

DIPTERA OF PATAGONIA AND SOUTH CHILE

PART VI

FASCICLE 3.—EPHYDRIDAE (Supplement), SYRPHIDAE, CONOPIDAE.

EPHYDRIDAE.

(Supplement.)

By F. W. EDWARDS, M.A., Sc.D., Assistant-Keeper, Department
of Entomology.

SINCE the main collection of Ephydridae was submitted to Mr. Cresson a rather large amount of additional material has been found in the British Museum Patagonian collections, including examples of two very distinct new species. In order to complete the account of the Patagonian Ephydridae these new species are described below, and the opportunity is taken of making some further slight additions and corrections to Mr. Cresson's paper.

Ditrichophora puella, Cresson.

Since the remainder of the material was submitted to Mr. Cresson, a large number of additional specimens of this species have been discovered in the collection, having previously been placed with the Drosophilidae. These additional specimens are from the following localities: Bariloche, Casa Pangué, Peulla, Ensenada, Puerto Varas, Castro; also a long series from Los Andes.

The species varies somewhat in size, but its coloration appears constant. The pollinosity of the head and thorax is dark brown rather than ochreous as described by Mr. Cresson.

Ditrichophora polita, sp. n.

Structurally similar to *D. puella*, but body wholly shining black; legs with only the tarsi partly yellow.

♀ (?). Length, 2.3–2.8 mm.; wing, 2.3–2.8 mm.

Head wholly black and shining, devoid of pollen except on the small antennal grooves, but slightly roughened above antennae

and there less shining. Antennae small and wholly black. Chaetotaxy exactly as in *D. puella*, also shape and width of frons and face.

Thorax and *abdomen* wholly shining black; bristles and hairs as in *D. puella*.

Legs with coxae, femora and tibiae wholly shining black; first segment of front tarsi and first two segments of middle tarsi yellow, remaining tarsal segments black.

Wings hyaline; venation as in *D. puella* except that the second vein is less distinctly curved upwards to costa at tip; second section of costa over twice as long as third. Halteres with black stem and pure white knob.

Holotype, ♀ (?), L. Gutierrez.

Paratype, ♀ (?), Peulla.

In the type the thorax has a slight blue-green metallic gloss, which is not perceptible in the paratype. The species is perhaps most similar to *D. aliena*, Cresson, of Western North America, which has a white-dusted face.

Ilythea cressoni, sp. n.

A much larger species than either *I. fusca* or *I. niveoguttata*, also differing in wing-markings as described below.

♂ (?). Length, 3 mm.; wing, 3.5 mm.

Head covered with dense and coarse whitish-ochreous dust on the whole face except for the central knob, which is dark, dust somewhat whiter in antennal grooves, but as seen from above with light falling from in front the whole face appears almost silvery-white, not only the antennal grooves as in *I. niveoguttata*; there is also a similar small silvery-white spot between roots of antennae. Upper orbits more distinctly shining than in *I. niveoguttata*. Chaetotaxy of head as in *I. niveoguttata*, except that the fronto-orbital bristles are still closer together, the distance from the short lower to the long upper fronto-orbital being only about one-third instead of one-half that from the upper-fronto-orbital to the vertical. Third antennal segment only very narrowly yellowish at base.

Thorax scarcely shining, dark brownish with greyish pollinose markings arranged much as in *I. niveoguttata*: a faintly indicated but more or less continuous median line, most distinct in front of scutellum, and a row of three spots just inside the line of the dorso-central bristles; outside these are two more spots which are not traceable in the type of *I. niveoguttata*.

Abdomen shining blackish.

Legs ochreous with dark coxae; femora, especially front pair, somewhat darkened except at tips.

Wings with numerous dark brown spots arranged much as in *I. niveoguttata*, but larger and darker, in particular the spot below

tip of first vein larger, very dark, and completely filling space between first and second veins almost as far as base of latter. By reflected light many of the clear areas appear white, particularly those on each side of the large spot between third and fourth veins. Halteres yellowish.

Holotype, ♂ (?), Meechuque I.

Paratype, ♂ (?), Bariloche.

In both specimens the labella are provided with a remarkable fringe of close-set transparent scales; no such structure is visible in the other two *Ilythea* described by Mr. Cresson, nor in any other Ephydridae in the collection, but without mounting specimens for comparison it is not possible to say whether this scaly fringe is peculiar to this species or is merely hidden in the others. It is not visible in the allied British *I. spilota*, Hal., of which I have examined numerous specimens.

***Parydra aureola*, Cresson.**

Mr. Cresson writes that the species with which this was compared was *P. humilis*, Williston; the name was inadvertently spelt *humeralis* both in the text and in the footnote.

***Dimecoenia prionopectera* (Thomson).**

In discussing the identity of Thomson's *Ephydra prionopectera*, Mr. Cresson suggested that it might be one of the species he described under the generic name *Dimecoenia*. Having recently received Thomson's type on loan from Prof. Sjöstedt, I find that Mr. Cresson's supposition was correct; *E. prionopectera* belongs to the genus *Dimecoenia* and is identical with *D. densa*, Cresson, this name falling as a synonym.

***Scatella guttipennis* (Bigot).**

1888. *Palloptera guttipennis*, Bigot, Miss. Sci. Cap Horn, Zool.

Reference to this species was omitted by Mr. Cresson, doubtless owing to the fact that the describer placed it in the wrong genus. Bigot's figure obviously depicts an Ephydrid, and is most probably a species of *Scatella* closely related to *S. vulgata*, Cresson, though with somewhat different wing-markings. The type should be in the Paris Museum, but cannot be traced.

Tierra del Fuego.

SYRPHIDAE.

By RAYMOND C. SHANNON, Rockefeller Foundation, International Health division, and D. AUBERTIN, M.Sc., F.L.S., Assistant-Keeper, Department of Entomology, British Museum, (Natural History).

INTRODUCTION.

THE present paper is based mainly on material obtained by Shannon and Edwards in 1926, but it has been amplified by consideration of specimens already in the British Museum Collections. One of us (R. C. S.) has had access to the types in the United States National Museum, while the other (D. A.) has examined Walker's, Bigot's and Macquart's types in the British Museum Collection, further types of Bigot and Macquart kindly lent by Mr. J. E. Collin, and, by permission of Dr. Zerny, Wiedemann's types of certain species of *Eristalis* in the Museum at Vienna.

Systematic papers on the South American Syrphidae are not very numerous, and, for the most part, deal with isolated groups within the family. In addition most of them are based on material obtained, as a general rule, from regions further north than Patagonia and the southern part of Chile.

The most comprehensive revision of the family is that published by Shannon.¹ The majority of species occurring in S. Chile can be identified from Philippi's paper,² which is very much more extensive and illuminating than Blanchard's³ and is based mainly on his own collection. F. Lynch Arribalzaga⁴ published a revision of the Syrphidae of Argentina which is some help with the collection under discussion. Curran has dealt with the genera *Mesogramma*⁵ and *Baccha*⁶ and has also published a revision of the subfamilies Eristalinae⁷ and Volucellinae,⁸ but we are not always entirely in agreement with his interpretation of the species of the older authors. Porter⁹ gives a list of Syrphidae collected in various parts of Chile, and species have been described by Wiedemann, Macquart, Bigot, Rondani and Schiner.

In the key here given to the subfamilies a group called the

¹ 1927. Proc. U.S. Nat. Mus., 70, 9: 1-34.

² 1865. Verh. zool.-bot. Ges. Wien, 15: 733-750.

³ 1852. In: Gay, Hist. Chile, Zool., 7: 403-413.

⁴ 1891-2. Ann. Soc. Cient. Argent., 32-34.

⁵ 1930. Amer. Mus. Nov., 405: 1-13.

⁶ 1930. Amer. Mus. Nov., 403: 1-16.

⁷ 1930. Amer. Mus. Nov., 411: 1-27.

⁸ 1930. Amer. Mus. Nov., 413: 1-23.

⁹ 1923. Rev. Chil. Hist. Nat., 25: 446-447.

Chilosiinae has been split off from the Syrphinae, and is here treated as a subfamily, largely as a matter of convenience. The group, even in our region, is practically inseparable from the Xylotinae, as certain genera, e.g. *Hemixylota* and *Valdivia*, may more properly be placed in Xylotinae. The characters used for the separation of the group are easily recognizable, even if not of the taxonomic value assigned to them, and the present arrangement appears to simplify the work of identification.

In the generic keys an attempt has been made to include all genera which occur in South America, while in the specific keys, only species described from the geographical area under discussion, or those which may be reasonably suspected to occur there, are included. The names of genera and species which are not definitely known to occur in Patagonia or South Chile are enclosed in square brackets, both in the keys and in the headings of the notes thereon. The fauna of South Chile is rather different from that of the northern part and it is not always possible to ascertain the exact locality from which specimens in the older collections were obtained; all species recorded from Chile have therefore been included in this paper.

Of the twenty-four genera represented in the present collection from S. Chile and Patagonia, ten are found all over the world (*Microdon*, *Melanostoma*, *Syrphus*, *Scaeva*, *Baccha*, *Chrysogaster*, *Tropidia*, *Eristalis*, *Mallota*, *Volucella*), two (*Allograpta* and *Toxomerus*) are restricted to the New World, and the remaining eleven (*Fazia*, *Chamaesphagina*, *Hemixylota*, *Valdivia*, *Eriophora*, *Stilbosoma*, *Sterphus*, *Odyneromyia*, *Macrometopia*, *Philippimyia*, *Dolichogyna*) are found only in southern South America. The remaining genera, included in the keys but unrepresented in the collection, are mainly confined to South America, although one or two may be represented in the southern part of North America. The subfamily Cerioidinae is absent from the southern part of the continent, and the subfamily Microdontinae appears to be represented by a single species, *M. violaceus*, Macq.

Although approximately 100 genera of Syrphidae occur in the American north temperate zone only a little more than one-fourth of this number are now known from the south temperate region. Moreover, there are but a few species known for each of the genera; seven have but a single representative, and the largest number in any one genus is five. The area included in our study, of course, is far smaller than the north temperate area.

Of special interest is the fact that certain rather typical north temperate groups of Syrphidae apparently have their South American representatives only in Patagonia and Chile, although it is likely that they occur elsewhere in the higher altitudes of the Andes, as this mountain system probably afforded these representatives the means of reaching this distant region. Thus,

fairly typical species of the genera *Chilosia*, *Pipiza*, *Chrysogaster*, *Melanostoma*, *Syrphus*, *Myiolepta* and *Tropidia* are found here, while other genera are represented as follows: *Helophilus* by *Dolichogyna*; *Spegina* by *Chamaespegina*; *Xylota* by *Hemixylota*, *Odyneromyia*, *Stilbosoma*, *Sterphus*, *Philippomyia*; and *Criorrhina* by *Macrometopia* and *Eriophora*.

Six of the genera herein recorded are new or of recent erection. We have been able definitely to assign *Penium* and *Ortholophus* to synonymy—to *Pipiza* and *Tropidia* respectively; to confirm the generic status of *Eriophora* and *Dolichogyna*; to ascertain that *Priomerus haemorrhoidalis*, Phil., is a true *Myiolepta*; that *Doros odyneroides* typifies a new genus (*Odyneromyia*, tribe Xylo-tini) and that *Macrometopia* constitutes a very distinct genus.

Apart from the distinctive genera peculiar to the region under discussion, the fauna of southern South America does not present any general facies which would distinguish it from the fauna of the rest of the continent, except possibly, a certain predominance of orange colouring on head, body and wings. An examination of the New Zealand material in the British Museum Collections does not reveal any marked resemblance between species occurring in Chile and in the southern Australian region.

It has been impossible, in the case of certain genera and species not represented in the present collections, to obtain enough data to place them in the keys. Any relevant information that the descriptions afford, is given in the following list.

DESCRIBED GENERA AND SPECIES UNAVAILABLE FOR EXAMINATION.

[*Argentinomyia*, F. Lynch Arribalzaga (1891).] This genus should probably be placed in the Chilosiniæ, but sufficient data are not available for including it in the key to the genera of this subfamily. The type species, *A. testaceipes*, F. Lynch A., was described from specimens taken in Buenos Aires.

[*Eristalis chilensis*, Phil. (1865).] Santiago.

[*Eristalis concolor*, Phil. (1865).] Valparaiso. Appears to have bare, spotted eyes.

Eristalis croceimaculata, Jacobs. (1900). Recorded from Staten Island, Tierra del Fuego. The description and figure might perhaps refer to *E. bogotensis*, Macq.

[*Mallota xylotaeformis*, Schin. (1868).] Chile. Probably not a *Mallota*; a rather bare, dark species with black marks on inner ends of suture; antennæ orange, face yellow, jowls black; hind femora swollen, with white woolly hair underneath; wings darkened by a line at base; abdomen long, more or less parallel-sided, the segments shimmering white anteriorly so that in certain lights only a central line and posterior fleck of ground-colour are visible.

[*Syrphus auropulveratus*, Macq. (1842).] Chile, Santiago; collected by Gay. Probably not a member of the genus *Syrphus*.

[*Syrphus decemmaculatus*, Rond. (1863).] Chile; collected by Philippi. Should probably be placed either in *Tozomerus* or *Allograpta*.

[*Syrphus octoguttatus*, Jaen. (1867).] Chile. Possibly *Tozomerus philippii*, Snn.

[*Syrphus pallipes*, Big. (1884).] Chile. The type should be in Bigot's collection, but we have been unable to find it.

[*Syrphus punctatus*, Macq. (1842).] Chile, collected by Gay. May belong to another genus.

[*Syrphus vertebratus*, Rond. (1863).] Chile, collected by Philippi. Should be placed either in *Toxomerus* or *Allograpta*.

[*Syrphus sexmaculatus*, Macquart (1849).] Chile. Five females of *Scaeva melanostoma*, Macq., are found in Bigot's collection above the label "*sexmaculatus*? Macq.," but from the description, the latter species would appear to be something different; it is, however, insufficiently characterized for recognition.

Syrphus walkeri, F. Lynch Arribalzaga (1892). Patagonia. This name was proposed for *Syrphus unicolor*, Walk. (1837). The type of the species is practically unrecognizable, but probably belongs to the genus *Melanostoma*, as suggested by F. Lynch Arribalzaga. The unique female type was recorded from Patagonia.

Ocyrtamys? *valdivianus*, Philippi (1865). Valdivia. We have been unable to find a species which fits in with this description, and it is doubtful if *Ocyrtamys* is the right genus in which to place it. The Catalogue suggests *Melanostoma*, but the description does not fit in very well with this, either.

[*Xylota aurifacies*, Big.] The description of this species does not appear to have been published, although the name is used by Schiner; it must rank as a *nomen nudum*.

KEY TO SUBFAMILIES OF SOUTH AMERICAN SYRPHIDAE.

1. Antenna with a terminal style[CERIOIDINAE.]
- Antenna with a dorsal arista2.
2. Antennae elongate, porrect, first segment about four times as long as broad; third longitudinal vein with a free-ending branch projecting into first posterior cell; fourth vein strongly recurrent
- MICRODONTINAE (p. 124).
- Antennae shorter, first segment never much longer than broad; no free-ending branch projecting into first posterior cell from third longitudinal vein, or fourth vein not recurrent.....3.
3. Humeral calli and interhumeral region destitute of pile; discal cross-vein joins fourth vein well before middle of discal cell; ♂, as well as ♀, with five abdominal segments, exclusive of hypopygium, visible
- SYRPHINAE (p. 124).
- Hair on humeri as long as elsewhere on dorsum of thorax¹; ♂ with not more than four abdominal segments, exclusive of hypopygium, visible4.
4. Apical section of fourth vein recurrent, arista plumose
- VOLUCELLINAE (p. 166).
- Apical section of fourth vein not recurrent (except in *Alipumilio*, where spurious vein is absent, and in *Chrygogaster* (*Orthoneura*) where frons and face are rugose); arista bare, or at most slightly pubescent.....5.
5. Third vein deeply looped into first posterior cell, metasternum pilose; medium-sized flies.....ERISTALINAE (p. 158).
- Third vein straight, or very slightly depressed into first posterior cell (if markedly depressed, large flies with brilliant yellow markings).....6.
6. Discal cross-vein joining fourth longitudinal vein well before middle of discal cell; metasternum usually bare (pilose in *Myiolepta*)
- CHELOSIINAE (p. 139).
- Discal cross-vein joining fourth longitudinal vein at, or beyond middle of discal cell7.

¹ Pile on humeri and on dorsum of thorax microscopic in *Chamaesphagina*, absent in *Alipumilio*.

7. Large flies, generally with brilliant yellow markings; marginal cell closed.....[MILESINAE.]
 Medium-sized flies, less brilliantly marked with yellow; marginal cell open.....XYLOTINAE (p. 151).

MICRODONTINAE.

1803. *Microdon*, Meigen, Illiger's Mag., 2: 275.

A large genus with representatives all over the world; in South America species have been recorded from all regions except Patagonia.

Microdon violaceus (Macquart).

1842. *Aphritis violaceus*, Macquart, Dipt. Exot., 2, (2) : 13.

A fairly common Chilean species, metallic blue in colour, with greyish-hyaline wings.

1 ♂, Concepcion; also recorded from Coquimbo, Santiago, Illapel, Colchagua and Valdivia, and from the province of San Luis in Argentina.

SYRPHINAE.

KEY TO GENERA.

