally blackish; flagellum very much flattened, the segments broad and short; I yellow with a basal blackish mark, II to V yellowish, remaining segments dark brown. Occiput yellowish with two dilute dark brown marks behind ocellar callus, hairs blackish; ocellar callus blackish, the two ocelli inserted on each side.

Thorax: Posterior pronotum yellow. Mesonotum yellowish brown with the following blackish stripes; two diagonal lines from front and uniting into a V when the scutellum is reached, between these a slender blackish stripe which coalesces with the diagonal lines behind; two broad blackish lines on sides from anterior margin, reaching scutellum but leaving a yellow margin below, up to base of wing. Scutellum yellowish white with a narrow mesial blackish line. Pleura blackish but spiracular sclerite yellowish, upper portion of katapleuraltergite and pteropleurite yellowish and pleurotergite broadly whitish in the middle.

Wing hyaline with the following diluted dark markings:—first small and in middle of vein R. 1; second where R. 4 reaches R. 1 while the third is more like an apical shade. Haltere with white stem and black knob.

Legs: Coxae yellow but fore one with a rounded external black spot below middle and an internal anterior one at apex; mid coxa with apical third blackish while the hind coxa has nearly the apical half blackened. Fore legs (missing). Mid and hind femora yellow with base and apex blackish, more so on hind one. Tibiae with regular rows of blackish setulae. Tarsi blackish but with extreme apex whitish.

Abdomen blackish, segments II to V with large apical yellow marks which unite dorsally forming bands. Sternite I black, II to V yellowish with black spots; rest of segments blackish.

Genitalia: (Fig. 1). Basistyles with lobes fused, nearly quadrate. Dististyle longer than basistyle, triangularly shaped, with many rows of blunt differentiated and short spines over nearly the whole internal margin. Other structures as in the figure.

FEMALE: Unknown.

TYPE. Holotype male. To be returned to the Instituto Miquel Lillo, Prov. de Tucumán, Argentina.

Abdomen dark brown with the following yellow markings: on tergites I and II with narrow basal bands, III and IV with broad basal bands, V completely yellowish, VI and VII blackish.

Genitalia: (Fig. 4). Basistyles fused at base, free at apex and quite long. Dististyle shorter than the basistyle, thickened at middle and ending in two strong, blackish teeth pointing inwards.

FEMALE. Similar to male but with the following differences:—tergites I completely blackish, II to IV with broad, basal, yellowish bands while V to apex are yellowish. Cerci very long and slender, nearly as long as segment VII, whitish and constricted at apex to a point. Coxae as well as fore and mid femora blackish while hind femur is missing.

Types. Holotype male; allotype female; paratypes four males. Two paratypes to be retained and registered under ns. 11.288 and 11.289. Remaining specimens to be returned to the Instituto Miguel Lillo, Tucumán, Argentina.

TYPE LOCALITY. Prov. de Tucumán, Lacavera, VIII. 1953 (M. Aczél & R. Golbach col.), holotype; Tafi del Valle (2,000 mts. alt.), XII. 1950, allotype; Quebrada de la Toma (near Tafé Viejo), XII. 1950, paratypes (R. Golbach col.).

NOTE. Two of the paratypes have the first five tergites mostly yellow but conform otherwise with the descriptions. The definite apical wing mark at once separates this species from *I. argenteotomentosa* (Kertész, 1909), which is the species with which it is more closely allied.

SUBFAMILY SCIOPHILINAE

All the specimens belonging to the tribe Mycomiini were sent to Dr. E. I. Coher for determination.

TRIBE SCIOPHILINI

Sciophila cincticornis Edwards, 1940

1940. Edwards, Rev. Ent., 11: 458.

DISTRIBUTION. One specimen from Prov. de Misiones, Iguazú Cué, XII. 1951 (J. P. Duret col.).

Leptomorphus neivai Edwards, 1940

1940. Edwards, Rev. Ent., 11: 452.

DISTRIBUTION. One specimen from Prov. de Misiones, Cerro Azul, X. 1948 (J. P. Duret col.).

Megalopelma platyura Edwards, 1940

1940. Edwards, Rev. Ent., 11: 459.

DISTRIBUTION. One specimen from Prov. de Tucumán, Lacavera, XI. 1951 (M. Aczél & R. Golbach col.).

Monoclona digitata Edwards, 1940

1940. Edwards, Rev. Ent., 11: 460.

DISTRIBUTION. One specimen from PARAGUAY, Villarrica, VI. 1948 (Schade col.).

Monoclona maculata Edwards, 1933

1933. Edwards, Rev. Ent., 3: 307.

DISTRIBUTION. One specimen from PARAGUAY, Villarrica, VI. 1948 (Schade col.).

Cluzobra binocularis Edwards, 1934

1934. Edwards, Rev. Ent., 4: 362; 1940 Edwards, ibid., 11: 463.

DISTRIBUTION. One specimen from Prov. de Chaco, Cierro Petizo, XI. 1947 (J. P. Duret col.).

Cluzobra fascipennis Edwards, 1940

1940. Edwards, Rev. Ent., 11: 464; 1948 Lane, Rev. Bras. Biol., 8: 214.

DISTRIBUTION. One specimen from Prov. de Misiones, Los Helechos, V. 1949 (J. P. Duret col.).

Schnusea desanai Lane & Coher, 1950

1950. Lane & Coher, Rev. Bras. Biol., 10: 282.

DISTRIBUTION. Four specimens from Prov. de Misiones, Descado, XII. 1951 (J. P. Duret col.).

Schnusea sessilis Edwards, 1933

1933. Edwards, Rev. Ent., 3: 308.

DISTRIBUTION. One specimen from Prov. de Salta, Urundel, II. 1950 (R. Golbach col.).

TRIBE GNORISTINI

Dziedzickia hypsipile Lane, 1954

1954. Lane, Rev. Bras. Ent., 1: 101.

DISTRIBUTION. One specimen from Prov. de Misiones, Campo Ciera, X. 1948 (J. P. Duret col.).

Dziedzickia medea Lane, 1954

1954. Lane, Rev. Bras. Ent., 1: 103.

DISTRIBUTION. Three specimens from Prov. de Misiones, Aristobulo del Valle, II. 1951 (J. P. Duret col.).

TRIBE LEIINI

In our determinations, not all the specimens belonging to the genus *Leia* were studied. It is of interest to note the occurrence of *Procydonia furcata* Freeman, 1951 in the Province of Tucumán, Argentina, as it extends considerably the range of this Chilean species.

Leia andirai Lane, 1950

1950. Lane, Rev. Bras. Biol., 10: 130.

Sixteen specimens. We noted variations as to the white markings on female antenna. While in five specimens the white is restricted to the last segment, on one of them only a portion of this segment is marked. In the male, the antenna is completely blackish. This species is close to *L. bilunula* Wiedemann, 1828, from which it can be separated by the abdominal markings.

DISTRIBUTION. Capital Federal, VIII. 1948, XI. 1950, VI. X. IX. 1949, III. IV. 1954, III. VII. 1952 (J. P. Duret col.).

Leia apinageri Lane, 1950

1950. Lane, Rev. Bras. Biol., 10: 152.

DISTRIBUTION. Two specimens Prov. de Misiones, Descado, III. 1951 and Cerro Azul, V. 1949 (J. P. Duret col.).

Leia axillipunctum Enderlein, 1911

1911. Enderlein, Stet. Ent. Zeitg., 72: 198.

DISTRIBUTION. Two specimens Prov. de Misiones, Descado, XII. 1950 (J. P. Duret col.).

Leia bilunula Wiedemann, 1828

1828. *Leia* Wiedemann, Aus. Zweifl. Ins., 1: 65.

1902. Kertész, Cat. Dipt., 1: 83.

1909. Johannsen, Gen. Ins., 77.

1950. Shaw & Lane, Rev. Bras. Biol., 10: 255.

DISTRIBUTION. Three specimens from Capital Federal, XII. 1950 (J. P. Duret col.); Prov. de Tucumán, XII. 1950 (R. Golbach col.) and Lacavera, VI. 1950 (M. Aczél col.).

Leia bipartita (Arribáizaga, 1892)

1892. *Glyptoptera* Arribáizaga, Bol. Ac. Nat. Sci. Cordoba, 12: 409.

1909. *Leia* Johannsen, Gen. Ins., 77.

1950. Shaw & Lane, Rev. Bras. Biol., 10: 254.

This species has been recorded from Argentina. ADDITIONAL DISTRIBUTION. Capital Federal, IX. 1950 (J. P. Duret col.).

Leia diversipes Edwards, 1933

1933. Edwards, Rev. Ent., 3: 310.

DISTRIBUTION. One specimen from Prov. de Salta, S. Lorenzo, XI. 1947 (J. P. Duret col.).

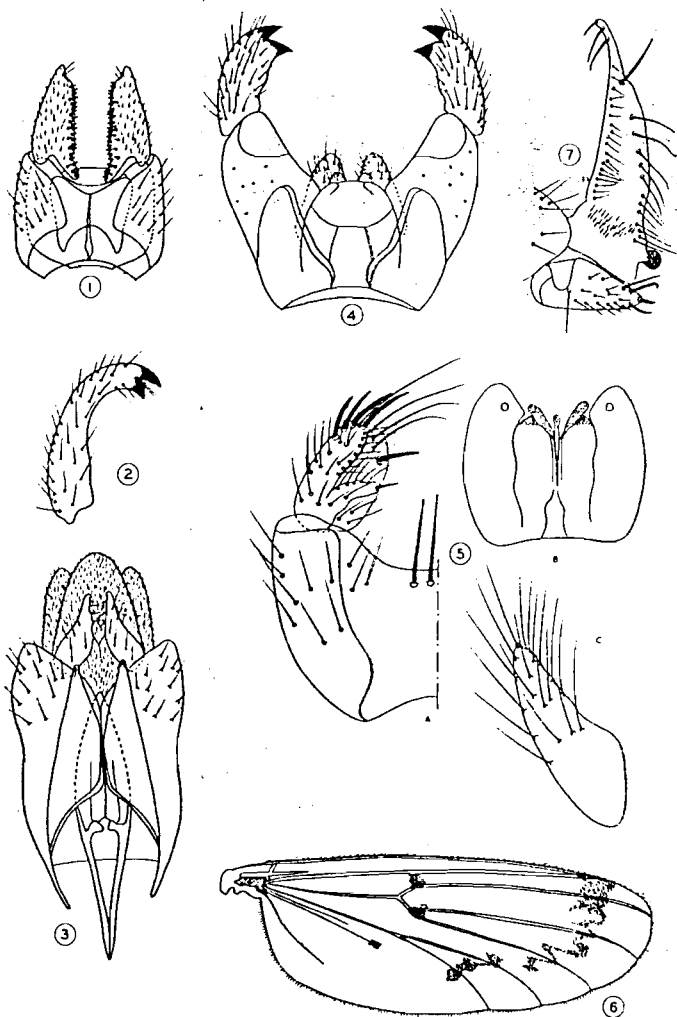
Leia falcata Edwards, 1933

1933. Edwards, Rev. Ent., 3: 313.

DISTRIBUTION. One specimen from Prov. de Buenos Aires, Jose C. Paz, IX. 1939 (Oglobin col.).

TYPE LOCALITY. Prov. de Salta, Urundel, II. 1950 (R. Golbach col.).

NOTE. This species is named in honor to its collector.



Figs. 1-5, 7. Male genitalia, dorso-ventral view. Fig. 6. Wing. 1. *Keroplatus* (K.) *golbachii* n. sp. 2. K. (*Cerotelion*) *dureti* n. sp. 3. *Platystrophia* (*Neoplatystrophia*) *aceti* n. sp. 4. *Lioneuremyia* *tucumani* n. sp. 5A, 5B, 5C. *Epeyretia* (E.) *aceti* n. sp. 6, 7. *Mycetophila* (M.) *guanasi* n. sp.

Keroplatus (*Neoceroplatus*) *minimax* Edwards, 1934

1934. Edwards, Rev. Ent., 4: 358; 1941 Edwards, ibid., 12: 304; 1948 Lane, ibid., 19: 440.

DISTRIBUTION. A single specimen. Prov. de Misiones, Desado, 20. III. 1951 (J. P. Duret col.).

Keroplatus (*Neoceroplatus*) *paicoenai* Lane, 1950

1950. Lane, Dusenía, 1: 43.

We have two specimens. As the female has not been described we here select one of the female specimens as the allotype of this species.

FEMALE. Abdomen broader and more flattened than in the male, markings more distinct. Cerci rounded and dark brown. Other characters as in the male.

DISTRIBUTION. Allotype from Prov. Misiones, rio Paraná, 13. III. 1951. Registered under n. 10.437 of our collections. A male from Prov. Misiones, Desado, 1. XII. 1951 (J. P. Duret col.).

SUBGENUS CEROTELION

As we have found an additional new species, and as Freeman (1951) did not make a key for the species described by him, we have prepared a key to receive these additional Neotropical forms.

Key for Neotropical adults of *Cerotelion*

- | | |
|--|----------------------------------|
| 1. Haltere with whitish stem and blackish knob | 2 |
| Haltere yellowish on both knob and stem | 4 |
| 2. Wing with distinct dark markings; antenna short, the segments flattened and broader than long | 3 |
| Wing evenly darkened but without distinct markings; antenna long, the segments longer than wide; head, thorax and legs blackish brown | 5 |
| 3. Mesonotum with three broad, brown stripes; darker species | <i>funerea</i> Freeman, 1951 |
| Mesonotum with two stripes, lighter species | <i>flavicornis</i> Freeman, 1951 |
| 4. Abdomen with narrow apical bands; scape and torus blackish or marked with black | 5 |
| Abdomen with broad apical bands on all segments; scape and torus yellowish white; pleura dark brown but pteropleurite yellowish as well as margins of adjacent sclerites | <i>dureti</i> n. sp. |
| 5. Mesonotum with five longitudinal lines; pleura, coxae and abdomen dark brown | <i>enderleini</i> Lane, 1948 |
| Mesonotum yellow, with nude areas, so that only the blackish hairs form a pattern; pleura and coxae yellow | <i>berocensis</i> Lane, 1950 |

Keroplatus (*Cerotelion*) *funerea* Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 19.

DISTRIBUTION. Ter. Neuquen, Pucará, Parque Nacional Lanin, X. 1952 to III. 1953. (S. Shajovskoi col.).

Keroplatus (*Cerotelion*) *enderleini* Lane, 1948

1948. Lane, Rev. Ent., 19: 443.

DISTRIBUTION. Prov. de Tucumán, Acheral, 15. XII. 1948 (J. P. Duret col.).

Keroplatus (*Cerotelion*) *dureti* n. sp.

MALE. Mouth parts much reduced. Single palpal segment large and blackish. Face broad, yellowish. Antenna with yellowish white scape and torus; flagellar segments rounded, I yellowish at base and light brown, II to VII dark brown, the rest missing. Occiput dark brown, the ocellar callus slightly darker, three ocelli in a triangle and far from eye margin, the mesial one smaller.

Thorax: Pronotum yellow, with black hairs. Mesonotum yellowish with three blackish marks, sides also narrowly blackish; mesial mark elongate, triangular and from anterior portion up to prescutellar region but not reaching the scutellum; lateral marks from anterior fourth to scutellum, oblong and darker than the mesial one; covering of blackish hairs with nude areas. Scutellum yellowish brown, blackish at margin and with a row of many marginal setae. Postnotum brown, laterally yellowish, nude. Pleura with anepisternite and katepisternite blackish except the hind margin of katepisternite, nude, dull; pteropleurite yellow; pterotergite dull blackish; hypopleurite yellowish.

Wing unicolorous. Haltere yellowish except base of knob which is slightly darker.

Legs: Front coxae yellow, the mid and hind ones light brown. Femora yellow. Tibiae and tarsi brown. Fore basitarsus slightly shorter than corresponding tibia.

Abdomen: Tergites dark brown with broad apical yellow bands over third or more of each segment and from I to VII; segment VII nearly completely yellow. Sternites I to V yellow, VI and VII blackish.

Genitalia: (Fig. 2). Basistyles with fused lobes at base, longer than broad. Dististyle longer than basistyle and ending in two incurved blunt, differentiated teeth. Other structures as in the figure.

FEMALE. Unknown.

TYPE. Holotype male. To be returned to Dr. J. P. Duret, Buenos Aires, Argentina.

TYPE LOCALITY. Prov. de Buenos Aires, Cap. Federal, 27. IV. 1954 (J. P. Duret col.).

NOTE: This species is named in honor to its collector our friend Dr. J. P. Duret.

Platyura (Pyrautula) paraguayana Edwards, 1934

1934. Edwards, Rev. Ent., 4 (3): 356.

1950. Lane, Dusenía, 1: 53.

When we mentioned this species it was wrongly ascribed to the subgenus *Pyrautula*. We take this occasion to correct the mistake.

DISTRIBUTION. Two females. Prov. Corrientes, Ituzaingó, IX. 1945 and Prov. de Misiones, Ramada Paso, IX. 1948 (J. P. Duret col.).

Platyura (Lyprautia) chacoensis Edwards, 1931

1931. Edwards, Konowia, 10: 77.

1939. Fisher, Trans. Ent. Soc. Am., 65: 228.

1940. Edwards, Rev. Ent., 11: 451.

DISTRIBUTION. Prov. Salta, Aguaray, II. 1950 (R. Golbach col.), one specimen; Prov. Misiones, Corpus, IX. 1948, one specimen and Prov. Corrientes, B. de Astrada, IX. 1948 one specimen (J. P. Duret col.).

NOTE: This species has already been recorded from Argentina.

Platyura (Lyprautia) nubilapex Edwards, 1940

1940. Edwards, Rev. Ent., 11: 452.

DISTRIBUTION. Two specimens. Prov. Salta, Tartagal, II. 1950 (R. Golbach col.).

Platyura (Proceroplatus) terenoi Lane, 1950

1950. Lane, Dusenía, 1: 61.

DISTRIBUTION. One specimen. Prov. de Tucumán, Taff del Valle (2000 mts. alt.), 30. I. 1953 (P. Wygodzinsky col.).

SUBGENUS NEOPLATYURA

With the finding of a new species we have decided to key the species of our region.

Key for Neotropical adults of *Neoplaturia*

1. Vein M.3 not detached at base 2
Vein M.3 detached at base; abdomen dark brown, only the apex of segments with narrow bands; wing hyaline *apicalis* Lane, 1950
2. Abdomen dark brown, when bands are present they are yellowish and narrow 3
Abdomen yellowish, tergites I, IV and V completely yellow, II and III with a broad apical blackish band, (in the female IV has also a very narrow apical blackish band); haltere yellowish but base of knob brownish; wing with a subapical diluted mark *aczelii* n. sp.
3. Wing with a distinct subapical band; abdomen with base of tergites I, III and IV and sides of V yellowish *regularis* Edwards, 1934
Wing without such a band but smoky at apex; abdomen with very narrow bands on segments *ignobilis* Williston, 1896

Platyura (Neoplaturia) ignobilis Williston, 1896

1896. Williston, Trans. Ent. Soc. London, 257, fig. 9.

1909. Johannsen, Gen. Ins., 92: 23; 1909 Johannsen, Maine Agr. Exp. Sta. 172: 257.

1950. Lane, Dusenía, 1: 51.

DISTRIBUTION. Prov. de Misiones, Los Halechos, III. 1954 (J. P. Duret col.).

Platyura (Neoplaturia) aczelii n. sp.

MALE. Head: Mouth parts and palpus yellow. Frons yellow. Antenna with yellow scape and torus; flagellum blackish, short, slightly flattened. Occiput light brown, ocellar callus blackish, the three ocelli quite removed from the eye margin, mesial one smaller and inserted below laterals.

Thorax: Mesonotum brown with two dark elongate stripes from anterior margin to prescutellar area and two additional ones from anterior fourth to scutellum; covered with longish black hairs. Scutellum yellowish with a marginal row of setae. Pleura nude and yellowish including postnotum.

Wing hyaline with a small diluted spot over R. 4 and another band which is preapical and also diluted. Stem of M. weak, m-cu also weak at base. M. 3 not detached. M. 2 and M. 3 not reaching the wing margin. Haltere yellowish but the base of knob is light brown.

Legs: Coxae yellow. Femora yellow but the hind one is slightly darker basally. Tibiae and tarsi brown. Spurs 1-2-2, the inner one of T. II is very small.

Abdomen with tergites I, IV and V completely yellow, II and III with a broad apical blackish band, larger on II, the rest yellow; VI and VII blackish.

Genitalia (Fig. 3). Basistyles elongate, the lobes completely fused. Dististyle a small triangular structure as in figure. Mesosome elongate and with two ventral hooks. Other structures as in the figure.

FEMALE. Mesonotal markings not so clear. Abdomen expanded and with segment IV also bearing a narrow blackish apical band. Cerci yellowish and rounded.

Types. Holotype male; allotype female; paratypes five males. Three paratypes registered in our collection under ns. 11.285 to 11.287. The remaining specimens to be returned to the Instituto Miguel Lillo, Tucumán and Dr. J. P. Duret, Buenos Aires, Argentina.

TYPE LOCALITY. Holotype from Prov. de Salta, Tonono, XII. 1949 (J. P. Duret col.); allotype from Embarcación, II. 1950; three paratypes from Embarcación II. 1950; one paratype from Tartagal, II. 1950 (R. Golbach col.) and one from Tartagal, XII. 1948 (J. P. Duret col.).

NOTE: This species is named in honor to our friend Dr. Martin L. Aczel from the Instituto Miguel Lillo, Tucumán, Argentina.

Platyura (Pyrautula) alticola Lane, 1948

1948. Lane, Rev. Ent., 19: 450.

Seven females and ten males. This species appears to be common. We have noted quite a range of variation as to the mesonotal and abdominal markings so that some specimens are quite dark.