1. Squamae, squamal cilia and plumula¹ well developed, cilia of lower squama equal to at least half length of haltere.....2.
 Squamae, squamal cilia and usually the plumula considerably reduced10.
2. Face entirely black3.
 Face largely yellow5.
3. Face not broader than length of arista.....[*Xanthandrus*, Verr.]
 Face much broader than length of arista.....4.
4. First antennal segment as long as, or not much longer than, second
 Melanostoma, Schin. (p. 132).
 First segment much longer than second.....[*Braziliana*, Curr.]
5. Metasternum² long-pilose.....6.
 Metasternum bare.....9.
6. Oral opening about twice as long as broad.....7.
 Oral opening four or more times as long as broad...*Fazia*, Snn. (p. 126).
7. Head of the normal *Syrphus*-type.....8.
 Head much inflated; antennae widely separated at base; face with paired longitudinal grooves[*Claraplumula*, Snn.]
8. Small flies; abdomen narrow and parallel-sided *Allograpta*, O.-S. (p. 130).
 Large flies, very similar in appearance to *Syrphus*; abdomen broad, more or less oval in shape.....[*Epistrophe*, Walk.]
9. Wings without villosity, glassy in appearance; head large, inflated
 Scaeva, F. (p. 127).
 Wings villose, head not abnormally inflated; pleurae and margin of dorsum of thorax without yellow markings.....*Syrphus*, F. (p. 125).

¹ A small feathery structure lying below the squama.

² Area in front of and between hind coxae.

10. Second abdominal segment strongly constricted, or narrow throughout its length, at least twice as long as broad and generally longer, abdomen more or less circular in section.....11.
Abdomen more or less parallel-sided, dorso-ventrally flattened, second visible segment broader than long, sometimes constricted at base...13.
11. A distinct row of stiff hairs across anterior margin of mesonotum
[*Ocyptamus*, Macq.] (p. 137).
Mesonotum without a row of hairs anteriorly.....12.
12. Third longitudinal vein dipping deeply into first posterior cell, or at least somewhat depressed; hind femora armed with short spines distally.....[*Salpingogaster*, Schin.] (p. 134).
Third vein straight; hind femora without spines...*Baccha*, F. (p. 135).
13. Apical section of fourth vein upright; a distinct black spot at apex of wings; second abdominal segment moderately constricted
[*Calostigma*, Snn.]
Apical cross-vein directed obliquely outwards; wing without a black spot, face projecting below antennae.....*Toxomerus*, Macq. (p. 137).

SYRPHUS, Fabricius.¹

1775. *Syrphus*, Fabricius, Systema Ent. : 762.

1933. *Syrphidis*, Goffe, Trans. Ent. Soc. S. of Engl., 8 : 78.

The genus is world-wide in distribution and very uniform in appearance; it is surprising that so few South American species have been clearly defined.

Syrphus octomaculatus, Walker.

1837. *Syrphus octomaculatus*, Walker, Trans. Linn. Soc. Lond., 17 : 344.

1842. *Syrphus gayi*, Macquart, Dipt. Exot., 2, pt. 2 : 90.

1865. *Syrphus poecilogaster*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 747.

1892. *Syrphus patagonus*, F. Lynch Arribalzaga, Anal. Soc. Cient. Argent., 33 : 115.

Abdominal pattern variable, but composed entirely of paired yellow spots.

S. octomaculatus, Walk., appears to be the only common species of *Syrphus* in the region; it shows a considerable amount of variation in abdominal pattern and colour of the legs. In the typical form, the bulk of the abdomen is yellow with a thin network of black, the bases of the femora are dark and the posterior end of the venter black. In some specimens the yellow pattern is reduced and has the appearance of rounded spots, which do not reach the margin of the abdomen on the second visible segment, although there are yellow marginal patches to which they might break through. In this form the femora are pale luteous brown, or even clear yellow. It is very probable that a number of descriptions of species of *Syrphus* in which the characters given appear inadequate for purposes of identification, are based on specimens of this very variable species.

34 ♂♂, 22 ♀♀. S. ARGENTINA : Bariloche, L. Gutierrez, L.

¹ Pending a decision of the International Committee as to the correct genotype of *Syrphus*, the name is employed here in the usually accepted sense, with type *ribesii*, Linn.

Nahuel Huapi (Puerto Blest); Rio Gallegos. S. CHILE: Llanquihue, Casa Pangué; Concepcion, Angol; Tierra del Fuego, Rio Grande.

Also recorded from Coquimbo, Valdivia and Santiago.

[*Syrphus similis*, Blanchard.]

1852. *Syrphus similis*, Blanchard in Gay, Hist. Chile, Zool., 7: 410.

1927. *Syrphus reedi*, Shannon, Proc. U.S. Nat. Mus., 70, 9: 27.

Abdomen with at least two unbroken transverse yellow bands.

There are six males and four females in Bigot's collection. The species has been fully described by one of us (R. C. S.) under the name *S. reedi*, and its affinities with *S. ribesii*, L., are there discussed. It remains only to note that the frons in both sexes is thinly covered by glistening golden tomentum.

Recorded from Santa Rosa, Valparaiso, Santiago, Cautin, La Ligua and La Serena, all in Chile.

FAZIA, Shannon.

1927. *Fazia*, Shannon, Proc. U.S. Nat. Mus., 70, 9: 25.

This genus is similar in general appearance to *Syrphus*, but is characterized by the forwardly projecting face, and consequent elongation of the oral opening. It is at present known only from South Chile and South Argentina; the genotype is *F. bullaephora*, Snn.

Fazia bullaephora, Shannon. ^{tubercle at height}
^{of face, rounded}

1927. *Fazia bullaephora*, Shannon, Proc. U.S. Nat. Mus., 70, 9: 25.

Pleurae and margin of mesonotum with yellow markings; third segment of antenna reddish beneath; lower part of face projecting less than in *F. macquarti*, Blanch., and yellow abdominal spots rounder.

5 ♂♂, 1 ♀. CHILE: Concepcion and Angol. ARGENTINA: Terr. Rio Negro.

Fazia macquarti (Blanchard). ^{tubercle at middle}
^{of face, not up}

1852. *Syrphus macquarti*, Blanchard in Gay, Hist. Chile, Zool., 7: 411.

1868. *Syrphus macquarti*, Schiner, Reise der Novara: 354.

1927. *Fazia australis*, Shannon, Proc. U.S. Nat. Mus., 70, 9: 26.

Pleurae and mesonotum without definite yellow markings; third segment of antenna entirely black.

The specimens in Bigot's collection above the label *S. macquarti* agree perfectly with those in the present collection, and also with Blanchard's description. Schiner amplifies this description and suggests that the species is closely related to *Syrphus umbellatarum*, F.; the resemblance, however, lies merely in the appearance of the abdominal pattern; it is improbable that close relatives of *S. umbellatarum*, F., occur in South America.

1 ♂, 7 ♀♀. S. CHILE: Casa Pangué, Castro, Peulla, Ensenada, Condes.

Also recorded from La Serena, Valdivia, Valparaíso, Aconcagua and Río Blanco in Chile, and from Mendoza in Argentina.

SCAEVA, Fabricius.¹

1805. *Scaeva*, Fabricius, Syst. Antl.: 248.

1844. *Lasiophthicus*, Rondani, N. Ann. Sci. Nat. Bologna (2), 2: 459.

1877. *Catabomba*, Osten-Sacken, Bull. U.S. Geol. Surv., 3: 326.

A small genus, occurring, with the exception of the Australian region, all over the world. It is characterized by the swollen frons and face, and glassy wings which are devoid of microscopic hairs (microtrichia) on the membrane. The abdominal pattern is not invariably lunulate, and it is possible that certain species of *Syrphus* should be transferred to this genus.

KEY TO SPECIES.

1. Face and legs entirely yellow.....*flavipes*, sp. n.
At least the facial tubercle and hind femora darkened.....2.
2. Sides of face pale-haired.....3.
Sides of face with numerous dark and pale hairs intermixed; lateral margins of epistome more or less infuscated.....4.
3. Jowls and lateral margins of epistome yellow; abdominal spots narrow and lunulate.....[*pyrastris*, L.]
Abdominal spots larger and more rotund.....[*occidentalis*, Snn.]
4. Lunules on second visible segment reduced to two small spots
punctata, sp. n.
Lunules on second visible abdominal segment as fully developed as the remaining two pairs.....*melanostoma*, Macq.

Scaeva flavipes, sp. n. = *fallipes* Bir. *

A fly with abdominal markings of the *Syrphus* type, hyaline non-villous wings, and dilated clear yellow face.

♂. Length, 11 mm.; wing, 8 mm.

Head: Eyes bare, contiguous for a short space; ocellar triangle black, bearing a mixture of soft dark and pale hairs; frons slightly swollen, yellowish-aeneous above, shining near base of antennae, covered with tomentum and pale hair along eye-margins; face, epistome and jowls clear yellow, face blown out laterally, with bands of silver tomentum along eye-margins; first and second antennal segments dark brown to black, third segment reddish-brown, paler underneath; palpi yellow.

Thorax shining green, thickly covered with upstanding light brown hair, rather paler on pleurae than on dorsum; scutellum orange-yellow, yellow-haired.

Abdomen black, with large yellow lunules (Text-fig. 22, b) on

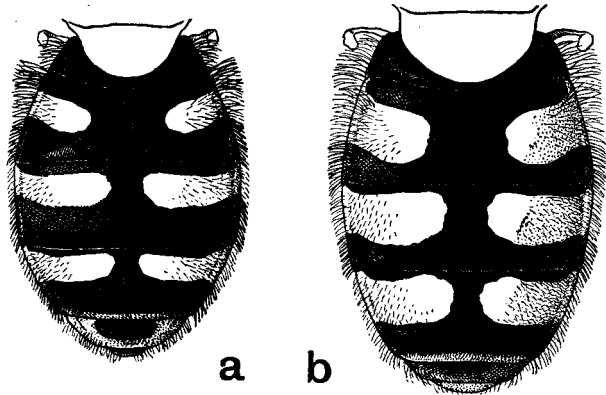
¹ This genus has usually been known as *Catabomba* or *Lasiophthicus*, but there appears to be no reason for disputing Curtis' designation of *pyrastris*, Linn., as the genotype of *Scaeva*, and Fabricius' name must therefore take precedence over the other two.

* This fly is a true *Syrphus* of the *retinatus* group; with *melanostoma*. (23. 7. 20)

second, third and fourth visible segments (posterior pair of lunules darkened in both specimens, but outlines can be traced), posterior margin of fifth segment dark orange; hairs pale on yellow markings, elsewhere black; venter yellow, pale-haired, darkened posteriorly; male hypopygium inconspicuous.

Wings hyaline; squama white, lower lobe with long pale fringe; halteres yellow.

Legs clear yellow; coxae and trochanters brown.



TEXT-FIG. 22.—*Scaeva flavipes*, sp. n. Abdomen of ♂ (b), and ♀? (a).

Two males of this species are to be found in Bigot's collection, over the label "*flavipes*, Chili," but the description of the species does not appear to have been published. A specimen from Bariloche with the abdomen patterned as in Text-fig. 22, a, may well be the female of this species. The distance between the eyes at the vertex is about two-thirds the width of one eye, the frons shining black except above the bases of the antennae, with a faint transverse band of tomentum which extends down the eye-margins.

Scaeva punctata, sp. n.

A blackish-looking insect with the yellow abdominal markings much reduced in size.

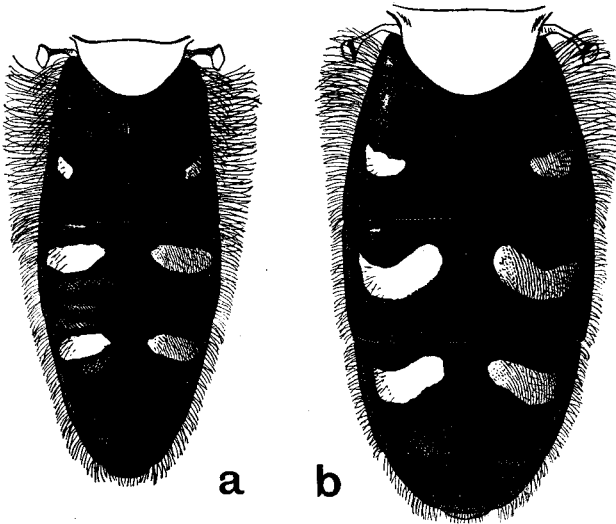
♂. ♀ Length, 11 mm. Wing, 9 mm.

Head: Eyes holoptic, covered with short pale hair; ocellar triangle shining black; frons luteous, dark at eye-margins and above insertion of antennae, dark-haired; face testaceous covered with a mixture of dark and pale hairs, central knob and epistome rather diffusely darkened; post-ocular region with a fringe of white hairs, some fine black hairs intermixed at vertex; antennae black.

* — in one the types of Bigot's *S. pallipes*, the label "*flavipes*" being merely a label misplacement. *Text-fig. 22, fig. 2, 1892.*

Thorax shining aeneous, with a distinct greenish tinge, covered with long upstanding white hair; scutellum rather more purple-brown than green, also sparsely covered with long white hair.

Abdomen (Text-fig. 23, *a*) shining black, with dull black patches in certain lights; first pair of lunules reduced to two small yellow spots lying towards lateral margins, second and third pair rather small, not markedly concave on anterior margins; fourth segment very narrowly yellow-margined posteriorly; venter brownish-black; whole abdomen covered with long white hairs, thickest on lateral margins of second segment; a few short, rather decum-



TEXT-FIG. 23.—Abdomen of *Scaeva punctata*, sp. n. ♂ (*a*) and *S. melanostoma* (Macq.) ♂ (*b*).

bent black hairs on posterior dorsal margins of fourth and fifth segments.

Wings hyaline; squama white with long white fringe.

Legs brown, tarsi and bases of femora rather darker; femora with thin fringes of long white hairs on postero-dorsal surface.

Holotype, ♂, Bariloche (*R. & E. Shannon*), U.S. Nat. Mus.

[*Scaeva occidentalis*, Shannon.]

1927. *Scaeva occidentalis*, Shannon, Proc. U.S. Nat. Mus., 70, 9 : 29.

♀. Length, 13 mm.; wing, 10 mm.

"*Female*.—Closely allied to *melanostoma*, but differs in having the front and face narrower; facial pile entirely pale; scutellum entirely yellowish;

hind femur less extensively black, almost half of the apical half yellowish; tarsi more yellowish; the yellow abdominal spots distinctly larger and less arcuate, the black separating the spots in each pair narrower than the length of (front to back) the spots (in *melanostoma* the black separating the spots much broader than the length of the spots)."

"This species can hardly be that described as *melanostoma* by Macquart, as the yellow abdominal spots are distinctly larger and more rotund than in *pyrastris*" (Shannon).

Type locality, Santiago.

Macquart recorded *S. pyrastris*, Linn., from Chile, and Porter has recorded it from Lampa and La Serena in Chile, and Mendoza in Argentina; it is unrepresented in the present collection, and it is possible that Macquart's and Porter's records were based on misidentifications; the species recorded may be *S. occidentalis*, Snn.

Scaeva melanostoma (Macquart).

1842. *Syrphus melanostomus*, Macquart, Dipt. Exot., 2, pt. 2: 87.

This is the common species of *Scaeva* in southern South America. Four of the specimens are quite typical, with the anterior margins of the second pair of lunules markedly concave (see Text-fig. 23, b), but two females have the anterior margins of the second pair of lunules straight, and much nearer the anterior margin of the segment than in the typical specimens.

1 ♂, 5 ♀♀. CHILE: Concepcion; Condes; Coquimbo. ARGENTINA: Bariloche; Chubut Terr.

Also recorded from Valdivia, Santiago, Valparaiso and Maipu in Chile, and Mendoza in Argentina.

Scaeva, sp. indet.

A single, badly preserved specimen in the British Museum, taken at Chubut, Patagonia, is very similar to *C. melanostoma*, Macq., but larger. The abdomen is rather broader than the thorax, and the lunules are parallel-sided and concave in front. This specimen probably represents a new species, but we prefer to wait for further specimens before describing it.

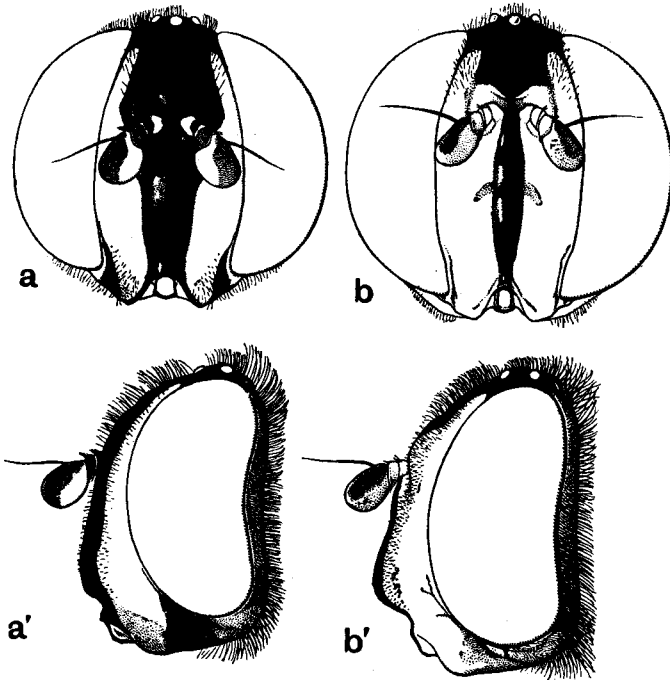
ALLOGRAPTA, Osten-Sacken.

1876. *Allograpta* Osten-Sacken, Bull. Buffalo Soc. Nat. Hist., 3: 49.