DISTRIBUTION. Capital Federal, IX. 1948, V. 1947, I. 1954, IX. 1953; Prov. de Buenos Aires, G. Gones, IX. 1942, XI. 1942; Prov. de Chaco, Barranqueras, XI. 1949, Las Palmas, XI. 1949; Prov. de Córdoba, I. 1946; Prov. de Mendoza, Tupungato, II. 1952; Prov. de Misiones, IX. 1947; Prov. de Salta, Campo Quijano, XI. 1947 (J. P. Duret col.).

Isonciroynia tucumana n. sp.

MALE. Head: Mouth parts brown. Palpus with basal segments brown, the last one much elongated and blackish. Frons dark brown. Antenna with reddish dark brown scape and torus; flagellum blackish, somewhat flattened. Occiput black, the three ocelli removed from eye margin, the mesial one smaller; covered with blackish hairs.

Thorax: Pronotum blackish but posterior pronotum yellowish. Mesonotum black with white pruinosity and covered with longish black hairs leaving nude spaces. Scutellum black with many black marginal setae. Postnotum black with white pruinosity. Pleura black but anterior spiracle yellow; hypopleurite brown.

Wing hyaline but about apical fourth darkened into a distinct mark; veins M.2 and M.3 not reaching the wing margin as well as the anal vein. Haltere with white stem and black knob.

Legs: Coxae yellow but with a brown mark at base of mid and hind ones. Femora yellow but blackish at apex. Tibiae and tarsi dark. Spurs 1-2-2, the outer ones shorter.

Abdomen dark brown with the following yellow markings: on tergites I and II with narrow basal bands, III and IV with broad basal bands, V completely yellowish, VI and VII blackish.

Genitalia: (Fig. 4). Basistyles fused at base, free at apex and quite long. Dististyle shorter than the basistyle, thickened at middle and ending in two strong, blackish teeth pointing inwards.

FEMALE. Similar to male but with the following differences:—tergites I completely blackish, II to IV with broad, basal, yellowish bands while V to apex are yellowish. Cerci very long and slender, nearly as long as segment VII, whitish and constricted at apex to a point. Coxae as well as fore and mid femora blackish while hind femur is missing.

TYPES. Holotype male; allotype female; paratypes four males. Two paratypes to be retained and registered under ns. 11.288 and 11.289. Remaining specimens to be returned to the Instituto Miguel Lillo, Tucumán, Argentina.

TYPE LOCALITY. Prov. de Tucumán, Lacavera, VIII. 1953 (M. Aczél & R. Golbach col.), holotype; Tañi del Valle (2,000 mts. alt.), XII. 1950, allotype; Quebrada de la Toma (near Tafé Viejo), XII. 1950, paratypes (R. Golbach col.).

NOTE. Two of the paratypes have the first five tergites mostly yellow but conform otherwise with the descriptions. The definite apical wing mark at once separates this species from *I. argenteotomentosa* (Kertész, 1909), which is the species with which it is more closely allied.

SUBFAMILY SCIOPHILINAE

All the specimens belonging to the tribe Mycomiini were sent to Dr. E. I. Coher for determination.

TRIBE SCIOPHILINI

Sciophila cincticornis Edwards, 1940

1940. Edwards, Rev. Ent., 11: 458.

DISTRIBUTION. One specimen from Prov. de Misiones, Iguazú Cué, XII. 1951 (J. P. Duret col.).

Leptomorphus neivai Edwards, 1940

1940. Edwards, Rev. Ent., 11: 452.

DISTRIBUTION. One specimen from Prov. de Misiones, Cerro Azul, X. 1948 (J. P. Duret col.).

Megalopelma platyura Edwards, 1940

1940. Edwards, Rev. Ent., 11: 459.

DISTRIBUTION. One specimen from Prov. de Tucumán, Lacavera, XI. 1951 (M. Aczél & R. Golbach col.).

Monoclona digitata Edwards, 1940

1940. Edwards, Rev. Ent., 11: 460.

DISTRIBUTION. One specimen from PARAGUAY, Villarrica, VI. 1948 (Schade col.).

Monoclona maculata Edwards, 1933

1933. Edwards, Rev. Ent., 3: 307.

DISTRIBUTION. One specimen from PARAGUAY, Villarrica, VI. 1948 (Schade col.).

Cluzobra binocellaris Edwards, 1934

1934. Edwards, Rev. Ent., 4: 362; 1940 Edwards, ibid., 11: 463.

DISTRIBUTION. One specimen from Prov. de Chaco, Cierro Petizo, XI. 1947 (J. P. Duret col.).

Cluzobra fascipennis Edwards, 1940

1940. Edwards, Rev. Ent., 11: 464; 1948 Lane, Rev. Bras. Biol., 8: 254.

DISTRIBUTION. One specimen from Prov. de Misiones, Los Helechos, V. 1949 (J. P. Duret col.).

Schnusea desanai Lane & Coher, 1950

1950. Lane & Coher, Rev. Bras. Biol., 10: 282.

DISTRIBUTION. Four specimens from Prov. de Misiones, Deseado, XII. 1951 (J. P. Duret col.).

Schnusea sessilis Edwards, 1933

1933. Edwards, Rev. Ent., 3: 308.

DISTRIBUTION. One specimen from Prov. de Salta, Urundel, II. 1950 (R. Golbach col.).

TRIBE GNORISTINI

Dziedzička hypsipile Lane, 1954

1954. Lane, Rev. Bras. Ent., 1: 101.

DISTRIBUTION. One specimen from Prov. de Misiones, Campo Ciera, X. 1948 (J. P. Duret col.).

Dziedzička medea Lane, 1954

1954. Lane, Rev. Bras. Ent., 1: 103.

DISTRIBUTION. Three specimens from Prov. de Misiones, Aristobulo del Valle, II. 1951 (J. P. Duret col.).

TRIBE LEIINI

In our determinations, not all the specimens belonging to the genus *Leia* were studied. It is of interest to note the occurrence of *Procylloneura furcata* Freeman, 1951 in the Province of Tucumán, Argentina, as it extends considerably the range of this Chilean species.

Leia andirai Lane, 1950

1950. Lane, Rev. Bras. Biol., 10: 130.

Sixteen specimens. We noted variations as to the white markings on female antenna. While in five specimens the white is restricted to the last segment, on one of them only a portion of this segment is marked. In the male, the antenna is completely blackish. This species is close to *L. bilunula* Wiedemann, 1828, from which it can be separated by the abdominal markings.

DISTRIBUTION. Capital Federal, VIII. 1948, XI. 1950, VI. X. IX. 1949, III. IV. 1954, III. VII. 1952 (J. P. Duret col.).

Leia apinagei Lane, 1950

1950. Lane, Rev. Bras. Biol., 10: 152.

DISTRIBUTION. Two specimens Prov. de Misiones, Deseado, III. 1951 and Cerro Azul, V. 1949 (J. P. Duret col.).

Leia axillipunctum Enderlein, 1911

1911. Enderlein, Stet. Ent. Zeitg., 72: 198.

DISTRIBUTION. Two specimens Prov. de Misiones, Deseado, XII. 1950 (J. P. Duret col.).

Leia bilunula Wiedemann, 1828

1828. *Leia* Wiedemann, Aus. Zweifl. Ins., 1: 65.

1902. Kertész, Cat. Dipt., 1: 83.

1909. Johannsen, Gen. Ins., 77.

1950. Shaw & Lane, Rev. Bras. Biol., 10: 255.

DISTRIBUTION. Three specimens from Capital Federal, XII. 1950 (J. P. Duret col.); Prov. de Tucumán, XII. 1950 (R. Golbach col.) and Lacavera, VI. 1950 (M. Aczél col.).

Leia bipartita (Arribáizaga, 1892)

1892. *Glyptoptera* Arribáizaga, Bol. Ac. Nat. Sci. Cordoba, 12: 409.

1909. *Leia* Johannsen, Gen. Ins., 77.

1950. Shaw & Lane, Rev. Bras. Biol., 10: 254.

This species has been recorded from Argentina.

ADDITIONAL DISTRIBUTION. Capital Federal, IX. 1950 (J. P. Duret col.).

Leia diversipes Edwards, 1933

1933. Edwards, Rev. Ent., 3: 310.

DISTRIBUTION. One specimen from Prov. de Salta, S. Lorenzo, XI. 1947 (J. P. Duret col.).

Leia falculata Edwards, 1933

1933. Edwards, Rev. Ent., 3: 313.

DISTRIBUTION. One specimen from Prov. de Buenos Aires, Jose C. Paz, IX. 1939 (Oglobin col.).

Leia fasciata (Kertész, 1902)1902. *Neoglyphyoptera* Kertész, *Termes Fuzet.*, 25: 574.1931. *Leia* Edwards, *Konowia*, 10: 78.1950. Shaw & Lane, *Rev. Bras. Biol.*, 10: 255.

This species has been recorded from Argentina.

ADDITIONAL DISTRIBUTION. Fourteen specimens from Capital Federal, V. 1951 (J. P. Duret col.) and PARAGUAY, Villarrica, VI. 1945 (Schade col.).

Leia flavoscutellata (Arribáizaga, 1892)1892. *Glaphyoptera* Arribáizaga, *Bol. Ac. Nac. Córdoba*, 12: 410.1909. *Leia* Johannsen, *Gen. Ins.*, 77.1950. Shaw & Lane, *Rev. Bras. Biol.*, 10: 254.

DISTRIBUTION. Thirteen specimens from Prov. de Buenos Aires, S. Nicolas, V. 1952; Prov. de Misiones, Pto. Rios, IX. 1948 (J. P. Duret col.) and PARAGUAY Villarrica, VI. 1945 (Schade col.).

Leia halterata (Kertész, 1902)1902. *Neoglyphyoptera* Kertész, *Term. Fuzet.*, 25: 575.1909. *Leia* Johannsen, *Gen. Ins.*, 78.1950. Shaw & Lane, *Rev. Bras. Biol.*, 10: 256.

DISTRIBUTION. Six specimens from Prov. de Misiones, Carbus, III. 1951 (J. P. Duret col.) and PARAGUAY, Villarrica, VII. 1949 (Schade col.).

Leia incompleta (Twinn & Curran, 1928)1928. *Boletina* Twinn & Curran, *Sci. Survey P. Rico & Virgin Isls.*, 11. syn. 1933 *Leia biamputata* Edwards, *Rev. Ent.*, 3: 317.Dr. Alan Stone wrote me the following in 19. II. 1954:—"I had occasion to determine a *Leia* from Puerto Rico and found that it agreed perfectly with specimens that you had determined as *Leia biamputata* Edwards, 1933. I also noted that there seemed no way of distinguishing the specimen from what Curran described as *Boletina incompleta* in 1928. It would seem, therefore, that *Leia biamputata* is a synonym of *L. incompleta* (Curran)."As Edwards (1933, *Rev. Ent.*, 3 (3): 314) described a species as *Leia incompleta* Edward's name becomes an homonym and we here propose the name of *Leia stonei* n. n. for this species.

DISTRIBUTION. Thirty specimens from Prov. de Salta, Embarcación, Aguaray, Tartagal, Urundel, II. 1950 and Prov. de Tucumán, Aconquija, XII. 1950 and Lacavera, XI. 1950 (R. Golbach col.).

Leia monoleuca Edwards, 19331933. Edwards, *Rev. Ent.*, 3: 312.

DISTRIBUTION. One specimen from Prov. de Misiones, Iguazú, X. 1948 (J. P. Duret col.).

Leia paranensis Edwards, 19331933. Edwards, *Rev. Ent.*, 3: 313.

DISTRIBUTION. Twelve specimens from Prov. de Misiones, Deseado, III. 1949, XI. 1954, Aristobulo del Valle, II. 1951, B. de Irigoyen, III. 1951 (J. P. Duret col.).

Leia picticornis (Kertész, 1902)1902. *Neoglyphyoptera* Kertész, *Term. Fuzet.*, 25: 578.1909. *Leia* Johannsen, *Gen. Ins.*, 79.

DISTRIBUTION. Five specimens from Prov. de Misiones, Deseado, III. IX. XII. 1951 (J. P. Duret col.).

Leiella ochreocalcar Enderlein, 19111911. Enderlein, *Stet. Ent. Zeitg.*, 72: 200.1933. Edwards, *Rev. Ent.*, 3: 320.

DISTRIBUTION. Five specimens from Prov. de Chaco, Berquilla, XI. 1949 (J. P. Duret col.); Prov. de Salta, Embarcación, II. 1950 (R. Golbach col.); San Lorenzo I. 1949 (M. Aczél col.); Prov. de Tucumán, Quebrada la Toma, XII. 1950 (R. Golbach col.).

Leiella zonalis Edwards, 19311931. Edwards, *An. & Mag. N.H.*, 10: 259; 1952 Lane, *Rev. Ent.*, 3: 139.

A series of eighteen species which show the yellowish white of tergites III and IV extensively distributed, more so in two of the males.

DISTRIBUTION. Prov. de Santa Fé, Vera, XII. 1950; Prov. de Chaco, Laguna Limpia, XII. 1949, Capitan Solari, XI. 1949, Est. Girasol, XII. 1949 (J. P. Duret col.), Col. Benitez, XII. 1948 (R. Golbach col.); Prov. de Tucumán, Lacavera, XI. 1951 (R. Golbach col.).

Paraleia nubilipennis (Walker, 1836)1836. *Leia* Walker, *Trans. Lin. Soc. London*, 17: 334.1892. Arribáizaga, *Bol. Ac. Nac. Córdoba*, 12: 408.1909. Johannsen, *Gen. Ins.*, 93: 79.1913. *Acrodicranium* Edwards, *An. & Mag. N.H.*, 12: 55.1946. Stuardo, *Cat. Dipt. Chile*, 58.1951. *Paraleia* Freeman, *Dipt. Pat. & S. Chile*, 3: 74, 75.

DISTRIBUTION. Twenty-two specimens from Terr. Santa Cruz, Lago Argentino, II. 1950 (P. Willink col.) and CHILE, Magallanes, El Ganso, II. 1953 (R. Rodriguez col.).

Megophthalmidia divergens Edwards, 19321932. Edwards, *Rev. Ent.*, 2: 141.

DISTRIBUTION. One specimen from Prov. de Tucumán, Quebrada La Toma, XII. 1950. (R. Golbach col.).

Procylloneura paranensis Edwards, 19321932. Edwards, *Rev. Ent.*, 2: 141.

DISTRIBUTION. One specimen from Prov. de Misiones, Aristobulo del Valle, II. 1951 (J. P. Duret col.).

Procylloneura furcata Freeman, 19511951. Freeman, *Dipt. Pat. & S. Chile*, 3: 80.

DISTRIBUTION. Prov. de Tucumán, Lacavera, XI. 1951 (Aczél & Golbach col.); Quebrada la Toma, XI. 1950 (R. Golbach col.).

Tetragoneura borgmeieri Edwards, 19321932. Edwards, *Rev. Ent.*, 2: 142; 1952 Lane, *ibid.*, 14: 408.

DISTRIBUTION. One specimen from Prov. Corrientes, S. Benito, IV. 1950 (J. P. Duret col.).

Tetragoneura galea Freeman, 19511951. Freeman, *Dipt. Pat. & S. Chile*, 3: 84.

DISTRIBUTION. One specimen from Ter. Neuquén, Villa Angostura (S. Shajovskoi col.).

Tetragoneura sinuata Freeman, 19511951. Freeman, *Dipt. Pat. & S. Chile*, 3: 83.

DISTRIBUTION. One specimen from Ter. Neuquén, Pucará, Parque Nacional Lanin, XI. 1952 to II. 1953 (S. Shajovskoi col.).

SUBFAMILY MYCETOPHILINAE

This subfamily was the one which was best represented in the collections and from a zoogeographical point of view, the most interesting. The following species from the Chilean center of dispersal and endemism were found to extend their range into Argentinian provinces not belonging to it:—*Trichonta fasciata* Freeman, 1951; *Mycetophila pectinata* Freeman, 1951, and *Mycetophila triordinata* Freeman, 1953.On the other hand, the genus *Epicrypta* has continued to be negative to the Chilean center.*Zygomyia freemani* Lane, 19511951. Lane, *Dusenja*, 2: 248.

We hesitated in the determination of this material as the specimens had different mesonotal markings. Besides a stronger tinge, the marks spread to the sides and the mesal one is divided.

When a larger series is examined, there is the possibility that this may prove a distinct subspecies.

DISTRIBUTION. Three specimens. Prov. de Salta, Urundel, III. 1950 (R. Golbach col.).

Zygomyia ornatipennis Lane, 1948

1948. Lane, Rev. Ent., 19: 241; 1951 Lane, Dusenía, 2 (4): 250.

DISTRIBUTION. One specimen. Prov. de Misiones, Aristobulo del Valle, 28. III. 1954 (J. P. Duret col.).

Cordyla brevicornis (Enderlein, 1911)

1911. Allodia Enderlein, Stet. Ent. Zeitg., 72: 204.

1941. Neallodia Edwards, Rev. Ent., 12: 311.

syn. 1932. Neallodia flavida Edwards, Rev. Ent., 2: 146.

1947. Trichonta brasiliensis Lane, Rev. Ent., 18: 448.

Dr. Paul Freeman of the British Museum (Natural History) suggested that our *Trichonta brasiliensis* could be synonymous with this species. A comparison of our material with a specimen determined by Edwards as *brevicornis* has shown that they are conspecific and for this reason we here synonymize our species.

The number of hairs on the anepisternite and the production of the costal vein is variable in the large series of specimens which we have examined. For this reason we also consider *N. flavida* Edwards, 1932, a synonym of *C. brevicornis* (Enderlein, 1911).

DISTRIBUTION. Twelve specimens. Prov. de Salta, Tartagal, II. 1950; Aguairay, II. 1950; Urundel, II. 1950; Embarcación, II. 1950 (R. Golbach col.); one specimen from PARAGUAY, Villaraica, VI. 1945 (Schade col.).

Trichonta fasciata Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 97.

DISTRIBUTION. Five specimens. Prov. de Tucumán, Lacavera, XII. 1951 (M. Aczél col.).

Epicypta (*Epicypta*) *aczéli* n. sp.

MALE. Head: Mouth parts and palpus yellowish. Antenna with scape, torus and first four or five segments yellowish, the rest darkened. Occiput brown in the center and lighter on the sides.

Thorax: Mesonotum yellow with a very large black, rounded mark over posterior two thirds but not invading margins and fused with the two prescutellar blackish spots; covered with decumbent yellowish hairs. Scutellum yellowish but sides and margins brownish black. Postnotum blackish in the center and yellowish on the sides. Pleura yellowish; anepisternite brown anteriorly and bearing golden hairs on posterior portions; pteropleurite and pleurotergite brown.

Wing hyaline. Posterior fork slightly beyond anterior one. Haltere yellow.

Legs: Coxae, trochanteres and femora, yellowish; hind femur narrowly blackish at apex. Tibiae yellowish, hind one darkened at base. Mid tibia with 5 d., 3 e., 2 v. and 1 i. setae. Hind tibia with 6 d., 3 subdorsal and 3 i. setae.

Abdomen blackish except middle of base and apex of segments II to V and apex of VI which are yellowish.

Genitalia: (Fig. 5). Basistyle with lobes fused, two stout internal setae present. Dististyle rounded and with four, stout and differentiated setae on its apical margin and another on the inner portion above middle and at right angles; a protuberance ending in a short stout seta is also present. Mesosome as in figure. Ninth tergite as high as dististyle.

FEMALE. Similar to male but abdomen with much narrower markings. Cerci small, elongate and yellowish.

TYPES. Holotype male; allotype female; paratypes seventeen males and females. Holotype, allotype and five paratypes to be returned to the Instituto Miguel Lillo, Tucumán, Argentina; one paratype to be sent to the British Museum (Natural History); one paratype to be sent to the U.S. National Museum, Washington, D.C.; four paratypes to be returned to Dr. J. P. Duret, Buenos Aires, Argentina and the remaining paratypes registered in our collections under ns. 10.393 to 10.399.

TYPE LOCALITY. Prov. de Salta, Embarcación, II. 1950 (holotype), Aguairay, I. 1950 (allotype); Tartagal, II. 1950 (five paratypes), Urundel, II. 1950 (one paratype), Que brada La Toma, XII. 1950 (one paratype); Prov. de Tucumán, Aunguiga, XII. 1950 (one paratype), (all collected by R. Golbach); Prov. de Corrientes, Col. Pellegrini, III. 1951 (four paratypes); Prov. de Chaco, Cierro Perizo, XI. 1949 (J. P. Duret col.). BRASIL, State of Goiás, Corumbá, XI. 1945 (M. P. Barretto col.); State of S. Paulo, Ribeirão Preto, rio Tamandua, X. 1954 (J. P. Duret et M. P. Barretto col.) two paratypes; TRINIDAD (B.W.I.), Monte Serrat, VI. 1913 (A. Busck col.), one paratype.

NOTE. We take pleasure in naming this species in honor to our friend Dr. Martin L. Aczél of the Instituto Miguel Lillo, Tucumán, Argentina, who has done excellent work on many groups of Neotropical Diptera.

This species differs from *E. goianensis* and *E. brasiliensis* because of the scutellar markings; from *E. maupiensis* because it has no longitudinal dark scutellar stripe. From all species of its group because the posterior black mesonotal marks covers the whole posterior portion of disk but does not extend to the sides. On the other hand the male genitalia is quite distinct from all species hitherto described in this subgenus.

Epicypta (*Epicypta*) *brasiliensis* Edwards, 1932

1932. Delopis Edwards, Rev. Ent., 2: 147; 1947 Lane, ibid., 18: 454.

1951. *Epicypta* Lane, Dusenía, 2: 338.