A small genus, restricted to North and South America; it is characterized by the yellow markings on the pleurae and almost parallel sides to the face. In certain species there are peculiar longitudinal yellow markings on the fourth and fifth abdominal segments, but they are not of universal occurrence and cannot be regarded as diagnostic of the genus.

KEY TO SPECIES.

1. Fourth and fifth abdominal segments with paired longitudinal yellow lines between the spots.....[*exotica* (Wied.)]
Fourth and fifth abdominal segments without longitudinal yellow stripes.....2.
2. Legs dark brown; black frontal stripe in ♀ surrounding bases of antennae and broadly continuous with facial stripe.....*hortensis* (Phil.).
Legs mainly yellow; tarsi brown, hind femora with a brown fleck distally, hind tibiae brown distally and brown-flecked near base; in ♀ frontal black stripe constricted anteriorly; only continuous with facial stripe between bases of antennae.....*pulchra*, Snn.



TEXT-FIG. 24.—Head, from in front and in profile, of *Allograpta hortensis*, Phil. ♀ (a, a') and *A. pulchra*, Snn. ♀ (b, b').

***Allograpta hortensis* (Philippi).**

1865. *Syrphus hortensis*, Philippi, Verh. zool.-bot. Ges. Wien, 15: 746.

(Text-fig. 24, a, a'; Text-fig. 25, a.)

22 ♂♂, 40 ♀♀. S. CHILE: Casa Pangué. S. ARGENTINA: Bariloche, L. Gutierrez, L. Nahuel Huapi (Eastern End), L. Correntoso.

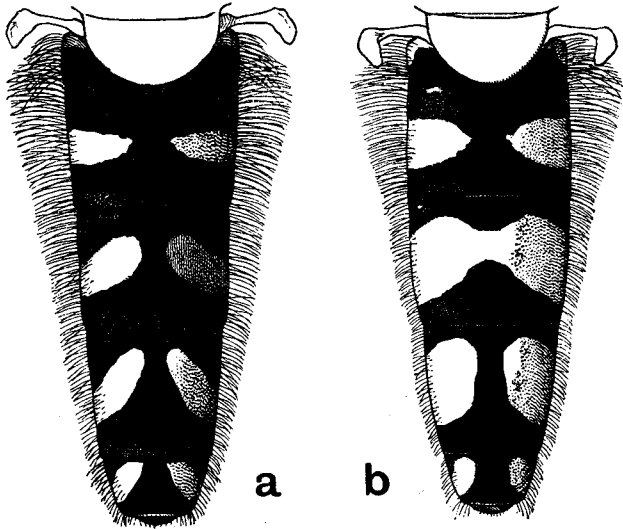
Also recorded from Santiago and Valparaiso in Chile, and Mendoza in Argentina.

***Allograpta pulchra*, Shannon.**

1927. *Allograpta pulchra*, Shannon, Proc. U.S. Nat. Mus., 70, 9 : 25.

(Text-fig. 24, b, b'; Text-fig. 25, b.)

5 ♂♂, 10 ♀♀. CHILE : Puerto Montt, Angol, Concepcion, Los Andes, Llai Llai, Santiago.



TEXT-FIG. 25.—Abdomen of *Allograpta hortensis*, Phil. ♂ (a), and *A. pulchra*, Snn. ♂ (b).

MELANOSTOMA, Schiner.

1860. *Melanostoma*, Schiner, Wien. Entom. Monatschr., 4 : 213.

A large genus, with representatives all over the world. The species have black faces and the abdominal markings are often bluish instead of yellow. The three commonest and most widely-spread species, *M. mellinum*, L., *M. scalare*, F., and *M. stegnum*, Say, have been recorded from South America, but are not represented in the present collection, and may not occur so far south.

KEY TO SPECIES.

- 1. Legs entirely reddish-brown.....[*chalconotum* (Phil.)]
- At least the hind legs dark brown.....2.
- 2. Abdomen with orange spots, slightly dusted with silver tomentum; antennæ black; face uniformly covered with grey tomentum
edwardsi, sp. n.

These species are really Platygasteria rather than Melanostoma
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- Spots on abdomen bluish in appearance (sometimes slightly orange),
 tomentum covering face thinly in such a way as to give it a punctate
 appearance.....3.
 3. Oral opening three times as long as broad.....*fenestratum* (Macq.).
 Oral opening twice as long as broad.....*reynoldsi*, sp. n.

[*Melanostoma chalconotum* (Philippi).]

1865. *Syrphus chalconotus*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 747.

There are six specimens above the label "*chalconota*" in Bigot's collection: two females (locality uncertain) agree well with Philippi's description, three specimens labelled Mexico belong to another species, and the remaining specimen is unlabelled and belongs to yet a third species.

M. chalconota, Phil., has the spotted, protuberant face characteristic of *M. fenestrata* (Macq.), but the abdominal spots are almost clear yellow and the legs uniformly pale brown. The species is unrepresented in the present collection, but has been recorded from Santiago.

Melanostoma edwardsi, sp. n.

A fly with yellow abdominal markings, brown legs and greyish thorax; face thickly covered with grey tomentum.

♂. Length, 10 mm.; wing, 8 mm.

Head: Eyes bare, contiguous for a short space; ocellar triangle, frons and face black, latter evenly covered with grey tomentum and bearing a sparse covering of pale and dark hairs; face in profile tuberculate, not markedly protuberant opening of epistome being about twice as long as broad; antennae black.

Thorax shining aeneous, pale-haired, dorsum with two faint longitudinal stripes; humeri, post-alar calli and pleurae very thinly dusted with grey tomentum.

Abdomen black, second, third, fourth and fifth visible segments with paired yellow spots, thinly dusted with grey tomentum; venter testaceous.

Wings hyaline; squama white with pale fringe; halteres with dark brown knobs and rather paler stems.

Legs: front and middle legs reddish-brown, femora and tarsi darkened; hind legs dark brown, femora almost black in middle; hind metatarsi slightly swollen.

Holotype, ♂, Bariloche.

Melanostoma fenestratum (Macquart).^{*}

1842. *Syrphus fenestratus*, Macquart, Dipt. Exot., 2, pt. 2 : 103.

?1849. *Syrphus productus*, Macquart, Dipt. Exot., Suppl. 4 : 154.

?1888. *Melanostoma punctulatum*, van der Wulp, Tijds. v. Ent., 31 : 375.

This common and widely spread species is characterized by the punctate appearance of the face and the length of the opening of

K

^{*} Probably several species confound under this name (test. J. G. G.)

the epistome, which throws the anterior margin forward. This character appears to be more pronounced in these specimens than in typical *M. stegnum*, Say, with which *M. fenestratum* is synonymized in Kertész' Catalogue; it is possible that this synonymy is incorrect. The specimens over the label *producta*, Macq., in Bigot's collection are certainly identical with *M. fenestratum*, Macq., but we are uncertain if they are conspecific with Macquart's types of *M. productum*, which are in the Paris Museum; this also leaves the identity of *M. punctulatum*, v. d. W., in doubt.

57 ♂♂, 27 ♀♀. S. ARGENTINA: Bariloche, L. Gutierrez, L. Nahuel Huapi (Eastern End), L. Correntoso.

23 ♂♂, 14 ♀♀. S. CHILE: Casa Pangué, Puerto Varas, Ensenada, Ororno, Concepcion, Ancud, Angol, Castro.

Recorded from all parts of South America.

Melanostoma reynoldsi, sp. n.

Rather a small fly with bluish abdominal markings and dark shining green thorax; the face, except in the middle line, is covered with grey tomentum and has a punctate appearance.

♂♀. Length, 7 mm.; wing, 6.5 mm.

Head: Eyes bare, in ♂ contiguous for a short space, in ♀ separated at vertex by distance equal to two-thirds width of one eye; frons dull greenish-black, rather more shining in ♀ than in ♂, clothed with upstanding black hairs; face in profile slightly tuberculate, not protruding, clothed, except for central and two lateral streaks, with grey tomentum, through which the shining black ground shows in numerous small spots (as in *M. fenestratum*, Macq.); antennae dark brown, third segment reddish below.

Thorax dull greenish-black, pale-haired, pubescence shorter and thinner in ♀ than in ♂.

Abdomen dull black, pale-haired, in ♂ with pale bluish-grey spots on anterior external margins of third and fourth visible segments, ♀ with a pair of spots on second visible segment as well.

Wings hyaline; squama white with pale fringes; halteres dark brown.

Legs dark brown, darker in ♂ than in ♀; hind metatarsi considerably swollen in ♂, less so in ♀.

Holotype, ♂, *allotype*, ♀, and *paratypes*, 4 ♂♂, Tierra del Fuego, Rio Grande, Estancia Viamonte, xii.1929 (*P. W. Reynolds*).

[*SALPINGOGASTER*, Schiner.]

1868. *Salpingogaster*, Schiner, Reise der Novara, Dipt.: 344.

A small and well-defined genus, peculiar to Central and South America. The markedly sinuous third longitudinal vein and club-shaped abdomen give the species a characteristic appearance.

[*Salpingogaster conopida* (Philippi).]

1865. *Baccha conopida*, Philippi, Verh. zool.-bot. Ges. Wien, 15: 750.
 1883. *Salpingogaster nigri-ventris*, Bigot, Ann. Soc. Ent. Fr., (6), 3: 329.
 1868. *Salpingogaster macula*, Schiner, Reise der Novara, Dipt.: 345.

The species has a yellow scutellum, pinkish red face and a triangular brown mark bordering on the costa just behind the dark brown stigma. The club-shaped abdomen and thin second abdominal segment give it the facies of a typical *Salpingogaster*, but the third longitudinal vein is only slightly depressed into the first posterior cell, whereas in other species it runs a course very similar to that found in species of *Eristalis*.

The specimens in the present collection agree with both Philippi's and Schiner's descriptions, and there is little doubt that *S. macula*, Schin., must fall into synonymy. Three cotypes of *S. nigri-ventris*, Big., are now in the British Museum collections.

1 ♂, 3 ♀♀. CHILE: Valparaiso, Santiago. ARGENTINA: Mendoza Prov., Potrerillos.

Also recorded from Montevideo, Uruguay.

BACCHA, Fabricius.

1805. *Baccha*, Fabricius, Systema Antliat.: 199.

This genus is represented all over the world and is composed mainly of dark-coloured flies with slender abdomens constricted basally. The species may be distinguished from those of *Salpingogaster* by the straight third longitudinal vein. Apart from *B. clavata*, F., the species in the present collection appear to be confined to southern South America.

KEY TO SPECIES.

1. Wings hyaline with well-defined brown markings.....2.
 Wings more or less evenly infuscated (sometimes only faintly so).....3.
2. Second and third visible abdominal segments each with two pairs of faint yellow spots; stigma and both cross-veins brown.....*valdiviana*, Phil.
 Second and third visible abdominal segments each with one pair of yellow spots; face clear yellow with a black central stripe.....[*clavata*, F.]
3. Sides of thorax from humeral callus to base of wing largely yellow.....5.
 Thorax without yellow markings, abdomen narrowed basally, wings infuscated evenly though sometimes only faintly so.....4.
4. Second and third tergites each with two pairs of yellow spots...[*filiole*, Snn.]
 Second and third tergites uniformly dark, or each with a single pair of spots.....*lugubris*, Phil.
5. Hind legs black.....*melanorrhina*, Phil.
 Hind legs brown.....*flavicornis*, Phil.

[*Baccha clavata* (Fabricius).]

1794. *Syrphus clavatus*, Fabricius, Entomol. System., 4: 298.

In this species the scutellum is yellow with a dark transverse band, and the wings are hyaline except for the subcostal cell which is a uniform dark brown.

2 ♂♂. PARAGUAY, Encarnacion; ARGENTINA, Mendoza; also recorded from Brazil.

Baccha flavicornis, Philippi.

1865. *Baccha flavicornis*, Philippi, Verh. zool.-bot. Ges. Wien, 15: 749.

This does not appear to be represented in the collection. The specimens so named in Bigot's collection are a mixture of *B. melanorrhina*, Phil., and *B. lugubris*, Phil.; *B. flavicornis* appears to be closely allied to the former species, but differs from it in having yellow legs, yellow face without central infuscation, and almost hyaline wings.

Philippi described specimens taken in Valdivia.

Baccha lugubris, Philippi.

1865. *Baccha lugubris*, Philippi, Verh. zool.-bot. Ges. Wien, 15: 749.

1883. *Baccha nigrifrons*, Bigot, Ann. Soc. Entom. Fr. (6), 3: 335.

In this species the sides of the face are yellowish; apart from this it is dark except for ill-defined paired spots on the third and fourth visible abdominal segments. The wings are darkened and the front and middle femora have fringes of hairs. The darkening of the wing shows considerable variation in intensity in different specimens. The unique male type of *B. nigrifrons*, Big., is in the British Museum collection.

7 ♂♂, 1 ♀. S. CHILE: Peulla; Casa Pangué; Castro.
Philippi's specimens were taken at Corral.

Baccha melanorrhina, Philippi.

1865. *Baccha melanorrhina*, Philippi, Verh. zool.-bot. Ges. Wien, 15: 749.

1927. *Baccha felix*, Shannon, Proc. U.S. Nat. Mus., 70, 9: 30.

B. melanorrhina, Phil., is characterized by the yellow face and yellow marks on the thorax. The male paratype of *B. felix*, Snn., is very poorly chitinized so that the yellow markings are not readily apparent, but it seems to one of us (D. A.) to be this species.

2 ♀♀. S. CHILE: Peulla, Ancud.

Also recorded from Valdivia, Quilpué and La Serena, Valparaiso and Santiago.

Baccha valdiviana, Philippi.

1865. *Baccha valdiviana*, Philippi, Verh. zool.-bot. Ges. Wien, 15: 750.

The species is characterized by the wing-markings, duplication of the abdominal spots, and attenuation of the base of the abdomen. A male and a female in Bigot's collection have also been examined.

1 ♂, 1 ♀. CHILE: Quillota, Angol.

Philippi's specimens were taken at Corral.

[*Baccha filiola*, Shannon.]

1927. *Baccha filiola*, Shannon, Proc. U.S. Nat. Mus., 70, 9: 30.

"Male.—Frons black aeneous, very narrow; frontal triangle black aeneous, rugose; frontal lunule yellow with a central black spot above antennae; antennae small brownish; face very narrow, the sides gently converging downward; lower eye-margin bordering on to oral margin; thorax entirely dark aeneous, a pair of faint longitudinal pollinose stripes on mesonotum; pleurae with a faint reddish-yellow tinge; legs yellowish-brown, hind legs darker; abdomen extremely narrow at second and third tergites; tergites two and three each with two pairs of yellowish spots, the fourth with one pair; wings entirely smoky, unusually small, the discal cross-vein nearly at middle of discal cell; alula and basal portion of axillary cell vestigial; length 9 mm.; wing 5.5 mm."

Valparaiso and Santiago. Unrepresented in the present collection.

[*Ocyptamus*, Macquart.]

1834. *Ocyptamus*, Macquart, Suit. a Buffon, 1: 554, 30.

The genus may be distinguished from *Baccha* by the presence of a transverse row of fine bristles anteriorly on the dorsum of the thorax, and by the narrow unstricted abdomen. It appears to be restricted to Central and South America, but so far no species which really belong to the genus have been recorded from the southern part of the continent.

[*Ocyptamus funebris*, Macquart.]

1834. *Ocyptamus funebris*, Macquart, Suit. a Buffon, 1: 554.

1837. *Syrphus iridipennis*, Walker, Trans. Linn. Soc. Lond., 17: 345.

O. funebris, Macq., is a common S. American species, but there are no specimens from Patagonia or South Chile in the collection, and it is possible that it does not occur so far south. It is a characteristic dark fly with the abdomen parallel-sided throughout its length and the wings darkened except for an ill-defined hyaline area near the tip. Walker's type of *Syrphus iridipennis* is from the collection made by Captain King.

1 ♂. ARGENTINA: Misiones Terr., Bompland, i.1927.

Also recorded from Brazil and other parts of Argentina.

TOXOMERUS, Macquart.

1855. *Toxomerus*, Macquart, Dipt. Exot., Suppl. 5: 92.

1865. *Mesogramma*, Loew, Berlin Entom. Zeitschr., 9: 157.

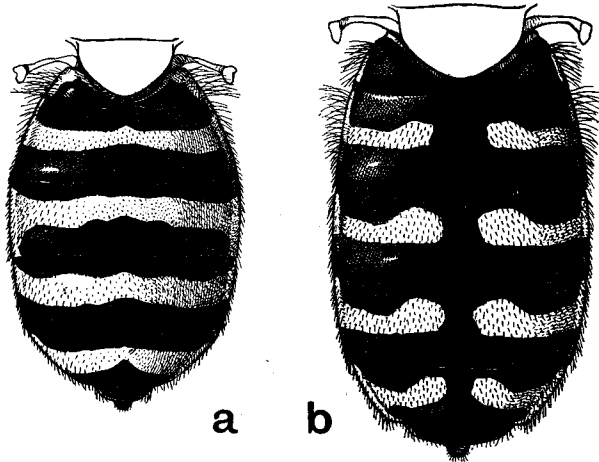
Members of this genus are small flies with characteristically protruding faces. The species have at various times been placed under the generic names *Mesogramma* and *Mesograpta*. The genus appears to be predominantly Central and South American, and contains a large number of species.

Toxomerus calceolatus (Macquart).

1842. *Syrphus calceolatus*, Macquart, Dipt. Exot., 2: 91.

The species is characterized by unbroken black and yellow bands on the abdomen (Text-fig. 26, a).

4 ♂♂, 1 ♀. CHILE: Los Andes, Angol, Llai Llai, Santiago.
Also recorded from Coquimbo.



TEXT-FIG. 26.—Abdomen of *Toxomerus calceolatus*, Macq. ♀ (a),
and *T. philippii*, Snn. ♀ (b).

Toxomerus philippii, Shannon.

1865. *Syrphus interruptus*, Philippi, Verh. zool.-bot. Ges. Wien, 15: 747.

?1867. *Syrphus octoguttatus*, Jaenicke, Abh. Senckenberg. Naturf. Ges.,
6: 398.

1927. *Mesogramma philippii*, Shannon (*nom. nov.*), Proc. U.S. Nat. Mus.,
70, 9: 24.

T. philippii, Snn., in its typical form, has distinctive paired, yellow, anteriorly concave lunules on the abdomen (Text-fig. 26, b); these, however, are frequently partially or completely obliterated, the abdomen then being entirely black or with yellow margins only. In a long series almost every degree of variation can be found, and it would be extremely rash to describe new species based mainly on the abdominal pattern.

19 ♂♂, 29 ♀♀. S. CHILE: Angol; Puerto Varas, Ancud, Ensenada, Peulla, Casa Pangué; L. Yuvin, Tierra del Fuego. S. ARGENTINA: L. Nahuel Huapi (Eastern End), L. Gutierrez, Puerto Blest, Correntoso.

Also recorded from Illapel, Valdivia and Perales, in Chile.

CHILOSIINAE.

KEY TO GENERA.

1. Mesonotum broader than long; post-angular section of apical cross-vein directed obliquely inwards.....[*Alipumilio*, Snn.]
Mesonotum longer than broad.....2.
2. Post-angular section of apical cross-vein vertical or recurrent; frons and face rugose.....*Chrysogaster*, Meig. (p. 140).
Apical cross-vein directed outwards; frons and face not rugose.....3.
3. Body deeply pitted; length of arista equal to width of third antennal segment.....[*Nausigaster*, Will.]
Body not noticeably pitted; arista longer than width of third antennal segment.....4.
4. Face distinctly pilose.....5.
Face bare.....7.
5. Arista longer than antenna; discal cross-vein directed outwards.....6.
Arista much shorter than antenna; post-angular section of discal cross-vein directed upwards, then outwards on distal half
[*Trichopsomyia*, Will.] (*Halictomyia*, Snn.).
6. Face tuberculate, at least in ♂
Chilosia, Mg. (in part, *sens. lat.*) (p. 140).
Face, in profile, receding to upper margin of epistome; not tuberculate
Pipiza, Fall. (p. 143).
7. Epistome produced forwards in a well-defined rostrum; costa extending beyond tip of wing.....[*Rhingia*, Scop.]
Epistome normal, not produced; costa reaching only to tip of wing...8.
8. Thorax with bristles on lateral margins
Chilosia, Mg. (in part, *sens. lat.*) (p. 140).
Thorax without bristles on lateral margins.....9.
9. Section of the third vein preceding anterior cross-vein only about one-eighth the length of that following; body shining pile microscopic
Chamaesphegma, gen. n. (p. 145).
Section of third vein preceding anterior cross-vein one-fourth or more the length of the following.....10.
10. Body-pile modified, scale-like.....11.
Body-pile normal, composed of fine hairs.....12.
11. Antennae moderate; second and third segments as long as broad
Eumyiolepta, Snn.]
Antennae much elongate; second and third segments much longer than broad.....[*Lepidostola*, Mik.]
12. Face with a straight keel; a transverse row of small spines on anterior margin of mesonotum.....[*Zonemyia*, Snn.]
Without spines on mesonotum.....13.
13. Third and fourth veins meet at wing-margin, no petiole beyond; all femora somewhat swollen (middle pair but slightly) and with spinules on lower surface.....[*Myiolepta*, Newm. (p. 151).]
A distinct petiole beyond first posterior cell.....14.
14. Face concave in both sexes; antennae inserted slightly below middle of eyes.....*Hemixylota*, gen. n. (p. 146).
Face more or less tuberculate in ♂, concave in ♀.....15.
15. Abdomen more or less constricted basally; antennae inserted above middle of eyes; ♂ dichoptic, with well-developed hypopygium
Valdivia, Snn. (p. 149).
Abdomen not constricted; male holoptic and without conspicuous hypopygium.....[*?Pia*, Phil.] (p. 150).

CHRYSOGASTER, Meigen.

1803. *Chrysogaster*, Meigen, Illig. Mag., 2: 274.

The dark colouring and rugose frons and face in this genus are characteristic, and in the subgenus *Orthoneura* the post angular section of the apical cross-vein is either vertical or recurrent. The majority of species are found in the Palaearctic Region. Two or three have been recorded from North America, and a few from Africa, Australia and New Zealand. *C. ?annulifera*, Bigot, the type of which is headless, was described from Brazil; this probably belongs to another genus.

Chrysogaster (Orthoneura) quadristriata, sp. nov.

A small greenish-black species with four well-marked longitudinal brownish-purple stripes on the thorax.

♂. Length, 5 mm.; wing, 4 mm.

Head: Eyes bare, separated at point of closest approximation by a distance equal to width of third antennal segment; vertex shining black; frons dark green, rugose; face shining green, sparsely hairy with fine transverse striae and triangular patches of silver tomentum just below level of insertion of antennae; epistome projecting, shining green.

Thorax: dull dark green, finely punctate, with four longitudinal purplish-brown stripes on the dorsum; scutellum with a slight marginal rim, rather purple in colour.

Abdomen: dull dark green with dull coppery reflections, covered with very sparse, short white pubescence, hypopygium large, shining blackish-green.

Legs with femora dark green, tibiae and tarsi brownish, metatarsi on hind legs slightly swollen.

Wings: greyish-hyaline, slightly and evenly infuscated, stigma a little darker; fourth longitudinal vein strongly recurrent; squama white, halteres dull yellow.

Holotype, ♂, Bariloche (*R. and E. Shannon*), U.S. Nat. Mus.

Three female specimens are also present in the collection, but it is impossible to decide whether they are all the same species, and whether they are conspecific with the ♂ specimen described above; they are from the following localities: Argentina, L. Correntoso and Bariloche; Chile, Perales.

The only species of *Chrysogaster* previously recorded from Chile is *C. lugubris*, Jaen., but from the description it would seem probable that it should be placed in another genus.

CHILOSIA, Meigen (*sens. lat.*).

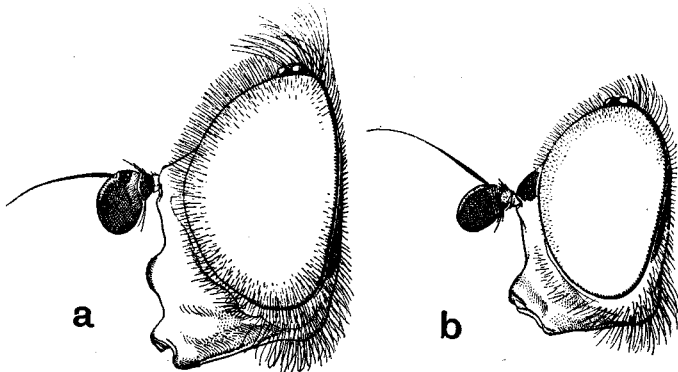
1822. *Cheilosia*, Meigen, Syst. Besch., 3: 296.

Chilosia is a difficult genus with ill-defined limits; it is predominantly palaearctic, but a number of species occur in North

America. Of the following species, *C. nitescens*, sp. n., approaches most nearly to the typical North Temperate forms; the remaining species are obviously very closely related to one another.

KEY TO SPECIES.

1. Thorax with bristles on lateral margins of dorsum.....2.
 Thorax without bristles on lateral margins of dorsum; a shiny black species with hairy face and orange antennae.....*nitescens*, sp. n.
2. Thorax and abdomen dull black.....*pubescens*, sp. n.
 Thorax mainly yellow or reddish-brown, although marked with black...3.
3. Eyes hairy in both sexes, frons in ♀ orange, thorax sparsely clothed with long fine hairs.....*bicolor*, sp. n.
 Eyes microscopically pubescent and frons black, in ♀; thorax clothed with very short fine hairs.....*incerta*, sp. n.



TEXT-FIG. 27.—Head of *Chilosia bicolor*, sp. n. ♂ (a), and *C. incerta*, sp. n. ♀ (b).

***Chilosia bicolor*, sp. n.**

A striking insect with hairy eyes, orange face and thorax, and black antennae, abdomen and legs; the dorsum of the thorax has an ill-defined black patch.

♂♀. Length, 10.5 mm.; wing, 10 mm.

Head (Text-fig. 27, a): Eyes hairy, in ♂ contiguous, in ♀ separated at vertex by rather less than length of third antennal segment; frons orange, in ♂ bare anteriorly, in ♀ with sparse fine hairs down three-quarters of its length; a little golden tomentum in both sexes; ocellar triangle in ♂, black; face orange with a little sparse golden tomentum, tuberculate in ♂ only, epistome darkened anteriorly, rather projecting in both sexes; antennae and arista black.

Thorax clear orange except for centre of anterior three-quarters of dorsum, and ventrally around attachment of coxae; these parts dull black, the patch on dorsum with two narrow longitudinal stripes of grey tomentum touching anteriorly; thorax thinly

covered with a mixture of long fine black and golden hairs; sides of dorsum and margin of scutellum with long, fine, hair-like bristles.

Abdomen dull black, sparsely covered with a mixture of fine black and golden hairs.

Wings hyaline, but with an even pale brown tint, stigma slightly darker brown; squama white, dark-edged, with a long pale fringe; halteres yellow, the stalks brown.

Legs dark brown to black, tarsi thickly clothed on inner surface with golden bristles; hind femora swollen in both sexes, with numerous short black spines distally, on under surface.

Holotype, ♂, *allotype*, ♀ and 4 *paratypes*, Chile, Casa Pangué.

Chilosia pubescens, sp. n.

A dull black insect with an orange face; abdomen noticeably parallel sided, wings lightly and evenly infuscated.

♂. Length, 8 mm.; wing, 8 mm.

Head: Eyes contiguous, pubescent; frons dull black, bare; face slightly tuberculate, translucent, testaceous, golden tomentum very thinly scattered, and with a few pale hairs along eye-margins, epistome darkened anteriorly; antennae and aristae black.

Thorax with dorsum dull black, pleurae dull brown, both thinly covered with upstanding pale hairs; long thin bristles on margin of dorsum and scutellum.

Abdomen parallel-sided, dull brownish-black, thinly covered with long, soft, pale hairs.

Wings long, in proportion to total length of insect; faintly but evenly infuscated, stigma rather browner than rest of wing; squama dirty grey, dark-margined, and with a pale fringe; halteres dull brown.

Legs dull brown, tibiae showing an indefinite pale annulation in middle; hind femora with two rows of spines distally on under surface.

Holotype, ♂, and *paratypes*, 4 ♂♂, Casa Pangué.

Paratype, ♂, Bariloche.

Chilosia incerta, sp. n.

Shiny; thorax and legs reddish-brown, abdomen black; face dull orange, third segment of antenna black.

♀. Length, 8 mm.; wing, 9 mm.

Head (Text-fig. 27, b): Eyes very sparsely and microscopically pubescent (appearing bare unless subjected to close examination), separated at vertex by distance equal to length of third antennal segment; frons black, moderately shining, covered with short upstanding black hairs; face reddish-orange, shining, not tuberculate, epistome projecting slightly; first and second segments of antenna dark brown, third segment and arista black.

Thorax shining reddish-brown, dorsum more or less suffused with black, in middle two faint longitudinal stripes of tomentum ending well before base of scutellum; margin of dorsum and of scutellum with fine black bristles; humeri orange-yellow.

Abdomen shining black, with a few pale hairs laterally.

Wings hyaline, but evenly and faintly tinged with brown, stigma rather yellower; squama greyish-white, dark margined, with a long pale fringe; halteres brown.

Legs reddish-brown, hind femora slightly swollen and with short black spines distally on under surface.

Holotype, ♀, Casa Pangue.

Paratypes, 4 ♀♀, Castro.

It is possible that this species may prove to be the female of *C. pubescens*.

Chilosia nitescens, sp. n.

A shining black insect with hairy eyes, face and body; the antennae are brilliant orange in colour.

♂♀. Length, 8 mm.; wing, 7 mm.

Head: Eyes contiguous in ♂, separated in ♀ by one quarter of total head-width, densely long-haired in ♂, more sparsely haired in ♀; frons shining black, rather swollen anteriorly, covered with upstanding black hairs, a little grey tomentum anteriorly along eye-margins in ♀; face shining black, tuberculate, very thinly covered with grey tomentum laterally and just beneath point of insertion of antennae, and with a mixture of black and white upstanding hairs everywhere except on the tubercle; jowls and lower part of back of head shining black, white-haired; antennae orange, arista dark brown.

Thorax shining black, black-haired on dorsum, and with many pale hairs as well on pleurae; no bristles present.

Abdomen shining blue-black, sparsely covered with a mixture of fine black and white hairs; venter dark translucent brown.

Wings grey-hyaline, veins dark brown; squama greyish-brown, with long, rather lighter fringe; halteres brown.

Legs dark brown, mainly white-haired; hind metatarsi slightly swollen in both sexes.

Holotype, ♂, Ensenada.

Allotype, ♀, Puerto Varas.

Paratype, ♂, Puerto Montt.

PIPIZA, Fallen.

1810. *Pipiza*, Fallen, Nov. Dipt. Disp. Method., 2 : 32.

1865. *Penium*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 741.

1885. *Penium*, Kowarz, Wien. ent. Zeit., 4 : 241.

Dark coloured flies with hairy, receding faces. The genus appears to occur mainly in the Palaearctic, Nearctic, and Neotropical regions.

Pipiza triste (Philippi).

1865. *Penium triste*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 741.

1884. *Penium dubium*, Bigot, Ann. Soc. Entom. Fr. (6), 3 : 557.

We have seen one male which agrees perfectly with Philippi's description of the species; Bigot's types of *P. dubium* are very similar, but the hairs on the dorsum of the thorax in the male are pale instead of reddish; a male specimen from Bariloche also exhibits this character.

Castro; also recorded from Corral and Santiago.

Pipiza, spp. indet.

Two females in the collection, one taken at Casa Pangué and one at Puerto Blest, run to *P. triste*, Phil., in the key given above; they do not appear to be conspecific either with each other, or with the female type of *P. dubium*, Big. (*triste*, Phil.); the dorsum of the abdomen shows extensive, ill-defined, lateral dark orange patches, and the venter is orange-brown in both specimens, while in the female of *P. dubium* the dorsum of the abdomen is entirely black. The specimens differ from each other in width of, and distribution of tomentum on, the frons.

CHAMAESPHEGINA, gen. n.

Shining bare, elongate flies. Face concave, with slightly projecting epistome; thorax bare, with patches of tomentum; hind margin of scutellum forming a well-defined ridge; abdomen shining, elongate, more or less parallel-sided; wings long and narrow, with anterior cross-vein placed very near base of discal cell; legs simple, hind femora with minute bristles.

The genus is distinctive, but is probably allied to *Hemixylota*.

Genotype, *C. argentifacies*, sp. n.

Chamaesphegina argentifacies, sp. n.

Slender, shining flies, with a clear-cut transverse division on the frons where the covering of tomentum begins.

♀. Length, 7 mm.; wing, 6 mm.

Head (Text-fig. 28): Eyes bare; frons narrow, at vertex about one-third width of one eye, shining black except anteriorly; antennal prominence and face covered with silver tomentum; antennae dark brown, the two basal segments lighter in colour.

Thorax shining black; humeri, interhumeral region, and pleurae with patches of silver tomentum.

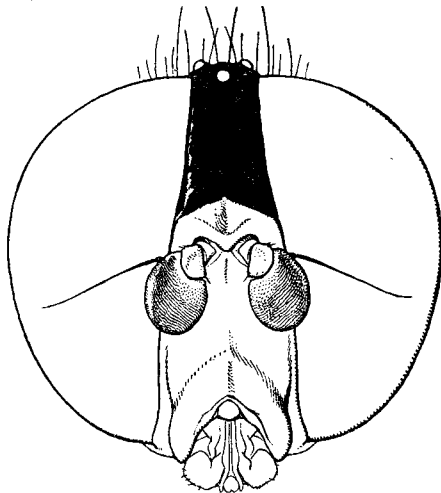
Abdomen shining, dark brown, with a few long hairs laterally on first and second visible segments.

Wings (Text-fig. 29) hyaline, stigma faintly infuscated; squamae white, with white fringes; halteres yellow.

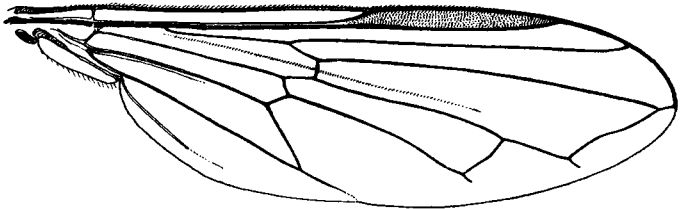
Legs testaceous, hind femora and tibiae rather elongate.

Holotype, ♀, and *paratypes*, 2 ♀♀, Ensenada.

Paratype, 1 ♀, Casa Pangué.



TEXT-FIG. 28.—*Chamaesphagina argentifacies*, gen. et sp. n. ♀ Head.