DISTRIBUTION. One specimen. Prov. de Salta, Aguairay, II. 1950 (R. Golbach col.).

Epicypta (*Epicypta*) *brasiliensis* (Enderlein, 1911)

1911. Mycetophila Enderlein, Stet. Ent. Zeitg., 72: 171.

1947. Delopis Lane, Rev. Ent., 18: 455; 1951 *Epicypta* Lane, Dusenía, 2: 340.

DISTRIBUTION. One specimen. Prov. de Salta, Aguairay, II. 1950 (R. Golbach col.).

Epicypta (*Epicypta*) *duanasi* Lane, 1951

1951. Lane, Dusenía, 2: 377.

DISTRIBUTION. Five specimens. Prov. de Salta, Tartagal, Aguairay and Urundel, II. 1950 (R. Golbach col.).

Epicypta (*Epicypta*) *goianensis* (Lane, 1947)

1947. Delopis Lane, Rev. Ent., 18: 456.

DISTRIBUTION. One specimen. Prov. de Misiones, Cerro Azul, 3. V. 1949 (J. P. Duret col.).

Epicypta (*Epicypta*) *maculipennis* (Enderlein, 1911)

1911. Plastacephala Enderlein, Stet. Ent. Zeitg., 72: 178.

1948. Delopis Lane, Rev. Ent., 19: 277.

DISTRIBUTION. One specimen. Prov. de Salta, Tartagal, II. 1950 (R. Golbach col.).

Epicypta (*Epicypta*) *planiventris* (Enderlein, 1911)

1911. Plastacephala Enderlein, Stet. Ent. Zeitg., 72: 176.

1939. Delopis Fisher, Trans. Ent. Soc. Am., 65: 236.

1941. Edwards, Rev. Ent., 12: 311.

1951. *Epicypta* Lane, Dusenía, 2 (5): 336.

DISTRIBUTION. One specimen. Prov. de Misiones, El Salto Encantado, 19. X. 1948 (J. P. Duret col.).

Epicypta (*Boscmyia*) *lenguasi* Lane, 1954

1954. Lane, Rev. Bras. Ent., 2: 121.

DISTRIBUTION. One specimen. Prov. de Misiones, Iremberg, XI. 1948 (J. P. Duret col.).

Epicypta (*Callicypta*) *inornata* Lane, 1948

1948. *Epicypta* Lane, Rev. Ent., 19: 237.

1954. *Epicypta* (*Callicypta*) Lane, Rev. Bras. Ent., 2: 134.

DISTRIBUTION. Three specimens. Prov. de Tucumán, Quebrada la Toma, XII. 1950; Prov. de Salta, Tartagal, II. 1950 (R. Golbach col.).

Mycetophila (Mycetophila) amplipennis Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 115.

DISTRIBUTION. A single specimen. Terr. de Neuquen, Pucara, XI. 1952 (Schajovskoi col.).

Mycetophila (Mycetophila) banhumat Lane, 1952

1952. Lane, Dusenía, 3 (6): 424.

DISTRIBUTION. Eleven specimens. Prov. de Tucumán, Tafi del Valle, VII. 1947, XII. 1947 (R. Golbach col.).

Mycetophila (Mycetophila) curiaensis Lane, 1952

1952. Lane, Dusenía, 3: 425.

DISTRIBUTION. Three specimens. Prov. de Salta, Aguaray, II. 1952; Prov. de Tucumán, Tafi del Valle, VII. 1947 (R. Golbach col.).

Mycetophila (Mycetophila) freemani Lane, 1948

1948. Lane, Rev. Ent., 19: 256.

DISTRIBUTION. Two specimens. Prov. de Tucumán, Lacavera, XII. 1951 (M. Aczél & R. Golbach col.).

Mycetophila (Mycetophila) guanasi n. sp.

MALE. Head and mouth parts yellow. Palpus yellow but segment I brownish on one side, the segments long, last one the longest. Antenna with yellow scape and torus; flagellar segment I with a brown basal ring, the rest yellow, other segments with a dilute apical brownish ring which becomes larger and distinct on apical ones, the rest yellow.

Thorax: Mesonotum yellow on the sides, brownish in the middle, with two prescutellar brown spots and also brown spots over the root of wing. Scutellum yellow with large brown markings; four scutellar setae. Postnotum brown, laterally with whitish pruinose marks. Pleura; anepisternite brown, yellow mesially and below up to katapisternite, with golden hairs as well as five stout setae; katapisternite yellow but anteriorly and below with a brown mark; pteropleurite brown above, yellow below, with six setae in a row; pleurotergite brown with many posterior setae; hypopleurite yellow, below and behind with a brown mark and two setae besides three or four small ones.

Wing with veins and markings as in Fig. 6. Haltere yellowish.

Legs: Coxae yellow, extreme apex with brown markings. Femora yellow but with brown marks at base and apex. Tibiae yellow but with a broad apical brown band. Mid tibia with 5 d., 4 e., 0 v. and 8 i. setae (hind femora, tibiae and tarsi missing).

Abdomen yellowish. Tergite I broadly brown in the middle where there are some stout setae.

Genitalia. (Fig. 7). Basistyle with lobes fused and hollowed out so as to receive the dististyles, the upper margin sinuate as in the figure. Mesosome not seen. Ninth tergite finger shaped.

FEMALE. Unknown.

TYPE. Holotype male, to be returned to the Instituto Miguel Lillo, Tucumán, Argentina.

TYPE LOCALITY. Prov. de Tucumán, Tafi del Valle (2,000 mts. alt.), 12. XII. 1950 (R. Golbach col.).

NOTE. This species is near *M. armatura* Freeman, 1951, from which it can be readily separated by the wing markings and male genitalic structures.

Mycetophila (Mycetophila) guaraiasi Lane, 1952

1952. Lane, Dusenía, 3 (6): 427.

DISTRIBUTION. Four specimens. Prov. de Misiones, B. de Irigoyen, III. 1954 (J. P. Duret col.); Prov. de Salta, Aguaray, II. 1950 (R. Golbach col.).

Mycetophila (Mycetophila) iheringi Lane, 1948

1948. Lane, Rev. Ent., 19: 260; 1952 Lane, Dusenía, 3 (6): 433.

DISTRIBUTION. One specimen. Prov. de Misiones, Alba Posé, X. 1949 (J. P. Duret col.).

Mycetophila (Mycetophila) ilita Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 122.

DISTRIBUTION. One specimen. CHILE, Magallanes, El Ganso, III. 1953 (R. Rodríguez col.).

Mycetophila (Mycetophila) nervitacta Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 116.

DISTRIBUTION. Two specimens. Terr. de Santa Cruz, Lago Argentino, II. 1953 (Willink col.).

Mycetophila (Mycetophila) picea Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 119.

DISTRIBUTION. Five specimens. Terr. de Santa Cruz, Lago Argentino, II. 1953 (Willink col.).

Mycetophila (Mycetophila) thesae Edwards, 1932

1932. Edwards, Rev. Ent., 2: 148; 1948 Lane, ibd., 19: 255.

DISTRIBUTION. Four specimens. Prov. de Tucumán, Tafi del Valle, XI. 1947 (R. Golbach col.).

Mycetophila (Mycetophila) triangulifera Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 110.

DISTRIBUTION. Five specimens. Terr. de Santa Cruz, Lago Argentino, II. 1953 (Willink col.).

Mycetophila (Oromyceta) wygodzinskyi (Lane, 1947)

1947. Delopis Lane, Rev. Ent., 18: 456.

DISTRIBUTION. One specimen. Prov. de Salta, Aguaray, II. 1950 (R. Golbach col.).

Mycetophila (Abmyceta) acarisi n. sp.

MALE. Head: Mouth parts and palpus yellowish brown. Clypeus brown. Antenna with yellowish scape and torus; flagellum with basal segment yellowish, the other segments brown. Occiput brown.

Thorax: Mesonotum yellowish with three brown longitudinal stripes. Scutellum yellow in the middle-brownish on the sides, with four marginal setae. Postnotum yellowish. Pleura brownish with lighter portions. Three anepimeral; two pteropleural and two or three pleurotergal setae; hypopleurite yellowish, with one or two very small posterior hairs.

Wing with veins and markings as in Fig. 8. Haltere yellowish.

Legs: Coxae yellowish. Femora yellow, apices narrowly darker. Tibiae yellowish. Mid tibia with 4 d., 1 e., 1 v. and $\frac{3}{4}$ i. setae. Hind tibia with 6 d. and 7 e.

Abdomen blackish with narrow apical bands.

Genitalia: (Fig. 9). Basistyle with the lobes fused, quadrate. Dististyle with lobes as in Fig. 9. Ninth tergite elongate, with a preapical notch and as in Fig. 9.

FEMALE. Similar to the male. Cerci elongate and dark brown.

TYPE. Holotype male; allotype female; paratypes three females. Holotype, allotype and one paratype to be returned to the Instituto Miguel Lillo, Tucumán. Two paratypes registered under ns. 11.397 and 11.398.

TYPE LOCALITY. Prov. de Tucumán, Tafi del Valle, 6-12, XII. 1950 (R. Golbach col.).

NOTE. This species is near *M. sinuata* Freeman, 1951 from which it can be separated by the wing markings and male genitalic structures.

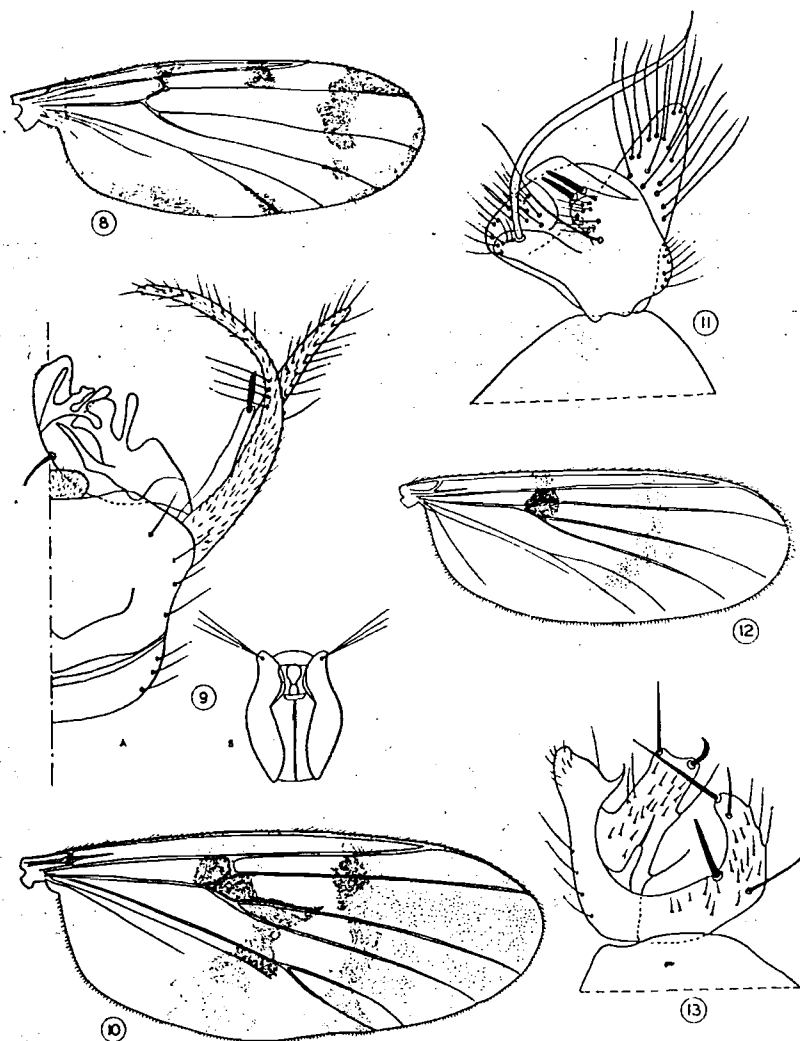
Mycetophila (Abmyceta) argentina n. sp.

MALE. Head and palpus blackish. Antenna with brown scape and torus; flagellum with segment I yellow at base, the rest blackish as well as other segments.

Thorax: Mesonotum blackish, humeral region yellowish as well as very narrow portions of prescutellar region and above root of wing. Scutellum blackish but margins broadly yellowish; four marginal setae. Pleura blackish; hypopleurite brownish.

Wing with veins and markings as in Fig. 10. Haltere yellow.

Legs: Coxae yellowish with diluted brown markings. Femora yellowish, the dorsum and venter with indefinite brown markings. Tibiae yellowish, apex of mid and hind ones



Figs. 8, 10, 12. Wing. Figs. 9, 11, 13. Male genitalia, dorso-ventral view. 8, 9A, 9B, *Mycetophila (Abmyceta) acarisi* n. sp. 10, 11, *M. (A.) argentina* n. sp. 12, 13, *M. (A.) golbachii* n. sp.

darker. Mid tibia with 4 d., 2 e., 2 v., and 8 i. setae in a row. Hind tibia with 6 d. and 6 e. setae.

Abdomen blackish.

Genitalia: (Fig. 11). Basistyles united and quadrate. Dististyle as in the figure. Mesosome ovate, the upper portions surpassing the lateral flaps and rounded; the lateral flaps pointed. Ninth tergite subtriangular and shorter than the height of basistyle.

FEMALE. Similar to male. Cerci brown and elongate.

TYPES. Holotype male; allotype female; paratypes three males and three females. Holotype, allotype and three paratypes returned to the Instituto Miguel Lillo, Tucumán, Argentina. Three paratypes registered in our collection under ns. 10.409 to 10.411.

TYPE LOCALITY. Prov. de Santa Cruz, Lago Argentino, 26. II. 1953 (Dr. W. Willink col.).

Mycetophila (Abmyceta) borgmeieri Edwards, 1932

1932. Edwards, Rev. Ent., 2: 149; 1948 Lane, ibid., 19: 253.

DISTRIBUTION. Twenty specimens. Prov. de Tucumán, Tafi del Valle, XII. 1947 (R. Golbach col.).

Mycetophila (Abmyceta) canicula Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 127.

DISTRIBUTION. Ten specimens. Terr. de Santa Cruz, Lago Argentino, II. 1953 (Willink col.).

Mycetophila (Abmyceta) clavigera Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 125.

DISTRIBUTION. Hundreds of specimens from Terr. de Santa Cruz, Lago Argentino, II. 1953 (Willink col.).

NOTE. The above mentioned material shows a wide range of variation and the probability that it represents a complex group of similar species must be taken in consideration.

Mycetophila (Abmyceta) constricta Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 128.

DISTRIBUTION. Two specimens. Terr. de Santa Cruz, Lago Argentino, II. 1953 (Willink col.).

Mycetophila (Abmyceta) demacuri Lane, 1951

1951. Lane, Trans. R. Ent. Soc. London, 106: 405.

DISTRIBUTION. Five specimens. Prov. de Tucumán, Quebrada La Torna, XII. 1951 (M. Aczél & R. Golbach col.); Prov. de Salta, Aguarray, II. 1950 (R. Golbach col.).

Mycetophila (Abmyceta) dicheta Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 126.

DISTRIBUTION. Two specimens. Prov. de Tucumán, Tafi del Valle, VII. 1947 and XII. 1950 (R. Golbach col.).

Mycetophila (Abmyceta) flavolunata Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 122.

DISTRIBUTION. Terr. de Santa Cruz, Lago Argentino, II. 1953 (Willink col.).

Mycetophila (Abmyceta) golbachii n. sp.

MALE. Head brownish yellow. Palpus yellowish. Antenna with scape, torus and first three or four segments yellowish, the rest darkened.

Thorax: Mesonotum brown; covered with brown hairs and dark setae. Scutellum brown but darker than mesonotum. Pleura with anterior spiracular sclerite, upper portion of pronotum and basal portion of pteropleurite yellowish, the rest dark brown.

Wing with markings and veins as in Fig. 12. Haltere yellow.

Legs: Coxae yellow. Trochanteres brown. Femora yellow, mid and hind ones dorsally darkened as well as narrowly at apex. Tibiae yellowish, mid and hind ones darker apically. Mid tibia with 5 d., 3 e., 1+2 v. and a row of 6-7 i. setae. Hind tibia with 5 d. and 7 e. setae.

Abdomen blackish.

Genitalia: (Fig. 13). Basistyles with the fused lobes broader than high. Dististyle as in figure. Mesosome with lateral upper flaps high and pointed, the mid portion rounded. Ninth tergite shorter than basistyle and subtriangular.

FEMALE. Similar to male. Cerci elongate, slender and yellowish.

TYPES. Holotype male; allotype female; paratypes six males and three females. Holotype, allotype and four paratypes returned to the Instituto Miguel Lillo, Tucumán, Argentina; five paratypes registered in our collection under ns. 10.413 to 10.417.

TYPE LOCALITY. Prov. de Tucumán, Tafi del Valle, XII. 1950 (R. Golbach col.). one paratype from La Caverna, VI. 1951 (M. Aczél et R. Golbach col.).

NOTE. We take pleasure in naming this species in honor to Dr. R. Golbach who collected a large portion of the material here studied.

By the wing markings this species would be placed near *M. conifera* and *M. clavigera* but, besides the outer mark of wing being (in *M. golbachii*) as a slender stripe, the male genitalia is quite different.

Mycetophila (Abmyceta) tapuii n. sp.

MALE. Head: Mouth parts and palpus yellowish brown. Antenna with scape, torus and base of flagellar segment 1 yellowish, the rest dark brown. Occiput brown.

Thorax: Mesonotum yellowish, with three indistinct brown longitudinal marks. Scutellum brownish, with four marginal setae. Postnotum brownish. Pleura dark brown but yellowish in the middle; anepisternite with three stout setae; pteropleurite with two or three stout setae; pleurotergite with a few setae.

Wing with a dark spot which from r-m reaches base of upper fork; a second dark spot at apex of wing and slightly below R. 4. Second fork of vein very much beyond the first so that its stem is about three times the length of respective fork. Haltere yellowish.

Legs: Coxae yellow, last one slightly darker at apex. Femora yellow, the last one slightly darker at base and apex. Tibiae yellowish. Mid tibia with 4 d., and 2 v. setae. Hind tibia with 5 d. and 7 e. setae.

Genitalia: (Fig. 14). Greatly enlarged, nearly as large as thorax. Basistyles fused, inflated forming a rounded structure, at apex a row of differentiated setae on each side. Dististyle invaginated on the basistyles, the lobes complex and as in the figure. Ninth tergites united at base and forming two slender filaments.

FEMALE. Unknown.

Types. Holotype male; paratype one male. Holotype to be returned to the Instituto Miguel Lillo, Tucumán, Argentina; the paratype registered in our collection under n. 11.399.

TYPE LOCALITY. Prov. de Tucumán, Lacavera, XII. 1951 (Aczél et Golbach col.), holotype; Quebrada de Cainzo (near Tafi Viejo), 8. XI. 1950 (R. Golbach col.), paratype.

NOTE. This species is near *M. guatensis* but the lower fork is much beyond the upper one and the male genitalic structures are completely different from those of the subgenus.

Mycetophila (Abmyceta) tucumana n. sp.

MALE. Head blackish brown. Palpus yellow. Antenna with scape and torus brownish; flagellum with basal segments blackish but base yellow, the rest darkened.

Thorax: Mesonotum yellowish with three brown marks which are fused and indistinct; covered with yellowish hairs and brown setae. Scutellum brown with four marginal setae. Pleura brown.

Wing hyaline with two spots, the veins and markings as in Fig. 15. Haltere yellow.

Legs: Coxae yellow. Femora yellow, mid and hind ones darkened dorsally and at apex. Tibiae yellow, mid and hind ones darkened at apex. Mid tibia with 5 d., 3 e., 2+1 v. and 1 i. setae. Hind tibia with 5 d. and 6 e. setae.

Abdomen blackish.

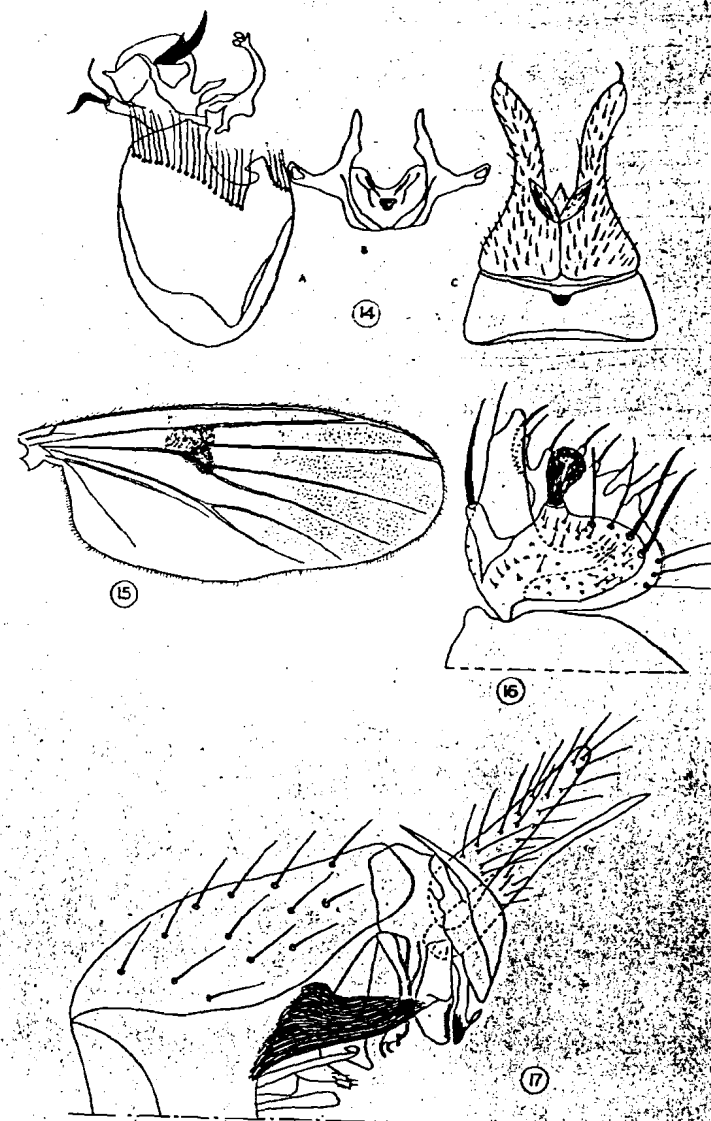
Genitalia: (Fig. 16). Basistyle with lobes fused and quite broader than long, shallow in the middle. Dististyle as in Fig. 16. Mesosome with upper portions quite expanded. Ninth tergite with lobes as high as basistyle.