TEXT-FIG. 29.—*Chamaesphagina argentifacies*, gen. et sp. n. Wing.

HEMIXYLOTA, gen. n.

Eyes bare, separated in ♂; face without pile, except along eye-margins, in profile hollowed to slightly protuberant epistome; point of insertion of antennae slightly below middle of eye; scutellum with a slight rim round margin; abdomen parallel-sided in ♂, long-oval in ♀; legs simple, without any marked characteristics; wing with first posterior cell pedunculate, with

or without posterior appendage, and anterior cross-vein joining fourth longitudinal vein before middle of discal cell.

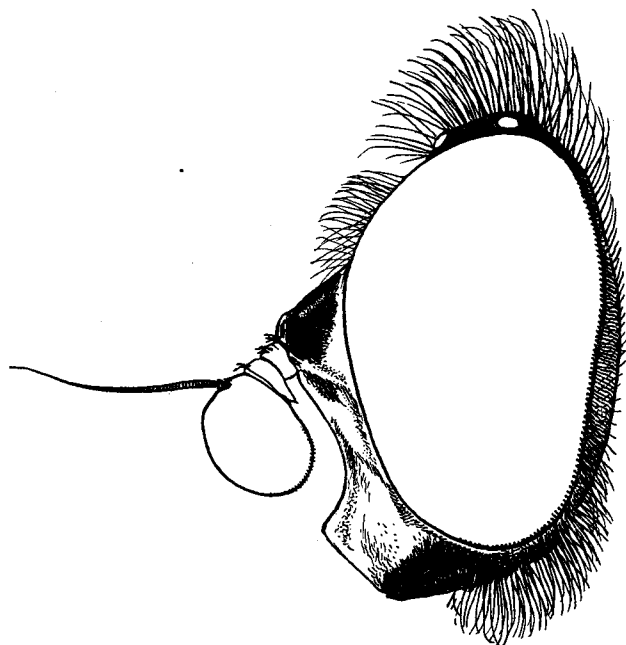
Genotype, *Hemixylota varipes*, sp. n.

***Hemixylota varipes*, sp. n.**

Shining black flies with orange legs; wings long in comparison with the body, and uniformly greyish-hyaline in colour.

♂♀. Length, 10 mm.; wing, 7.5 mm.

Head (Text-fig. 30): Frons shining black, much broader in



TEXT-FIG. 30.—*Hemixylota varipes*, gen. et sp. n. ♂ Head.

♀ than in ♂, with a transverse band of pale hair below ocellar triangle; face covered with silver tomentum, a few pale hairs along lower eye-margins; antennae and aristae black.

Thorax shining blue-black, sparsely covered with soft pale hairs, a patch of silver tomentum on inner side of humeral calli.

Abdomen shining blue-black, with pale soft hairs on lateral margins; ♂ hypopygium well developed.

Wings hyaline, the subcostal cell deeply infuscated. Squama dirty white, with a long pale fringe; halteres pale yellow.

Legs in ♂ black, except for bases of femora, knees, and front

and middle tibiae and tarsi, which tend to be a lighter brown; in ♀ orange, except for hind tarsi, which are dark brown; subcostal cell uniformly dark brown.

Holotype, ♂, Puerto Blest.

Allotype, ♀, Casa Pangue.

Paratypes, 4 ♂♂, Puerto Blest; 1 ♂, Bariloche; 3 ♀♀, Casa Pangue.

We have associated these males and females in one species although they were not actually taken together; apart from the difference in colour of the legs they are very similar in general appearance.

Hemixylota incerta, sp. n.

A shining insect with black face and thorax, reddish-brown abdomen and orange legs; antennae black, very large and porrect; wings darkened in subcostal cell.

♀. Length, 9 mm.; wing, 8 mm.

Head: Frons at vertex about half width of one eye, with median longitudinal furrow, shining black, with a few soft hairs; face covered with silver-grey tomentum; antennae and arista black.

Thorax shining black with greenish metallic reflections on dorsum; a few pale hairs on pleurae.

Abdomen shining reddish-brown with a few pale hairs.

Wings hyaline; subcostal cell infuscated, lighter towards distal end; squama clear white with pale fringe; halteres dark brown.

Legs orange, hind tibiae and tarsi rather darker.

Holotype, ♀, L. Nahuel Huapi, Puerto Blest.

Hemixylota unicolor, sp. n.

A shining blue-black insect with yellow halteres and dark legs; wings hyaline with a darkened stigma.

♀. Length, 10 mm.; wing, 9 mm.

Head: Frons at vertex about half width of one eye, shining black, with a few inconspicuous soft hairs laterally; face thinly covered with silver-grey tomentum; antennae and arista black.

Thorax shining blue-black with a few soft pale hairs scattered uniformly; inner sides of humeri with thin patches of silver-grey tomentum.

Abdomen shining blue-black, sparsely covered with soft pale hairs.

Wings greyish-hyaline; subcostal cell dark, lighter distally; squama white, with long dark-haired fringe; halteres pale yellow.

Legs black; front pair, and hind tibiae with a brownish tinge.

Holotype, ♀, and *paratype*, ♀, Ensenada.

VALDIVIA, Shannon.

1927. *Valdivia*, Shannon, Proc. U.S. Nat. Mus., 70, 9 : 31.

The genera *Valdivia* and *Odyneromyia* are very similar in general facies; in the former the anterior cross-vein meets the fourth vein before the middle of the discal cell, and the antennae are inserted above the middle of the eye, while in the latter the anterior cross-vein meets the fourth vein at the middle of the discal cell, and the antennae are inserted below the middle of the eye. The wing-venation is similar in the two genera, but the sinuous course of the apical cross-vein is less strongly marked in *Odyneromyia* than in *Valdivia*. As the grouping is at present arranged, these characters serve to place the two genera in different subfamilies, but the general resemblance is an indication that a more natural grouping should be looked for, as the genera are probably nearly related. Both genera are at present known only from Chile.

Genotype, *Valdivia darwini*, Snn.

KEY TO SPECIES.

1. Femora and tibia entirely orange.....2.
Femora and tibia mainly black.....3.
2. Antennae dark brown, dorsum of thorax with a marginal band of grey tomentum.....[*darwini*, Snn.]
Antennae orange, thorax entirely shining black.....[*edwardsi*, sp. n.]
3. Abdomen reddish.....[*ruficauda*, Snn.]
Abdomen black.....4.
4. Third wing-vein slightly sinuous, wing-tip noticeably yellowish-hyaline, tarsi gleaming white.....[*albimanus* (Bigot.)]
Third wing-vein straight, wing-tip not markedly hyaline, tarsi dirty white.....[*nigra*, Snn.]

[*Valdivia darwini*, Shannon.]

1927. *Valdivia darwini*, Shannon, Proc. U.S. Nat. Mus., 70, 9 : 32

This species is unrepresented in the present collection.

Unique ♂ type. Chile, Valdivia.

[*Valdivia albimanus*, Bigot.]

1883. *Ocyptamus albimanus*, Bigot, Ann. Soc. Entom. Fr. (6), 3 : 325.

The unique female type differs from *V. nigra*, Snn., apart from secondary sexual characters, in the reddish-brown colour of the thorax, sinuous course of third longitudinal vein, different shape of anterior apical cross-vein, and yellowish-hyaline wing-tip.

Chile, precise locality unknown.

[*Valdivia nigra*, Shannon.]

1927. *Valdivia nigra*, Shannon, Proc. U.S. Nat. Mus., 70, 9 : 32.

1 ♂, Castro.

The type specimen was collected in Santiago.

[*Valdivia ruficauda*, Shannon.]

1927. *Valdivia ruficauda*, Shannon, Proc. U.S. Nat. Mus., 70, 9: 32.

This species is not represented in the present collection, but appears to be characterized by the reddish-yellow abdomen; in the original description it is suggested that it may be the female of *V. nigra*, Snn.

Santiago.

Valdivia edwardsi, sp. n.

A large shining black insect with orange antennae and legs; wings orange anteriorly and brownish at tips.

♂♀. Length, 14 mm.; wing, 13 mm.

Head: Eyes bare, separated at point of closest approximation, in ♂ by distance equal to half longest diameter of third antennal segment, in ♀ at vertex by twice that width; frons black, moderately shining, in ♂ with band of dull grey tomentum just below point of closest approximation of eyes and along eye-margins, in ♀ covered with upstanding brownish hairs, antennal projection orange; face shining black, in ♂ very slightly tuberculate without projecting epistome, and with a broad band of thick golden tomentum, jowls shining black; in ♀ slightly concave, with two lateral streaks of golden tomentum converging towards epistome and a few fine hairs along the lower eye-margins; antennae and arista bright orange.

Thorax shining black, thinly covered with soft upstanding black hairs and slightly dulled between humeri with a scattering of golden-brown tomentum.

Abdomen shining black, thinly covered with pale hairs; second visible segment slightly constricted in middle; ♂ hypopygium prominent.

Wings orange at base and along anterior margin, brownish centrally and towards tip, the colour becoming fainter along posterior margin; third vein straight; squama white with orange margin and fringe; halteres pinkish-orange.

Legs mainly orange; coxae and trochanters black; hind tarsi brown to black.

Holotype, ♂, and *allotype*, ♀, Puerto Blest.

Paratypes, 1 ♂, Puerto Blest; 1 ♂, 1 ♀, Casa Pangué.

[*Pia*, Philippi.]

1865. *Pia*, Philippi, Verh. zool.-bot. Ges. Wien, 15: 742.

We have seen no specimens which conform to Philippi's description of *P. cyanea*; it is apparently a striking blue-black insect with orange antennae, bare eyes, a yellow face covered with hair, and hyaline wings, in which the spurious vein is absent.

The description does not allow one to visualize a sufficient number of characters to be sure of placing the genus correctly

in the key, but it appears to belong to the Chilosiinae, and the slender, unarmed femora remove the genus from the neighbourhood of the Myioleptini; if it is not related to *Pipiza* or *Chilosia*, it is probably a very distinct and isolated genus.

Type locality: Chile, Illapel.

[MYIOLEPTA, Newman.]

1838. *Myiolepta*, Newman, Ent. Mag., 5: 373.

1865. *Priomerus*, Philippi, Verh. zool.-bot. Ges. Wien, 15: 739.

A small genus, the species of which are found in Europe and North and South America.

[*Myiolepta luctuosa* (Bigot).]

1857. *Helophilus luctuosus*, Bigot, Ann. Soc. entom. Fr. (3), 5: 296.

Entirely black, with four well-marked longitudinal thoracic stripes, orange antennae and tuberculate face with a transverse band of golden tomentum just below antennae and a small patch on either side of the epistome; antennal prominence also covered with golden tomentum and fine pale hairs.

Chile, precise locality unknown; 3 ♂♂ cotypes in Bigot's collection.

[*Myiolepta haemorrhoidalis* (Philippi).]

1865. ?*Priomerus haemorrhoidalis*, Philippi, Verh. zool.-bot. Ges. Wien, 15: 740.

Characterized by faint thoracic stripes, orange antennae, and brilliant reddish-orange tip of abdomen.

Recorded from Santiago. One ♀ in Bigot's collection.

It is just possible that this species may prove to be the female of *M. luctuosa*, Big.

XYLOTINAE.

KEY TO GENERA.

1. Metasternum pilose.....2.
- Metasternum bare or pubescent.....7.
2. Body mainly dark-coloured.....3.
- Body mainly brilliant reddish-yellow and thickly pubescent; large and robust species.....*Eriophora*, Phil. (p. 152).
3. Hind femur with one or two apical tooth-like processes ventrally.....4.
- Hind femur without apical process; face subcarinate.....6.
4. Hind femoral process with a single tooth; hind coxa without spur
Tropidia, Mg. (p. 152).
- Hind femoral process bidentate; hind coxa with a small spur.....5.
5. Body very elongate; discal cross-vein simple; ♂ holoptic
[*Acrochordonodes*, Big.]
- Body broad; discal cross-vein with a free-ending branch; ♂ dichoptic
Stilbosoma, Phil. (p. 153).
6. Wings nearly devoid of villi, glassy in appearance; arista shorter than width of face.....[*Syritta*, St. Farg. & Serv.]
- Wings villose; arista longer than width of face.....[*Planes*, Rond.]

7. Face bright yellow, with an obtuse longitudinal ridge; metathoracic spiracle distinctly larger than third antennal segment; hind trochanters of ♂ spurred.....*Sterphus*, Phil. (p. 155).
Face dark; metathoracic spiracle distinctly smaller than third antennal segment.....8.
8. Face with a median longitudinal ridge and two oblique ridges.....9.
Face without oblique ridges.....10.
9. Abdomen strongly constricted basally.....[*Tatuomyia*, Snn.]
Abdomen of nearly uniform width.....[*Crepidomyia*, Snn.]
10. Abdomen more or less constricted basally; face hollowed out below antennae, bare.....*Odyneromyia*, gen. n. (p. 156).
Abdomen not constricted basally.....11.
11. Sides of face hairy.....*Macrometopia*, Phil. (p. 158).
Sides of face bare.....*Philippimyia*, Snn. (p. 158).

ERIOPHORA, Philippi.

865. *Eriophora*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 735.

A monotypic genus, apparently confined to Chile.

Eriophora aureorufa, Philippi.

1865. *Eriophora aureorufa*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 736.

The species is one of the most striking of S. American Syrphidae, and closely resembles the Chilean Humble Bee *Bombus dahlborni*, Guérin; it is not represented in the present collection. There are three females in the British Museum collection and four males and a female in Bigot's collection, all from Chile, but without record of locality. The species was originally described from Valdivia.

One of us (R. C. S., 1926 and 1927) has referred the species to the group with the metasternum bare, but this is a mistake; the hairs on the metasternum are well developed and easily visible.

TROPIDIA, Meigen.

1822. *Tropidia*, Meigen, System. Besch., 3 : 346.

1882. *Ortholophus*, Bigot, Ann. Soc. Entom. Fr. (6), 2, Bull. : cxxix.

A small genus, the members of which have characteristically keeled faces and swollen hind femora. It ranges over the palae-arctic, nearctic and neotropical regions.

KEY TO SPECIES.

1. Antennae reddish.....2.
Antennae black.....3.
2. Front femora black, with yellow tips.....[*rubricornis*, Phil.]
Front femora yellow.....[*flavimana*, Phil.]
3. Second and third abdominal segments mainly dark orange, fourth shining black, posterior margin pale.....*nigricornis*, Phil.
Abdomen black, with patches of bluish-silver tomentum on second, third and fourth segments.....*notata* (Big.).

Tropidia nigricornis, Philippi.

1865. *Tropidia nigricornis*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 745.
 1884. *Xylota bivittata*, Bigot, Ann. Soc. Entom. Fr. (6), 3 : 547.

Characterized by the black antennae, silver face with bare black facial keel, and shiny black fourth visible segment, latter with posterior margin pale.

1 ♂, Chile, Concepcion. December, 1926. Also recorded from the province of Santiago. There are two males in Bigot's collection.¹

[Tropidia flavimana, Philippi.]

1865. *Tropidia flavimana*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 745.

This species was described from specimens taken in Santiago, and has also been recorded from La Serena and Los Vilos; it is unrepresented in the present collection. There is a single male in Bigot's collection, the other specimen over the label being a poorly chitinized male of *T. nigricornis*, Phil.

[Tropidia rubricornis, Philippi.]

1865. *Tropidia rubricornis*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 744.

Described from specimens taken in Colchagua province; unrepresented in the present collection.

Tropidia notata (Bigot).

1882. *Ortholophus notatus*, Bigot, Ann. Soc. Entom. Fr. (6), 2, Bull. : cxxix.

Characterized by the paired patches of bluish-silver tomentum on the margins of the abdominal segments.

This species is a typical *Tropidia*; it is the type of the genus *Ortholophus*, Big., which therefore becomes a synonym of *Tropidia*, Mg. Bigot's type is a male; unfortunately all the legs are missing.

5 ♂♂, 1 ♀, Bariloche. The type specimen was taken in Chile.

STILBOSOMA, Philippi.

1865. *Stilbosoma*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 736.

The genus appears to be confined to Chile. The species are characterized by the shining and markedly developed antennal prominence and the curious shape of the discal cross-vein.

Stilbosoma cyanea, Philippi.

1865. *Stilbosoma cyanea*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 736.
 1865. *Stilbosoma nigrinervis*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 737.

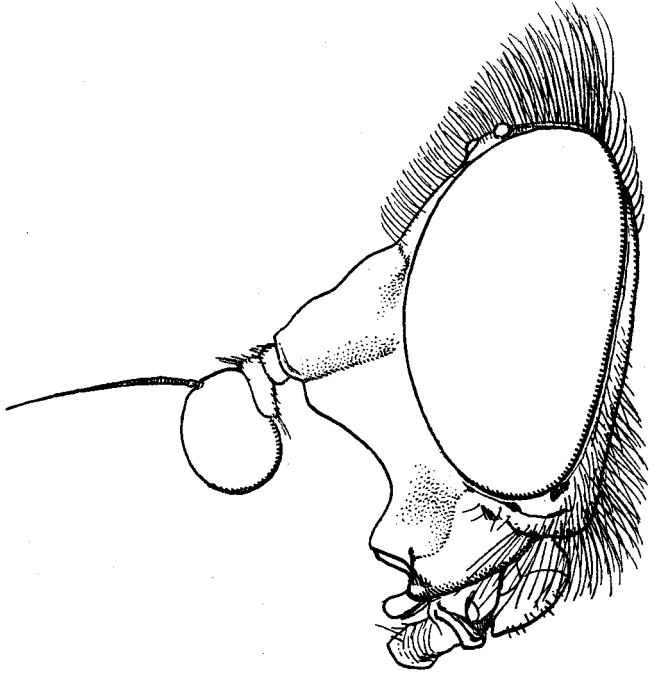
A striking blue-black species, with darkened wings, swollen and toothed

¹ Bigot's type of *Xylota bivittata* is almost certainly the female of this species; the fourth visible abdominal segment is reddish laterally at the base, and the facial keel is less prominent, but otherwise the two sexes are very similar.

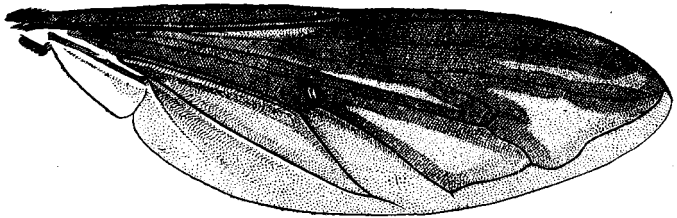
femora, and a prominent antennal tubercle. Face blue-black. (Text-figs. 31, 32.)

5 ♀♀, Castro, Casa Pangué, and Puerto Varas.

Also recorded from Valdivia, Santiago, Temuco and Victoria.



TEXT-FIG. 31.—*Stilbosoma cyanea*, Phil. ♀ Head.



TEXT-FIG. 32.—*Stilbosoma cyanea*, Phil. Wing.

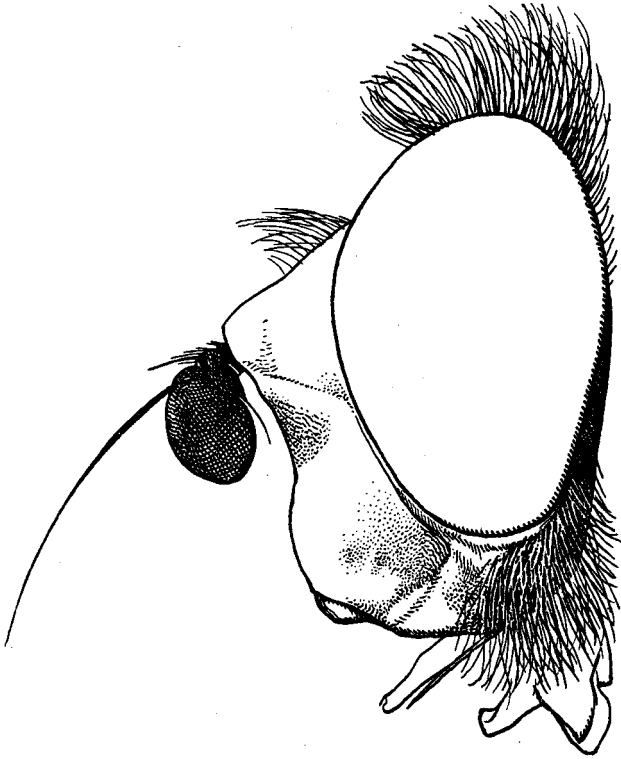
It is probable that *S. nigrinervis* is a synonym, as Philippi himself says that the only difference which he can detect between the two species, lies in the different degree of infuscation of the wings.

There appears to be a certain amount of variation in the width of the frons, in different individuals.

Stilbosoma rubiceps, Philippi.

1865. *Stilbosoma rubiceps*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 737.

Very similar to *S. cyanea*, Phil., except for the bright orange face.



TEXT-FIG. 33.—*Sterphus coeruleus*, Rond. ♂ Head.

1 ♀, Chile, Concepcion.

Also recorded from Santiago. There is a long series of females in Bigot's collection.

STERPHUS, Philippi.

1865. *Sterphus*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 737.

Sterphus has been recorded only from Chile. The species comprize large, metallic-coloured flies in which the hind femora are simple and the discal cross-vein straight.

Sterphus coeruleus (Rondani).

1863. *Xylota coerulea*, Rondani, Arch. per la Zoolog., 3 (sep.): 8.
 1865. *Sterphus antennalis*, Philippi, Verh. zool.-bot. Ges. Wien, 15: 737.
 1926. *Sterphus coerulea*, (Rondani), Shannon, Proc. U.S. Nat. Mus., 69, 9: 46.

A striking fly with the thick gold tomentum on the face; front and middle tibiae black; pubescence on thorax black. (Text-fig. 33.)

5 ♂♂, 3 ♀♀, Castro and Casa Pangué.

Also recorded from Valdivia and Tierra del Fuego. There are 3 ♂♂ in Bigot's collection under Philippi's name.

[Sterphus aurifrons, Shannon.]

1926. *Sterphus aurifrons*, Shannon, Proc. U.S. Nat. Mus., 69, 9: 46.

Differs from *S. coeruleus* only in the reddish-brown front and middle tibiae, and the reddish thoracic pubescence.

Chile: precise locality unrecorded. Known only from the male holotype.

ODYNEROMYIA, gen. n.

Large flies of wasp-like appearance, with the abdomen constricted basally. Eyes bare, touching in ♂ for a short space. Antennae inserted on a prominence, face hollowed below this to epistome in ♀, produced in a slight knob above mouth in ♂; third antennal segment large, rounded; arista bare, antennae inserted below middle of eye height. Second visible abdominal segment constricted anteriorly; ♂ hypopygium prominent.

Genotype, *Doros odynerooides*, Phil.

Odyneromyia odynerooides (Philippi).

1865. ?*Doros odynerooides*, Philippi, Verh. zool.-bot. Ges. Wien, 15: 747.

A black, wasp-like fly with hind margins of second and third abdominal segments narrowly yellow; wings orange at base, dark brown anteriorly and hyaline posteriorly.

♂♀. Length, 14 mm.; wing, 12 mm.

Head: Eyes in ♂ almost touching anteriorly, in ♀ separated at vertex by slightly more than width of ocellar triangle; frons in ♂ covered with silver-grey tomentum, in ♀ black, hairy below ocellar triangle, shining anteriorly, eye-margins narrowly covered with silver-grey tomentum; face in ♂ covered with silver-grey tomentum, in ♀ shining black; jowls shining black; antennae bright orange, first and second segments slightly darker, arista orange; palpi spatulate, dark brown.

Thorax: dull black, sparsely covered with short, soft black hair; two faint longitudinal stripes of tomentum anteriorly, and small patches of silver-grey tomentum, on inner sides of humeral calli, and on inner ends of thoracic suture.

Abdomen black; first visible segment and basal half of second shining, with a brownish tint; hind margins of second and third segments with narrow transverse bands of silvery-gold tomentum.

Wings hyaline posteriorly; costal and subcostal cells orange, stigma rather pinkish in colour; middle of wing mainly brown; veins orange at basal end, becoming brown distally. Squama dirty white with dark brown fringe. Halteres yellow-stemmed, knobs pinkish-orange.

Legs in ♂ dark brown, knees more or less dark orange; in ♀ coxae and trochanters black, femora, front and middle tibiae, and first and second segments of front and middle tarsi orange; hind tibiae orange basally, black distally; whole of hind tarsi and terminal segments of remaining tarsi dark brown to black.

4 ♂♂, 3 ♀♀. S. CHILE: Ensenada, Puerto Varas, Ancud.
Originally recorded from Corral.

***Odyneromyia valdiviformis*, sp. n.**

A shining black insect with orange legs and orange colour at base and along anterior margin of wings; abdomen entirely black.

♂♀. Length, 13 mm.; wing, 10 mm.

Head: Eyes bare, in ♂ contiguous for a short space, in ♀ separated at vertex by distance equal to length of first two antennal segments; frons black, moderately shining, in ♂ heavily covered with silvery-yellow tomentum anteriorly, in ♀ upper two-thirds thinly covered with black hair, a little silver tomentum on eye-margins and forming a thin central longitudinal streak on antennal prominence; face shining black, in ♂ slightly tuberculate, and covered except on jowls with silvery-yellow tomentum, in ♀ concave to the rather projecting epistome, and without tomentum; antennae dark brown, third segment slightly reddish at base.

Thorax shining black, thinly covered with short upstanding black hairs; a little silver tomentum on inner sides of humeri, and an indication of two longitudinal central stripes anteriorly.

Abdomen shining black, covered with soft pale hairs, second visible segment slightly constricted; ♂ hypopygium moderately prominent.

Wings with base and anterior margin orange, middle part brown, posterior margin more or less hyaline; squama yellowish-white with orange margin and fringe; halteres pinkish-orange.

Legs mainly orange; coxae and trochanters dark brown to black; hind tarsi, and two terminal segments of front and middle tarsi, brown.

Holotype, ♂, Peulla.

Allotype, ♀, Ensenada.

MACROMETOPIA, Philippi.

1865. *Macrometopia*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 740.

A monotypic genus of shining black flies, recorded only from Chile. It apparently belongs to the tribe Criorhinini.

Macrometopia atra, Philippi.

1865. *Macrometopia atra*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 740.

2 ♂♂, Ensenada. Also recorded from Corral and Martio, Concepcion. There are two specimens, a male and female, in Bigot's collection.

PHILIPPIMYIA, Shannon.

1926. *Philippimyia*, Shannon, Proc. U.S. Nat. Mus., 69, 9 : 47.

A monotypic genus recorded from Chili; it resembles *Sterphus* in general appearance but may be distinguished from it by the somewhat receding face. The genus was erected by Shannon for the reception of *St. cyanocephalus*, Phil.

Philippimyia cyanocephala (Philippi).

1865. *Sterphus cyanocephalus*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 738.

Similar in general form to *Sterphus coeruleus*, but body barer and more shiny, face and frons shining blue-black, without any tomentum, and hind femora proportionately much shorter.

1 ♀, Chile, Angol, January, 1927.

Also recorded from Santiago. We have seen long series of males and females in Bigot's collection.

ERISTALINAE

Of the genera introduced into the key, only *Eristalis* and *Dolichogyna* are represented in the present collection. Species of all the other genera have been recorded from Brazil, the Argentine and Chile, and some of these may eventually be found in Patagonia. *Promilesia*, Lynch-Arrib., appears to be closely allied to *Meromacrus*; it must also be similar in general appearance to *Habromyia*, Will., but seems to be separated from it by the closed marginal cell.

KEY TO SOUTH AMERICAN GENERA.

1. Marginal cell closed and petiolate.....2.
Marginal cell open.....5.
2. Epistome projecting forwards to form a rostrum [Lycastriirrhyncha, Big.]
Epistome normal.....3.
3. Head rounded in front, when seen from above, as deep as it is broad;
third segment of antenna generally rounded...*Eristalis*, Latr. (p. 159).
Head, when seen from above, broader than deep; third segment of
antenna more or less elongate.....4.

4. Loop of third vein without an appendage; eyes bare, all femora more or less swollen; male genitalia more or less prominent
[*Meromacrus*, Rond. [p. 163].]
Loop of third vein with a short appendage...[*Promilesia*, Lynch-Arrib.]
5. Frons, occiput, face and body thickly covered with long golden scale-like pubescence.....[*Quichuana*, Knab.]
Flies without this peculiar pubescence.....6.
6. Loop of third vein with a short appendage.....[*Habromyia*, Will.]
Loop of third vein without an appendage.....7.
7. Mesonotum densely and evenly yellow-pollinose; face evenly concave in ♀; with tubercle, but retreating below in ♂; last section fourth vein markedly sinuate; anterior cross-vein very oblique, leaving discal cell well beyond the centre.....[*Pterallastes*, Lw.]
Mesonotum not entirely yellow-pollinose; last section of fourth vein less sinuous.....8.
8. Eyes very widely separated in both sexes; hairy species with well-marked abdominal pattern.....[*Dolichogyna*, Macq. (p. 164).]
Bare species, or if densely hairy, without well-defined abdominal pattern.....9.
9. Bare species, generally with two well-marked longitudinal stripes on the thorax, and clearly defined abdominal pattern.....[*Helophilus*, Mg.]
Densely hairy species, or if bare, without well-defined abdominal pattern [Mallota, Mg. (p. 166).]

ERISTALIS, Latreille.

1804. *Eristalis*, Latreille, Hist. Nat. Crust. Ins., 14: 363.

The genus is world-wide in distribution and falls into several natural groups; all the species represented in the present collection belong to the subgenus *Eristalis*, *s. str.*

KEY TO SPECIES.

1. Thorax with one or more dull or shining transverse bands.....2.
Thorax unmarked, or only with opaque longitudinal markings.....7.
2. Thorax with a prescutellar band.....3.
Thorax without a prescutellar band.....6.
3. Prescutellar band shining.....5.
Prescutellar band dull, hind femora slightly swollen.....4.
4. Femora shining black, except at tips; scutellum and most of abdomen clear yellow; hypopygium reddish.....[*nigripes*, Wied. (p. 160).]
Femora brownish-black, anterior pairs brown distally or almost entirely brown; scutellum and abdomen brownish-orange, the latter considerably patterned with black; hypopygium black [vinetorum, F. (p. 160).]
5. Abdomen elongate; femora reddish-brown, hind pair much swollen [precipuus, Will. (p. 160).]
As above, but femora black.....[scutellaris, F.]
6. Thorax with a single broad, dull presutural band, sometimes broken posteriorly in middle; antennae and facial stripe light orange
taenia, Wied. (p. 161).
Thorax with two narrow dull presutural bands; facial stripe shining black; antennae dark brown.....[fasciatus, Wied.]

¹ *Pterallastes nubeculosus*, v.d.W., the only S. American species described under this genus, is probably not congeneric with *P. thoracicus*, Loew, the genotype.

7. Thorax blue-grey, sometimes with broken black markings; rather sparsely hairy.....8.
 Thorax dark greyish-brown, more noticeably hairy.....10.
8. Post-alar calli, thorax posteriorly, and scutellum, except for apex, covered with dense upstanding black pile; apex of scutellum bare, pale yellow.....[*melanaspis*, Wied. (p. 161).]
 No dense, upstanding black pile on thorax.....9.
9. Scutellum dark brown.....[*furcatus*, Wied.]
 Scutellum clear yellow, darkened at sides.....*meigeni*, Wied., ♀ (p. 161).
10. Scutellum clear yellow or brown.....11.
 Scutellum yellow, darkened at sides.....*meigeni*, Wied., ♂ (p. 161).
11. Scutellum dark translucent brown; wings hyaline; antennae and facial stripe black; dorsum of thorax with three faint, narrow, longitudinal dark stripes.....*bogotensis*, Macq. (p. 162).
 Scutellum clear yellow to pale brown.....12.
12. Scutellum reddish-yellow or pale luteous.....14.
 Scutellum clear yellow.....13.
13. Thorax unmarked except for two closely approximated longitudinal bands, which become very faint, and may disappear entirely behind the suture. Abdomen with shining broken transverse band on fourth visible segment only.....*lateralis*, Walk. (p. 162).
 Abdomen with interrupted transverse shining band on third and fourth visible abdominal segments; thorax with a pair of noticeable black spots lying laterally just behind suture; scutellum narrowly black anteriorly; a pair of central longitudinal, rather broken black stripes.....*elegans*, Blanch. (p. 162).
14. Scutellum pale luteous; scutum and scutellum covered with pale yellow hairs; eyes with hairs concentrated in longitudinal bands; wings more or less hyaline.....*tenax*, L. (p. 163).
 Scutellum reddish-yellow; scutum and scutellum covered with bright red hair; eyes uniformly hairy; wings slightly darkened centrally.....*obsoletus*, Wied. (p. 163).

[*Eristalis nigripes*, Wiedemann.]

1830. *Eristalis nigripes*, Wiedemann, Aussereurop. zweifl. Ins., 2: 165.

A single specimen, taken at Posadas,¹ agrees very well with Wiedemann's description of the species; so far there is no record of the occurrence of *E. nigripes* further south. The type locality of the species is Brazil.

[*Eristalis vinetorum*, Fabricius.]

1798. *Syrphus vinetorum*, Fabricius, Supplem. Entom. System.: 562.

2 ♂♂, 3 ♀♀. Argentina, Misiones Terr., Posadas,¹ i. 1927.

[*Eristalis precipuus*, Williston.]

1888. *Eristalis precipua*, Williston, Trans. Amer. Entom. Soc. Phil., 15: 280.

A long series of this species was taken at Posadas;¹ it may be

¹ The day on which these specimens were taken was very hot, and all the Syrphidae, as well as dragon-flies and other usually sun-loving insects, retreated at mid-day to the deepest shade of a small wood, where they congregated in great numbers. *Eristalis praecipuus* and *Volucella obesa* were so abundant in this wood that it was quite difficult to collect other species owing to the numbers of buzzing hover-flies captured with every sweep of the net.—F. W. E.

distinguished from *E. scutellaris*, F., the common Central and South American species, by the reddish-brown legs.

[*Eristalis taenia*, Wiedemann.]

1830. *Eristalis taenia*, Wiedemann, Aussereurop. zweifl. Ins., 2: 174.

E. taenia does not seem to occur in the south of Argentina; the specimens taken by Edwards are all from Posadas, Misiones Territory. Specimens of this species from Bigot's collection were labelled *annulipes*, Macq., but they differ from Macquart's description in the colouring of the legs; it is therefore doubtful if the name is a synonym of *E. taenia*, Wied. The species has also been recorded from Colombia, Brazil and Uruguay.

[*Eristalis melanaspis*, Wiedemann.]

1830. *Eristalis melanaspis*, Wiedemann, Aussereurop. zweifl. Ins., 2: 176.