FEMALE. Similar to male. Cerci small and rounded.

Types. Holotype male; allotype female; paratypes three males and six females. Holotype, allotype and four paratypes returned to the Instituto Miguel Lillo, Tucumán, Argentina. Five paratypes registered in our collection under ns. 10.404 to 10.408.

TYPE LOCALITY. Prov. de Tucumán, Tafi del Valle, 12 XII. 1947; Quebrada La Toma, 21. XI. 1950, one paratype (R. Golbach col.); La Caverna (M. Aczél et R. Golbach col.), one paratype.

NOTE. This species is, as to adult markings, similar to *M. flabellifera* from which it can be separated by the chaetotaxy of mid tibiae. On the other hand the male genitalia is different from all other species belonging to this subgenus.



Figs. 14, 16, 17. Male genitalia, dorso-ventral view. Fig. 15. Wing. 14A, 14B, 14C. *M. (A.) tapuii* n. sp. 15, 16. *M. (A.) tucumana* n. sp. 17. *Allodia argentinensis* n. sp.

Mycetophila (Abmyceta) flexiseta Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 105.

DISTRIBUTION. Twelve specimens. Terr. de Santa Cruz, Lago Argentino, II. 1953 (Willink col.).

Mycetophila (Abmyceta) forattini Lane, 1951

1951. Lane, Trans. R. Ent. Soc. London, 106: 407.

DISTRIBUTION. Two specimens. Prov. de Salta, Urundel, II. 1950; Tartagal, II. 1950 (R. Golbach col.).

Mycetophila (?Abmyceta) lacuna Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 123.

DISTRIBUTION. One specimen. Terr. de Santa Cruz, Lago Argentino, II. 1953 (Willink col.).

Mycetophila (Abmyceta) pectinata Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 125.

DISTRIBUTION. Two specimens. Terr. Santa Cruz, Lago Argentino, II. 1953 (Willink col.); Prov. Tucumán, Quebrada Cainzo, XII. 1950 (R. Golbach col.).

Mycetophila (Abmyceta) pellucida Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 103.

DISTRIBUTION. Three specimens. Terr. de Santa Cruz, Lago Argentino, II. 1953 (Willink col.).

Mycetophila (Abmyceta) spinosa Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 129.

DISTRIBUTION. One specimen. Terr. de Santa Cruz, Lago Argentino, II. 1953 (Willink col.).

Mycetophila (Abmyceta) triordinata Freeman, 19531951. *Mycetophila triseriata* Freeman, Dipt. Pat. & S. Chile, 3: 128.1953. *Mycetophila triordinata* Freeman (n. n.) Rev. Chil. Ent., 3: 40.

DISTRIBUTION. Six specimens. Prov. de Tucumán, Tafi del Valle, XII. 1947; Aconquija, XII. 1950 (R. Golbach col.).

Allodia argentinensis n. sp.

MALE. Head: Mouth parts and palpus yellow. Antenna with yellow scape, torus and most of flagellar segment I, the rest dark brown. Occiput dark brown in the middle, yellowish on the sides.

Thorax: Mesonotum yellowish with hairs and dark brown setae over the disk; a prescutellar brown spot. Scutellum yellowish but dark brown in the middle and on continuation to the prescutellar spot; two marginal setae. Postnotum yellowish but brown in the middle. Pleura yellowish, the pleurotergite darker.

Wing hyaline. Haltere yellowish.

Legs: Coxae yellow. Fore leg missing. Mid leg with yellow femur and tibia, the setae short. Hind leg with yellow femur and tibia, the setae also short. Tibiae with rows of setulae.

Abdomen blackish above and yellowish below.

Genitalia: (Fig. 17). Basistyle with the lobes fused and broader than long. Dististyle with elongate and complex lobes as in Fig. 17. Mesosome not observed. Ninth tergite very short, setose and elongate.

FEMALE. Unknown.

TYPE. Holotype male. To be returned to the Institute Miguel Lillo, Tucumán, Argentina.

TYPE LOCALITY. Prov. de Tucumán, Tafi del Valle, 12. XII. 1947. (R. Golbach col.).

NOTE. This species is near *A. complexa* but markings of mesonotum and scutellum as well as genitalic characters separate it from all others.

Allodia similis Freeman, 19511951. *Allodia* Freeman, Dipt. Pat. & S. Chile, 3: 92.

DISTRIBUTION. Prov. de Santa Cruz, Lago Argentino, 25. II. 1952 (W. Willink col.), one specimen.

Allodia complexa Lane, 1948

1948. Lane, Rev. Ent., 19: 234.

DISTRIBUTION. Prov. de Santa Cruz, Lago Argentino, 25. III. 1952 (W. Willink col.); Prov. de Misiones, Eldorado, 1. X. 1948 and Prov. de Corrientes, B. de Astrada, IX. 1948 (J. P. Duret col.), four specimens.

The Utilization of Morphological, Ecological, and Life History Evidence in the Classification of Protocalliphora (Diptera: Calliphoridae)

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ABSTRACT

The North American species of the blow fly genus *Protocalliphora*, whose larvae are obligatory bloodsucking parasites of nestling birds, were revised in 1924 by Shannon and Dobrosky and again in 1948 by David G. Hall. The first revision recognized three species and seven varieties; the second, ten species, three of them new. Difficulties in identifications remained, however, and studies were undertaken by the senior author on the adults and by the junior author on the immature stages, ecology, and life history. The studies were mutually advantageous and significantly complementary, and as a result twenty-one Nearctic species are now recognized, besides limited material suggestive of half a dozen others. The revision and a separate paper on ecology will appear elsewhere.

The adults have a meager variety of specific characters, making differentiation difficult with the increased number of species known. However, study of adequate series and proper association of sexes and immature stages has made it possible to define characters precisely for each taxon, and to appreciate the distinctiveness of different combinations of characters. Three useful characters—body color, width of frons, and form of the outer forceps—were illustrated and discussed in the talk and also shown in the exhibit prepared by the authors. In color there are two classes of males and three of females. In the male sex there are three general types of frontal width, and three of genital forceps. Various combinations of these characters are specific.

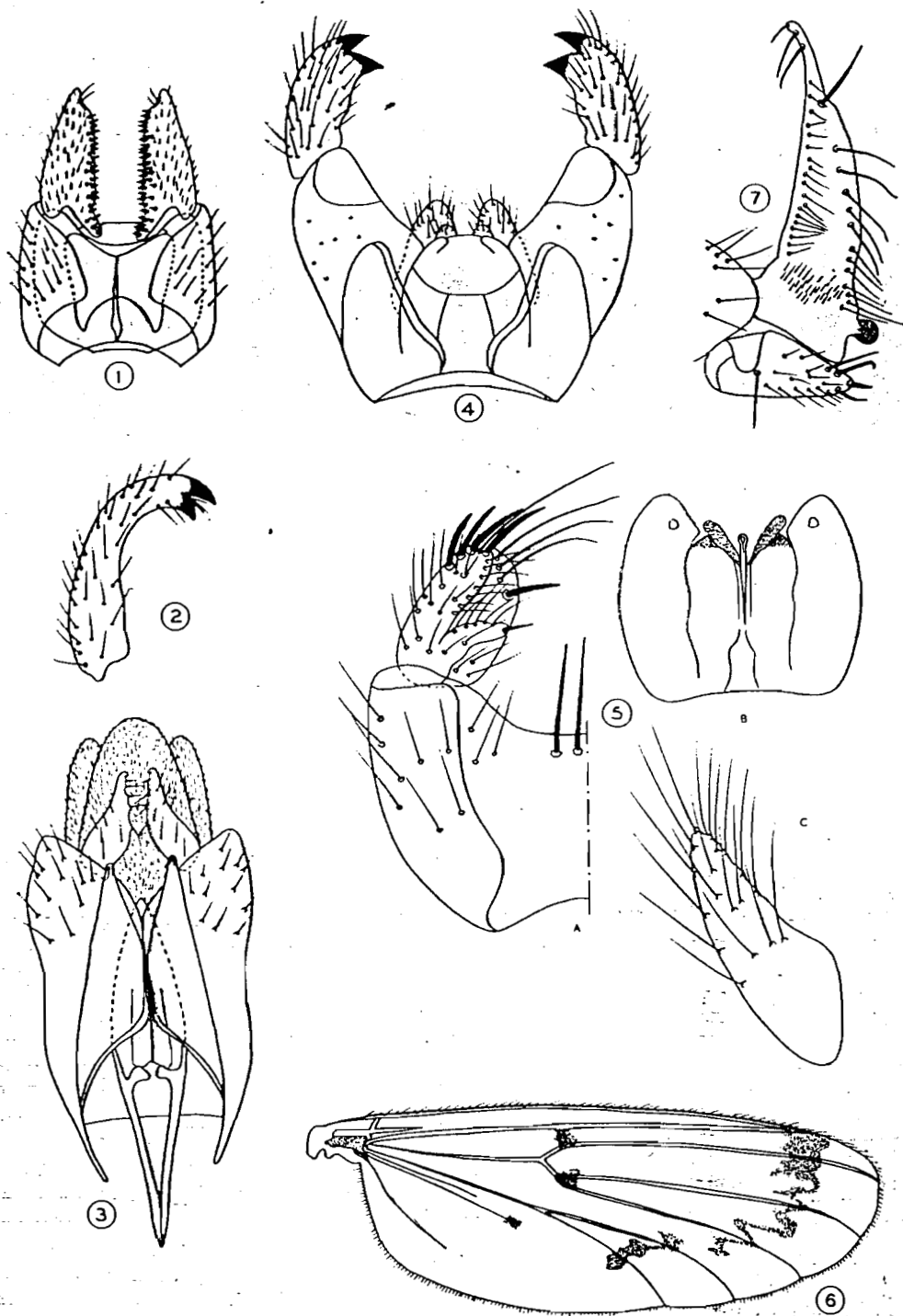
Puparial characters are also significant and useful, both in supporting conclusions reached from adult material and in contributing in a major way to the analysis of complexes of species with similar adults in one or both sexes. The chief characters are the cuticular folds of the stigmal region, spine bands on the ventral surface of the puparium, length of curicular spines on various surfaces, and length of spines in the prothoracic fringe. Morphological differences have also been found in the few eggs and first and second instar larvae thus far studied.