1848. *Eristalis nigriscutellatus*, Macquart, Dipt. Exot., Suppl. 3: 41.

A striking species, as far as we know unrecorded from South Chile or Patagonia. It is immediately recognizable by the curious upstanding black pile on the scutellum and post-alar calli. There are three specimens in the British Museum collection: two from Brazil, of which one is Macquart's type of *E. nigriscutellatus*, and one from Encarnacion, Paraguay. The species was described from specimens taken in Brazil.

[*Eristalis furcatus*, Wiedemann.]

1819. *Eristalis furcatus*, Wiedemann, Zool. Mag., 1, 3: 51.

1849. *Merodon tenebrica*, Walker, List. Dipt. Brit. Mus., 3: 601.

1852. *Eristalis floridus*, Walker, Ins. Saund., Dipt. 1: 245.

A characteristic and widely spread S. American species with curiously marked thorax, swollen hind femora and bent hind tibiae; it does not appear to occur in S. Chile or Patagonia. In all the specimens collected in Posadas, the yellow abdominal pattern is replaced by a similar aeneous blue pattern.

4 ♂♂, 4 ♀♀. Argentina, Misiones Terr., Posadas, i.1927.

Also recorded from Brazil, Uruguay, Colombia and Yucatan.

Eristalis meigeni, Wiedemann.

1830. *Eristalis meigenii*, Wiedemann, Aussereurop. zweifl. Ins., 2: 177.

1842. *Eristalis quadraticornis*, Macquart, Dipt. Exot., 2, 2: 51.

1849. *Eristalis testaceiscutellatus*, Macquart, Dipt. Exot., Suppl. 4: 138.

A striking species of rather small size; the scutellum retains a rectangular yellow patch, but is black along the base and lateral margins; hind femora very much swollen and hind tibiae curiously bent.

9 ♂♂, 2 ♀♀. CHILE: Castro; Concepcion; Llai-Llai; Angol.

Also recorded from Argentina, Uruguay, and many places in N. America, including Alaska.

The species shows sexual dimorphism to an extent rather

greater than is usual among the *Eristalinae*; the female is considerably larger than the male, with the abdomen frequently almost entirely black, except for the hind margins of the segments, and the thorax with a pattern rather like that of *E. furcata*, Wied., while in the male the thorax is almost without pattern.

***Eristalis bogotensis*, Macquart.**

1842. *Eristalis bogotensis*, Macquart, Dipt. Exot., 2, 2 : 52.

20 ♂♂, 7 ♀♀. ARGENTINA : Terr. Rio Negro : L. Nahuel Huapi, L. Gutierrez, Bariloche; Chubut Terr.; Mendoza Prov. : Mendoza. S. CHILE : Llanquihue Prov. : Casa Pangué; Tierra del Fuego : Est. Viamonte.

E. bogotensis, Macq., appears to be widely spread in S. America; it was described from specimens taken in Colombia and is a striking fly, in appearance not unlike *E. tenax*, L., but characterized by very hairy eyes and dark brown thorax with two or three fine, indefinite longitudinal stripes on it. From the description *E. assimilis*, Macq., must be very similar to this species, but we have not seen the type specimens. Our specimens run to this species in Curran's key. The catalogue gives *E. everes*, Walk., as a possible synonym, but the type of this species is no longer extant. The cotypes of *Eristalomyia rufoscutata*, Big., are in the British Museum collection and represent a different species; in the Catalogue, the name is placed as a synonym of *E. bogotensis*, Macq.

The specimens from Tierra del Fuego, collected by P. W. Reynolds, show a slight variation in the females, in that the frons is clothed entirely with pale hairs; in all the specimens from the mainland dark and pale hairs are present in almost equal proportions.

***Eristalis lateralis*, Walker.**

1837. *Eristalis lateralis*, Walker, Trans. Linn. Soc. Lond., 17 : 347.

1863. *Eristalomyia chilena*, Rondani, Archivio per la Zoolog., 3 : 5.

A common species with unmarked thorax and abdomen largely yellow; Rondani's description of *E. chilena* fits in better here than with any of the other Chilean species.

19 ♂♂, 6 ♀♀. S. ARGENTINA : Bariloche, L. Gutierrez, Puerto Blest. S. CHILE : Ancud, Castro; Peulla, Casa Pangué, Ensenada, Puerto Varas.

Also recorded from Brazil, Guiana, Mexico and Jamaica.

***Eristalis elegans*, Blanchard.**

1852. *Eristalis elegans*, Blanchard, in Gay : Hist. Chile, Zool., 7 : 406.

1868. *Eristalis philippii*, Schiner, Novara Reise, Dipt. : 363.

Superficially similar to *E. lateralis*, Walk., but at once distinguished by the paired black marks which lie laterally on the dorsum of the thorax, just behind the suture. The abdominal pattern is very variable and may be predominantly yellow or almost entirely black; Schiner's species was probably based on one of these variations.

15 ♂♂, 6 ♀♀. ARGENTINA: Villa Anna, F.C.S.F., vi.1924 (K. J. Hayward). CHILE; Concepcion, xii.1926.

Also recorded from Coquimbo, Santiago and Valdivia.

There are five specimens in Bigot's collection over the label *E. elegans*, Blanch., a synonym already established by the Catalogue. In Curran's key our specimens run out to *E. philippii*, Schin., which the author separates from *E. distinguendus*, Wied., on account of the dark hairs on the frons in the former species. The Catalogue, which places *E. elegans*, Blanch., as a synonym of *E. distinguendus*, Wied., is probably erroneous on this point.

***Eristalis tenax*, Linnaeus.**

1758. *Musca tenax*, Linnaeus, Systema Naturae, Edit. 10: 591.

This species, of world-wide distribution, can easily be recognized by the characteristic longitudinal bands of pubescence on the eyes.

6 ♂♂, 4 ♀♀. CHILE: Peulla, Puerto Varas, Concepcion, Los Andes.

Also recorded from Valparaiso and Santiago.

[*Eristalis obsoletus*, Wiedemann.]

1830. *Eristalis obsoletus*, Wiedemann, Aussereurop. zweifl. Ins., 2: 175.

5 ♂♂, 4 ♀♀. ARGENTINA: Misiones Terr., Posadas, January 1927.

This species is widely distributed in S. America but there appears to be no record of its occurrence in southern Argentina or Chile. It is similar to *E. tenax*, L., in appearance but is characterized by the short reddish pubescence on the thorax and deep orange scutellum. The type locality is Brazil.

[MEROMACRUS, Rondani.]

1848. *Meromacrus*, Rondani in Truqui, Studi Entom., 1: 70.

The only representative of this genus was taken at Posadas, and is described below as a new species. It is a striking dark grey fly without any of the yellow markings characteristic of this genus.

[*Meromacrus funereus*, sp. n.]

A sombre, greyish-black insect with very little yellow tomentum; anterior half of wings dark brown.

♂. Length, 14 mm.; wing, 12 mm.

Head: Eyes bare, contiguous for short distance, posterior margins with upstanding golden hairs; frontal triangle, facial stripe and jowls black; eye-margins pale-haired, cheeks covered with silver-grey tomentum; antennae brown, third segment darker than first and second; arista orange, bare.

Thorax dull dark grey, becoming intensely black behind humeral calli, along sutural depressions, above point of insertion of wings and on anterior border of scutellum; humeral calli and apex of scutellum a somewhat translucent brown; short, upstanding golden hairs occur in two small patches between humeral calli and in fine lines along sutural depressions, posterior mesopleural sutures, post-alar calli, and in front of scutellum.

Abdomen dull blackish-grey, covered with very short sparse golden hairs; first visible segment with a thin line of golden hairs along posterior margin; venter with five or six thin hairs on each segment; hypopygium large with genitalia projecting forward from under surface.

Wings with anterior half dark brown, posterior half hyaline; squama dark brown; halteres pale yellow.

Legs dull greyish-brown; all femora swollen, hind pair rather elongate, with short black bristles below distally; tibiae rather curved, clothed on inner side with short stiff golden hairs; hind trochanters bearing silver tomentum and a few long pale hairs.

Holotype, ♂, Argentina, Misiones Terr., Posadas, i.1927 (*F. and M. Edwards*).

DOLICHOGYNA, Macquart.

1842. *Dolichogyna*, Macquart, Dipt. exot., 2, pt. 2: 65.

This genus is closely allied to *Helophilus*, differing chiefly in the widely separated eyes of the male, development of the male genitalia, inflated frons, and elongate, pointed face. It apparently replaces *Helophilus* in southern South America.

KEY TO SPECIES.

1. Legs reddish-brown; abdominal pattern and hairs clothing body predominantly golden-orange.....*chilensis*, Walk.
 Legs mainly blackish-brown; hairs covering body predominantly pale brown; abdominal pattern often suffused with grey tomentum.....2.
2. Pleurae dark-haired; ♂ with thoracic longitudinal bands clearly defined and tarsi on anterior pairs of legs considerably flattened and broadened; in ♀ orange patches on second visible abdominal segment clear except for a small patch of grey tomentum on inner corners, patches on third and fourth visible segments more or less covered with grey tomentum
picta, Phil.
 Pleurae pale-haired above, dark-haired below; ♂ with thoracic longitudinal bands very faintly indicated; tarsi not markedly flattened; in ♀ orange patches on second visible segment largely, and on third and fourth visible segments completely grey-dusted.....*reynoldsi*, sp. n.

Dolichogyna chilensis, Walker.

1837. *Helophilus chilensis*, Walker, Trans. Linn. Soc. Lond., 17 : 344.

1842. *Dolichogyna fasciata*, Macquart, Dipt. exot., 2, 2 : 66.

1888. *Helophilus hahni*, Bigot, Miss. Sci. Cap. Horn. Zool., 6 Dipt. : 24.

9 ♂♂, 6 ♀♀. S. ARGENTINA : L. Nahuel Huapi (Eastern End) and Bariloche. S. CHILE : Concepcion; Castro and Ancud.

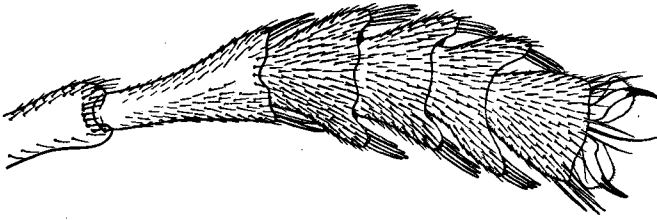
Also recorded from Coquimbo, Valdivia, La Serena and Cartagena in Chile, Santa Cruz and Rio Gallegos in Argentina, and from Tierra del Fuego.

Dolichogyna picta (Philippi).

1865. *Helophilus picta*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 743.

1883. *Dolichogyna nigripes*, Bigot, Ann. Soc. Entom. Fr. (6), 3 : 346.

This species is not represented in the collections made by Edwards and Shannon. It is rather smaller than *D. chilensis*, Walk., less striking in appearance, and may be distinguished at once by the flattened tarsi in the males, and by the mixture of light and dark hairs on the sides of the face and dark hairs on the pleurae in both sexes. Philippi's description of *Helophilus picta* agrees perfectly with the female specimens of this



TEXT-FIG. 34.—*Dolichogyna picta* (Phil.). Middle tarsus of ♂.

species, and it is curious that he did not recognize it as closely allied to *D. chilensis*, Walk. Bigot's cotypes of *D. nigripes*, 3 ♂♂ and 5 ♀♀, are in the British Museum collection.

Recorded from Chile; precise type localities unknown.

Dolichogyna reynoldsi, sp. n.

A hairy fly with reddish face and two longitudinal thoracic stripes clearly visible in ♀ but almost absent in ♂; posterior abdominal markings mainly bluish-grey; ♂ hypopygium not exceptionally large.

♂♀. Length, 12 mm.; wing, 9 mm.

Head: eyes separated at vertex by distance equal, in ♂, to rather less than one-third, in ♀ to one-third, total head width; upper third of frons dull black, with mixed dark and pale hairs,

M

middle third dull testaceous, black-haired, anterior third shining testaceous, bare; cheeks mainly pale-haired along eye-margins; face and jowls shining testaceous; antennae black.

Thorax with dorsum dull black, bearing pale upstanding pubescence, and, in ♀, with two longitudinal narrow grey stripes; in ♂ these stripes faintly indicated, but often almost invisible; pleurae dull dark grey, pale-haired above, dark-haired below; anterior thoracic spiracle silvery-grey; scutellum light brown, translucent, pale-haired.

Abdomen black; second visible segment with paired lateral triangular orange patches slightly suffused with grey tomentum on inner angles in ♀; third, fourth and fifth segments with paired, rectangular, grey-dusted patches lying on anterior margins; venter shining, blackish-brown; hypopygium of ♂ short, not projecting far forwards.

Wings hyaline; squama dirty white; halteres pale yellow.

Legs mainly dark brownish-black; knees orange; tibiae covered with short golden hairs on the antero-dorsal surface; basal joints of tarsi dark, distal joints golden, slightly flattened and splayed.

Holotype, ♂, *allotype*, ♀, and *paratypes*, 3 ♂♂, 2 ♀♀. Tierra del Fuego, Rio Grande (*P. W. Reynolds*).

[**MALLOTA**, Meigen.]

1822. *Mallota*, Meigen, System. Beschreib., 3 : 377.

[**Mallota xylotaeformis**, Schiner.]

1868. *Mallota xylotaeformis*, Schiner, Reise der Novara, Dipt. : 360.

Described by Schiner from specimens taken in Chile, but unrepresented in the present collection.

VOLUCELLINAE.

KEY TO GENERA.

1. Face with three strong tubercles, one on either side of the median tubercle
[*Ornidia*, St. Farg. & Serv.]
- Face with only one tubercle.....2.
2. Arista bushy-plumose, appearing more or less strap-like.....3.
- Arista loosely plumose or bare.....4.
3. Hairs of arista all of about the same length and extending to the tip
[*Copestylum*, Macq.]
- Arista with dorsal and ventral row of longer, isolated rays and with the apex broadly bare.....[*Volosyrpha*, Snn.]
4. Scutellum basally either with a very strong acute tubercle or with three weak tubercular swellings.....5.
- Scutellum without tubercles basally.....6.

5. Scutellum with three rather weak tubercular swellings bearing dense black pile; vertex of ♀ strongly produced upward
 [Apopophysophora, Will.]
 Scutellum with a median, strongly produced acute tubercle
 [Viereckomyia, Curr.]
6. Pile of eyes dense and with scale-like hairs intermixed
 [Lepidopsis, Curr.]
 No scale-like hairs on eyes..... Volucella, Geoffroy.

VOLUCELLA, Geoffroy.

1764. *Volucella*, Geoffroy, Hist. Ins. env. de Paris, 2: 540.

The genus is found almost all over the world, and the numerous species fall into several rather distinct groups. The species, however, intergrade, and it has been thought inadvisable to use the names *Phalacromyia* and *Temnocera* even in the subgeneric sense. The genus is apparently absent from the southern forested region of Chile and from Argentine Patagonia, the most southerly record being that of *V. nigripes* from Concepcion.

KEY TO SPECIES.

1. Marginal cell open.....2.
 Marginal cell closed.....5.
2. Body predominantly dark metallic.....3.
 Body predominantly testaceous.....4.
3. Scutellum concolorous with rest of body, dark purple-bronze
nigripes, Big. (p. 168).
 Scutellum testaceous, body otherwise dark purple-bronze
 [rufoscutellaris (Phil.) (p. 168).]
4. Pleurae and dorsum of thorax shining black; femora darkened proximally.....[argentina, Big.]
 Pleurae and dorsum of thorax testaceous, latter striped longitudinally; legs testaceous.....[soror, Big.]
5. Brilliant green to bronze species; wing with a dark fleck at level of stigma and a smaller fleck at tip of the distally expanded marginal cell.....[obesa, F. (p. 168).]
 Wings more or less hyaline, or with a single dark fleck; tip of marginal cell not dilated.....6.
6. Face shining metallic, blue, green or purple.....7.
 Face testaceous.....8.
7. Antennae orange; epistomal region only moderately produced below lower margin of eye; wings without a definite dark fleck, although slightly infuscated basally and in stigmatic region
 [sapphirina, Big. (p. 168).]
- Antennae dark brown; epistomal region produced vertically downwards for a considerable distance below lower margin of eye; wings with a definite brown fleck at level of stigma, which extends backwards over half the breadth of the wing.....[azurea, Phil. (p. 169).]
8. Scutellum armed with six to eight short blunt spines.....9.
 Scutellum armed with numerous long, stiff black bristles; wings hyaline; abdomen testaceous, posterior margins of segments darkened, and a longitudinal broken dark line running down centre
 [concinna, Phil. (p. 169).]
9. Scutellum translucent, reddish, shining, with six short spines; a compact transverse row of five short spines immediately in front of scutellum; antennae and hairing of eyes reddish-orange
 [scutellata, Macq. (p. 169).] = sp. 8
 not scutellata of Macq.,
 or of Fluke, 1951

also:

arica Fl.
 btadleyi Gn.
 cecerevelli Gn.
 escomele Gn.
 parina Fl.
 sublata Fl.
 sp. 3
 sp. 7
 sp. 8
 sp. 9
 sp. 10
 sp. 11

- Scutellum dull red-ochre to dark brown, armed with at least eight spines, although the lateral ones may have the appearance of rather stiff bristles; eyes pale-haired.....10.
- = *scutellata* 10. Third segment of antenna dark brown, only slightly excavated on anterior
Macq. & Fluke, 1829 margin; epistome only moderately produced below lower margin
Frauenfeldi, Fluke of eye; face appears blunt (Fig. 35, a)...[*frauenfeldi* (Schin.) (p. 169).]
 = n. sp. Third segment of antenna orange, deeply excavated in front; epistome
 produced considerably below lower margin of eye; face appears
 pointed (Fig. 35, b).....[*spinigera*, Wied. (p. 170).]

Volucella nigripes, Bigot.

1857. *Phalacromyia nigripes*, Bigot, Ann. Soc. Entom. Fr. (3), 5 : 296.
 1865. *Phalacromyia concolor*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 735.

4 ♂♂. CHILE : Concepcion, Valparaiso.
 Also recorded from Santiago.

The cotypes, three males and three females, are in Bigot's collection. In his description he states that the flies are "entièrement cuivreux rougeâtre brillant," whereas actually they are a dull dark purple with rather subdued copper-colour reflections; this erroneous description prevented Philippi from recognizing the species with certainty, and he redescribed it under the name *concolor*.

[*Volucella rufoscutellaris* (Philippi).]

1865. *Phalacromyia rufoscutellaris*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 735.

1 ♀. CHILE : Santiago. Also two males in Bigot's collection. There appear to be no other locality records for this species.

[*Volucella obesa*, Fabricius.]

1775. *Syrphus obesus*, Fabricius, Systema Entomol. : 763.

This species, which has a very wide distribution in the tropics, is one of the commonest of South American Syrphidae, but has not as yet been found in Chile or southern Argentina.

Kertész, in his Catalogue, suggests that *V. azurea*, Phil., is a synonym, but as is shown in the above key, this species is quite distinct.

5 ♂♂, 3 ♀♀. ARGENTINA : Misiones Terr., Posadas, i.1927.

[*Volucella sapphirina*, Bigot.]

1883. *Volucella sapphirina*, Bigot, Ann. Soc. Entom. Fr. (6), 3 : 85.

Four cotypes, three males and a female, of this species are now in the British Museum collection, from an unrecorded locality in Chile. As in the case of other material in Bigot's collection, for which no locality is noted, it is probable that the specimens came from the central provinces.

[*Volucella azurea*, Philippi.]

1865. *Volucella azurea*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 734.

This handsome species is unrepresented in the present collection, but we have seen two females collected at Miramar by A. Faz and others from Cortaderol; there are three specimens from unknown localities in Chile in the British Museum, two males collected by T. Edmonds, and a female taken by Sadler; there are also three females and a male in Bigot's collection. The species was described from specimens taken at Llico in Colchagua Province.

[*Volucella concinna*, Philippi.]

1865. *Volucella concinna*, Philippi, Verh. zool.-bot. Ges. Wien, 15 : 733.

A characteristic species with large head and considerably prolonged face, almost hyaline wings, and brownish abdomen with ill-defined transverse stripes; the thorax has three fine longitudinal stripes of light tomentum anteriorly.

1 ♀. CHILE: Valparaiso (A. Faz). Also recorded from Santiago and Aconcagua.

[*Volucella scutellata*, Macquart.]

1842. *Volucella scutellata*, Macquart, Dipt. exot., 2, 2 : 25.

1844. *Temnocera andicola*, Bigot, Ann. Soc. Entom. Fr. (6), 3 : 548.

1892. ?*Temnocera spinithorax*, F. Lynch Arribalzaga, Anal. Soc. Cient. Argent., 34 : 190.

Scutellum reddish, with six widely-spaced stiff spines, each on a tubercle; four or five additional short stiff spines just in front of scutellum. Sides of dorsum of thorax reddish; face, antennae and pubescence of eyes orange.

Recorded from Coquimbo, Santa Rosa, Santiago and Colchagua in Chile, Mendoza in Argentina, and from Uruguay; but it is possible that these records do not all apply to the same species.

The original description of *V. scutellata*, Macq., is very inadequate and the illustration unlike any known *Volucella*, but by a general consensus of opinion the name is now applied to a species with the characters noted above.

F. Lynch Arribalzaga considers *V. scutellata*, Macq., to be a species without a row of spines in front of the scutellum, but if this is so his suggested synonymy of *Temnocera andicola*, Big., is incorrect, as the type of this species, in the British Museum collection, has such a row of spines, and is probably synonymous with *T. spinithorax*, L.-A.

[*Volucella frauenfeldi* (Schiner).]

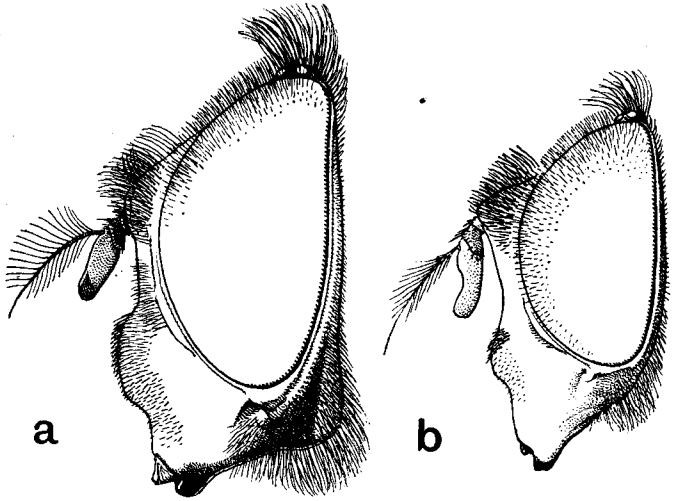
1868. *Temnocera frauenfeldi*, Schiner, Reise der Novara, Dipt. : 358.

1882. *Temnocera recta*, v. d. Wulp, Tijdschr. v. Entomol., 25 : 125.

Very similar to *V. spinigera*, Wied., but face less markedly produced downwards, antennae dull brown with third segment only slightly excavated on its anterior margin, and dark marks on wings less intense.

1 ♂, 7 ♀♀. CHILE: Valparaiso, Pemehue. ARGENTINA: Mendoza.

Schiner's specimens were taken in Chile and van der Wulp's in Argentina.



TEXT-FIG. 35.—Head of *Volucella frauenfeldi*, Schin. ♀ (a) and *V. spinigera*, Wied. ♀ (b).

[*Volucella spinigera*, Wiedemann.]

1830. *Volucella spinigera*, Wiedemann, *Aussereurop. zweifl. Ins.*, 2: 197.

1883. *Temnocera fulvicornis*, Bigot, *Ann. Soc. Entom. Fr.* (6), 3: 547.

This species has, to some extent, been confused with *V. frauenfeldi*, Schin., but may readily be distinguished by the orange antennae, markedly excavated in front, the considerable prolongation of the face below the level of the jowls and the deeply infuscated patches on the wings.

The species appears to be common in South America, but has not spread further south than Central Argentina. It has been recorded from Copiapó and Valparaiso in Chile.

Bigot used the name *fulvicornis* for two different species of *Volucella*, one from Panama, and the other, synonymized here, from Buenos Aires. The cotypes of the latter are in the British Museum collection.

CONOPIDAE.

(a) By D. AUBERTIN, M.Sc., F.L.S., Assistant-Keeper,
Department of Entomology.

The family Conopidae may be divided into four subfamilies, three of which, the Conopinae, Myiopinæ and Stylogasterinae, are represented in South America, while the fourth, the Dalmaniinae, is found only in the palæarctic region, Africa and North America. Of the seven genera known to occur in South America one, *Aconops* is endemic; *Stylogaster* occurs in North and South America and in Africa, *Tropidomyia* is represented in South and Central America, Asia Minor and the Belgian Congo, *Zodion* is unrecorded only from the Australian region, and *Conops* and *Physocephala* occur all over the world. Sixty-five species are known from the South American continent; of these *Conops magnus*, Will., *Zodion punctipennis*, Kröb., and *Physocephala segethi*, Rond., have been recorded from Chile.

Keys to genera and species may be found in a valuable Catalogue of the Conopidae published by Kröber,¹ and our knowledge of the South American forms is further enlarged in more recent papers by this author² and by Malloch.³

KEY TO SOUTH AMERICAN GENERA.

(Adapted from Kröber.)

1. Third segment of antenna with terminal style (Conopinae).....4.
Third segment of antenna with dorsal arista.....2.
2. Face strongly keeled, without grooves; proboscis very long and thin; arista with three segments; body slender; female with long protruding ovipositor (Stylogasterinae).....[*Stylogaster*, Macq.]
Face not keeled; proboscis never strikingly long, often short and almost hidden; arista with two segments.....3.
3. ♀ with ovipositor folded under venter; ♂ with threadlike processes to penis; body of ♂ almost circular, as seen from above [(Dalmaniinae.)]
♀ with theca; ♂ without processes to penis; body more or less elongate; proboscis hinged at base only (Myopinæ).....*Zodion*, Latr.
4. Face not grooved, sharply keeled; antennal style with two segments [Tropidomyia, Will.]
Face with grooves separated by flat keel.....5.

¹ 1919. Kröber, O. Archiv. für Naturg., 83, Heft 8 & 9.

² 1929. Kröber, O. Konowia, 8: 173-174.

³ 1919. Malloch, J. R., Proc. Ent. Soc. Wash., 21: 204.

1930. ———, Ann. Mag. N.H. (10), 5: 23.

5. An upwardly curved propleural bristle present; anterior cross-vein joins fourth vein near middle of discal cell; first posterior cell at least four times as long as broad (incl. *Aconops*, Kröber, and *Microconops*, Kröber).....*Conops*, L.
 Propleural bristle absent; anterior cross-vein joins fourth vein beyond middle of discal cell; first posterior cell barely three times as long as broad.....[*Physocephala*, Schin.]

[**PHYSOCEPHALA**, Schiner].

1861. *Physocephala*, Schiner, Wiener Entom. Monatschr., 5 : 137.

The genus belongs to the subfamily Conopinæ and is characterized by the shape of the first posterior cell, position of the discal cross-vein and length of the proboscis. Species in this genus range from 8-28 mm. in length.

[**Physocephala segethi**, Rondani].

1863. *Conops segethi*, Rondani, Archiv. per la Zool., 3 : 13 (sep.).

1868. *Physocephala costata*, Schiner, nec Fabricius, Reise der Novara, 371.

1887. *Conops tricolor*, Bigot, Ann. Soc. Ent. Fr., 7 : 41.

1883. *Conops costatus*, van der Wulp, nec Fabricius, Tijds. v. Ent., 26 : 11.

The species may easily be recognized from Kröber's key (1919 (8) : 41). Frons and face yellow with a black T-shaped mark; thorax dull black except for humeral and post-alar calli, scutellum, part of post-scutellum, and suture between meso- and ptero-pleura, which are a dull reddish-brown. Abdomen markedly pedunculate, black except for second and anterior part of third segment which are reddish, and hind margins of third, fourth and fifth segments which are narrowly covered with yellowish tomentum. Legs orange-red, except for basal third of hind femur which is black; wings broadly orange to brown on the anterior half.

Bigot's type of *Conops tricolor*, from Montevideo, in the British Museum, is certainly this species, and there are five other specimens from Bigot's collection, presumably from Chile, identified as *Conops segethi*, Rond. Rondani's type was from Chile and Schiner's specimens which he described under the name *costata* were also taken in Chile; the specimens referred to by van der Wulp are from Argentina.

CHILE: 1 ♂, Llai-Llai, i.1927 (*F. and M. Edwards*).

(b) By JOHN R. MALLOCH, U.S. Biological Survey,
 Washington, D.C., U.S.A.

CONOPS, Linnæus.

1758. *Conops*, Linnæus, Syst. Nat., 10 : 226.

This genus is readily distinguished from its closest relatives by the presence of a propleural bristle. This bristle is curved upward, and lying as it does close against the side of the thorax, is normally difficult to detect. Of the proposed genera that have this bristle present I have examined *Aconops*, Kröber, and *Micro-*

conops, Kröber. These concepts, which I consider merely as subgenera, may be distinguished as below.

KEY TO SUBGENERA.

1. Third antennal segment distinctly shorter than second
 [*Conops*, Linnæus.]
 Third antennal segment as long as, or longer than, second.....2.
2. Third antennal segment not longer than first and second segments
 combined.....[*Aconops*, Kröber.]
 Third antennal segment longer than first and second segments combined
 Microconops, Kröber.

There is one species in the collection that appears to fit best in *Microconops* though the abdomen has the second and third segments longer than wide and the ocelli entirely undeveloped, neither of which characters are in agreement with the genotype. There are two specimens of the latter in the United States National Museum mounted *in copula*, and the female has the second and third abdominal segments distinctly longer than does the male so that I infer this character may be subject to variation even in the Australian representatives. In the latter the ocelli are represented by the posterior pair, these being on the sides of a slight eminence and visible only when viewed from the side. In *Aconops*, or at least in the genotype, which I designate as *antennatus*, Kröber, the anterior ocellus is also present. In *Microconops* there is no distinct dark costal streak on the wings, in *Aconops* there is one present, and in the species described below only a close scrutiny discloses a faint trace of a darkening of the costal half on most of its extent. For other characters see the description of the species given below.

***Conops (Microconops) atratula*, sp. n.**

A small, slender, black species, with head black, central carina of face partly yellowish, parafacials on half next to eyes and facial foveæ densely silvery-white dusted, postocular orbits narrowly greyish dusted. Thorax and abdomen shining black, former with slight brownish dust, neither with any definite pale dusted markings. Legs honey-yellow, all coxæ and tarsi brownish black, bases of all femora slightly browned. Wings greyish hyaline, slightly darker on costal half, but without any definite dark streak.

♂. Length, 6.5 mm.

Head shining black, centre of face slightly brownish-yellow, dusting as noted in above paragraph. Antennae entirely black, proboscis fuscous. Frons slightly wider than long, faintly shining, microscopically alutaceous and with wrinkles on most of its area, most obvious in front; ocelli entirely lacking; hairs confined to vertex. Face in profile slightly receding, central carina linear above, widened below, visible in profile below level of lower margin of eye, gena about half as high as eye. Antennae longer

than head, basal segment on upper margin about as long as second on lower margin, the two combined about as long above as third on same surface, but shorter than on its lower; apical style with first segment distinct, a little shorter than second, latter not distinctly produced below at apex, both combined about as long as swollen base of third, apical slender process of latter not longer than thick basal part. Proboscis of almost uniform thickness on apical part, which is not longer than height of head.

Thorax black, shining, with brownish dusting, hairs on mesonotum and scutellum stiff, moderately long, and decumbent, more seriate centrally on the former, but rather evenly distributed. Sternopleura with a few upper marginal hairs; lower margin of the plate on hind margin of metathorax almost transverse.

Abdomen shining black, without dusted markings. Second segment about three times as long as wide from above, third widened apically, but longer than wide at middle. The other segments about as wide as long from above.

Legs honey-yellow, darkened as noted in specific diagnosis, slender, with the usual flattened apical parts of fore and mid tibiae hardly developed and not more densely dusted than remainder of surfaces; preapical tibial bristle undeveloped. Tarsi but slightly widened apically.

Wings greyish-hyaline, slightly smoky on costal half; apical half of first posterior cell paler than basal half, its petiole very short; inner cross-vein at middle of discal cell. Halteres yellow.

Holotype, Casa Pangué. U.S. National Museum.

I designate as the genotype of *Microconops*, *M. fasciatus*, Kröber.

ZODION, Latreille.

1796. *Zodion*, Latreille, Préc. des car. gén. d. Ins. : 162.

This genus contains species that are very difficult to distinguish from each other and unfortunately most of the details in descriptions have been confined to colour and markings, which are rather subject to variation. It is therefore to be understood that the following identifications are, at least in part likely to be changed when a full examination of the type material is made. In the North American species the male hypopygia present good characters for the distinction of closely similar appearing forms, but no one has attempted to make use of these characters up to the present time.

Zodion punctipennis, Kröber.

1915. *Zodion punctipennis*, Kröber, Arch. f. Naturges., 81, A (4) : 111.

A remarkably well-distinguished species for this genus, readily separated from its congeners by the black-spotted thorax, abdomen, and wings.

Concepcion, Chile, and Mendoza, Argentina.

Paratypes examined in the collection of the United States National Museum.

Zodion flavocaudatum, Bigot.

1887. *Zodion flavocaudatum*, Bigot, Ann. Soc. Ent. Fr., (6) 7 : 205.

1915. *Zodion analis*, Kröber, Arch. Naturg. 81, A (4) : 113.

1915. *Zodion peruvianum*, Kröber, l.c. : 115.

This species has usually two distinct black mesonotal vittae, but between these there are sometimes two narrower and less distinct dark vittae in front and rarely a brown central one on part of the disc. The variation in these markings is not confined to this species but occurs in several in North America, and too much stress laid upon the exact markings of the mesonotum results in the unfortunate increase in the number of species names that appears to be met with in the New World. The male has the hypopygium and the narrow tergite in front of it densely brassy-yellow dusted and the female has the genital cone and the segment in front of it orange-yellow. The legs in the male are almost entirely black with grey dust, only the apices of the femora below and bases of the tibiae being reddish-yellow, but in the only female I have seen the bases of the tibiae are more broadly pale and the bases of the fore and mid tarsi are slightly yellowish.

I have some doubt about the synonymy as far as *Z. peruvianum* is concerned, but am convinced the two other names refer to the same species.

Specimens are in the United States National Museum from Angol (*Bullock*); also 1 ♀ from E. C. Reed, bearing no locality except Chile and with the specific name "*chilensis*" which is a "*nomen nudum*" and evidently refers to this species listed in his catalogue of Chilean Diptera; and 1 ♂ with the locality Serena, probably near Santiago.