Life-history studies have also demonstrated differences between species, the most important being habitat preference. In the field study at Algonquin Park, Ontario, during the last six seasons, over 2500 bird nests were examined, and 13 species of *Protocalliphora* were recovered, 6 of them being relatively abundant. The evidence indicates that, in general, species of *Protocalliphora* show selective preference for certain habitat levels or strata in their environment. Within a given habitat they will apparently attack any species of bird with young confined to a nest. Other phases of the life history, such as the depth of burrowing by the larvae, the minimum temperature requirements for beginning of adult activity, rate of development of larvae and puparia, and length of adult life, are often quite specific and show adaptation to (1) the physical factors of the preferred environments, and (2) the life histories of the bird species found in those environments.

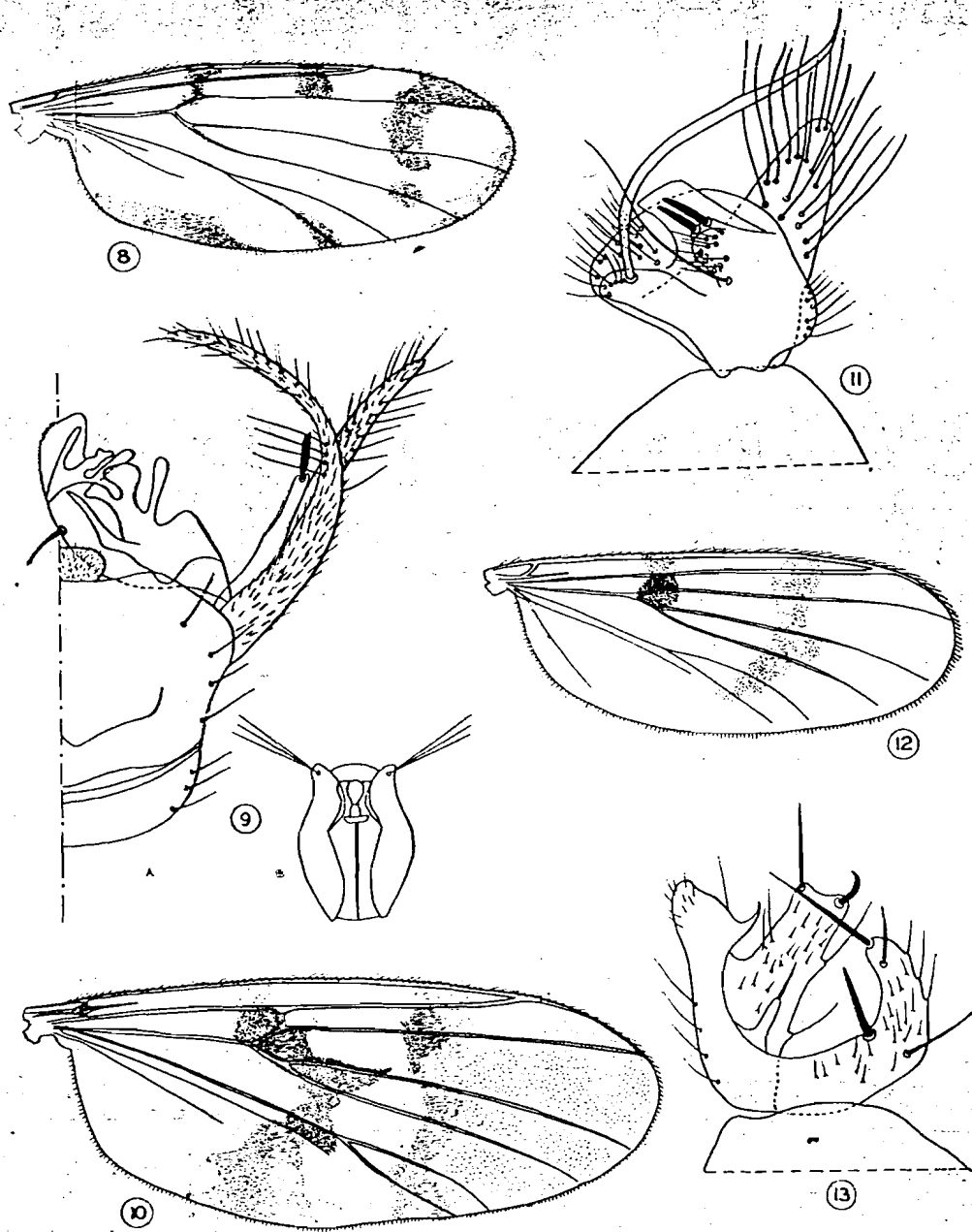
Of the 21 Nearctic species of *Protocalliphora* thus far recognized, 19 are known from both sexes and the immature stages, and 2 from both sexes but no immatures. The harmonizing of evidence from morphological, ecological, and life-history studies, and especially the critical study and correlation of long series of reared specimens with associated immature stages, are assurance that true biological species are involved rather than merely varieties or ecological races. It is seldom indeed that taxonomists have such varied information on which to base revisionary taxonomic work.

TYPE LOCALITY. Prov. de Salta, Urundel, II. 1950 (R. Golbach col.).

NOTE. This species is named in honor to its collector.



Figs. 1-5, 7. Male genitalia, dorso-ventral view. Fig. 6. Wing. 1, *Keroplatus* (K.) *golbachi* n. sp. 2, *K.* (*Cerotelion*) *dureti* n. sp. 3, *Platyura* (*Neoplatyura*) *aczéli* n. sp. 4, *Isoneuromyia* *tucumana* n. sp. 5A, 5B, 5C, *Epicypta* (*E.*) *aczéli* n. sp. 6, 7, *Mycetophila* (*M.*) *guanasi* n. sp.



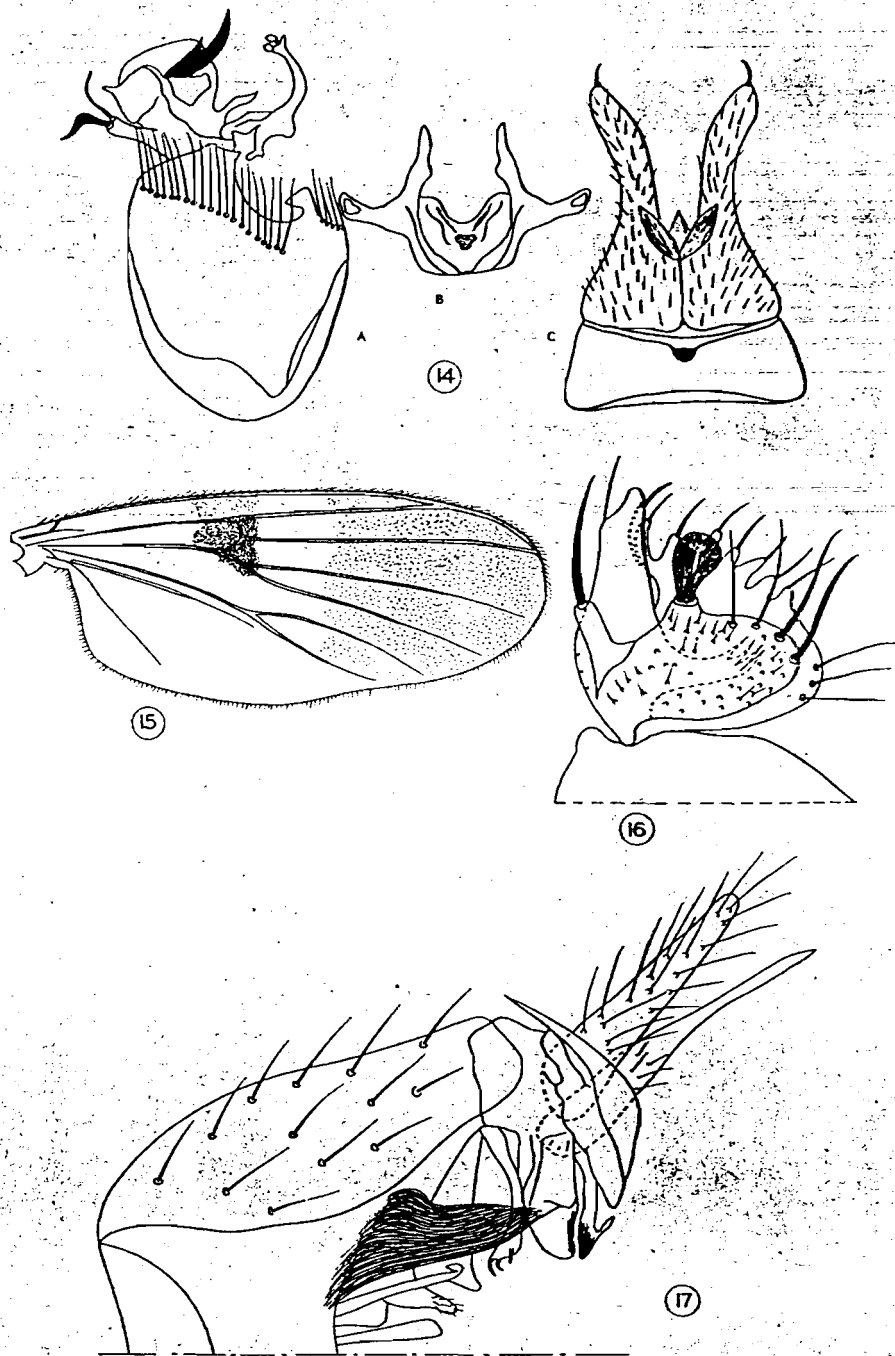
Figs. 8, 10, 12. Wing. Figs. 9, 11, 13. Male genitalia, dorso-ventral view. 8, 9A, 9B, *Mycetophila (Abmyceta) acarisi* n. sp. 10, 11, *M. (A.) argentina* n. sp. 12, 13, *M. (A.) golbachi* n. sp.

darker. Mid tibia with 4 d., 2 e., 2 v., and 8 i. setae in a row, Hind tibia with 6 d. and 6 e. setae.

Abdomen blackish.

Genitalia: (Fig. 11). Basistyles united and quadrate. Dististyle as in the figure. Mesosome ovate, the upper portions surpassing the lateral flaps and rounded; the lateral flaps pointed. Ninth tergite subtriangular and shorter than the height of basistyle.

FEMALE. Similar to male. Cerci brown and elongate.



Figs. 14, 16, 17. Male genitalia, dorso-ventral view. Fig. 15, Wing. 14A, 14B, 14C, *M. (A.) tapaiyai* n. sp. 15, 16, *M. (A.) tucumana* n. sp. 17, *Allodia argentinensis* n. sp.

Mycetophila (Abmyceta) flexiseta Freeman, 1951

1951. Freeman, Dipt. Pat. & S. Chile, 3: 105.

DISTRIBUTION. Twelve specimens. Terr. de Santa Cruz, Lago Argentino, II. 1953 (Willink col.).