BOMBYLIIDAE FROM CHILE AND WESTERN ARGENTINE

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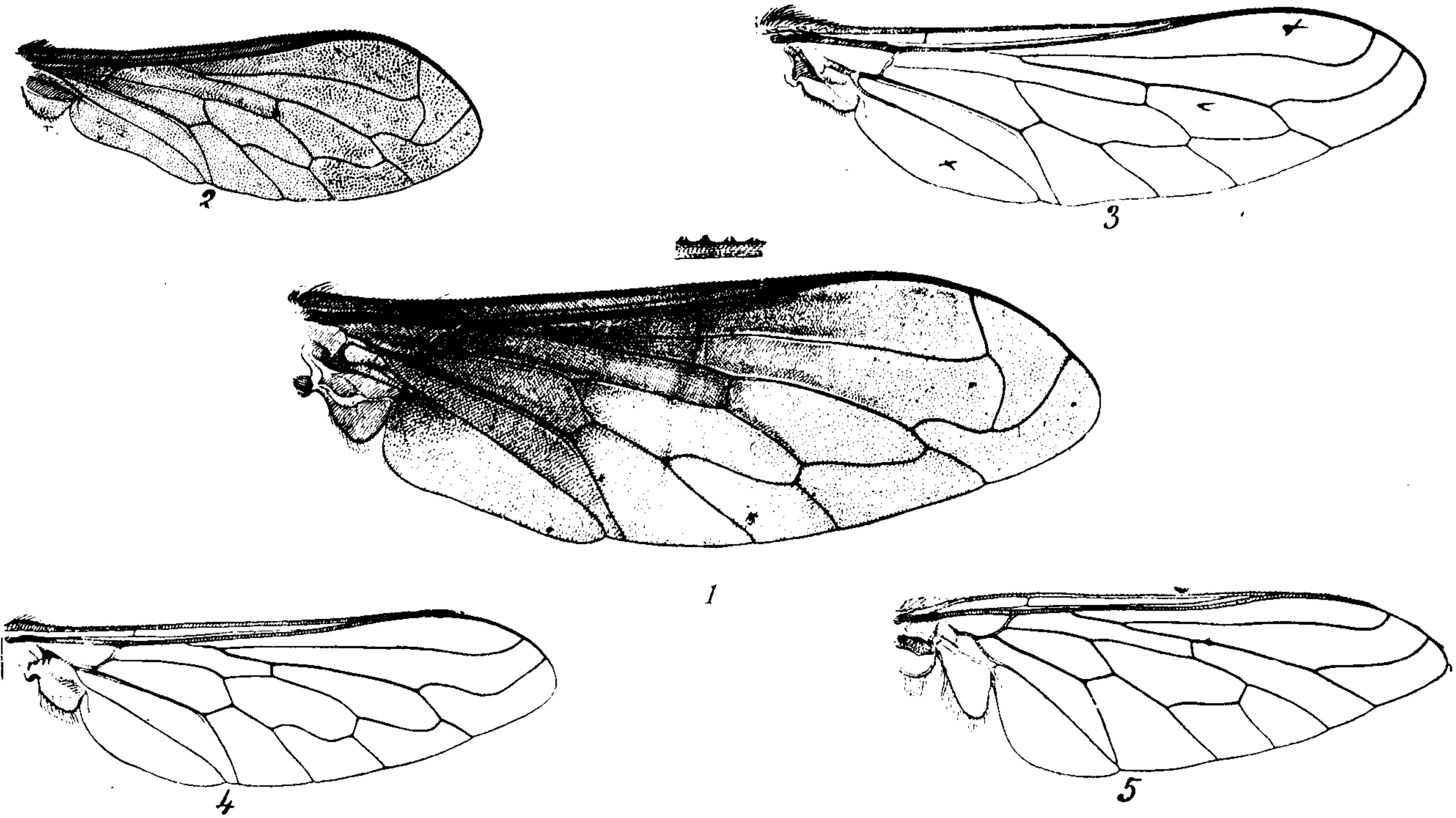
In the following pages notes are given on new or interesting Bombyliidae recently received from Fathers F. Jaffuel, A. Pirion and F. Ruiz, and Dr. Edwyn P. Reed (Chile), also from Captain K. J. Hayward (Argentina). The present contribution deals only with the Bombyliinae, Cythereinae and Phthiriinae, treatment of the Anthracinae and Exoprosopinae being reserved for a future occasion.

Bombyliinae

TRIPLOECHUS gen. n.

Williston and others have placed certain American species of Bombyliinae, including *B. heteroneurus* Macq., in the genus *Triplasius* Lw., on account of their resemblance to the genotype of *Triplasius* in venation—the wings having three submarginal cells and a closed first posterior cell. Apart from the



1. *Triploechus heteroneurus* Macq.—**2.** *Triploechus minor* sp. n.—**3.** *Bombylius Ruizi.*—**4.** *Bombylius flavesceus* Ph.—**5.** *Sericusia lanata gen et.* sp n.

constant presence of three submarginal cells, *B. heteroneurus* and its allies show two other features which undoubtedly justify the generic separation from *Bombylius* — the strongly indented posterior margin of the eyes (already remarked upon by Williston) and the very short pulvilli, which are less than half as long as the claws (a feature not hitherto noticed). On the other hand the South African genotype of *Triplasius* (*T. bivittatus* Lw.), as represented by a specimen in the British Museum, agrees with typical *Bombylius* in having the eyes entire and the pulvilli as long as the claws. Moreover in this particular specimen of *T. bivittatus* the wing has only two posterior cells, so that the additional cross-vein is evidently not as constant as it is in the American species. I therefore consider that a new generic name is required for the American species.

Genotype, *Bombylius heteroneurus* Maq., as represented by specimens in the British Museum.

Triploechus heteroneurus (Macq.) (*ornatus* Rond.)

Eyes of ♂ in contact; of ♀ separated by a wide frons, which is fully as broad as one eye. Antennae all black. Hair on occiput, frons and face mostly yellowish-grey with many black hairs intermixed. Integument of thorax and abdomen all black. Notopleural bristles black. Abdomen with hair at base and apex yellowish, long and dense at sides; hair on posterior margin of segment 2 and on whole of 3 and 7 black; a median black stripe on 4-7. Legs black, tibiae more brownish. Wings in both sexes with about the basal half smoky-brown; in ♂ Pl. V, (fig. 1), with the hairs of the costal margin modified to small black tubercles, but wing scarcely widened beyond middle. Wing-length 10-11 mm.

CHILE: Specimens in British Museum from Santiago (*Stuardo, Ruiz*); Río Blanco (*Reed*); Marga-Marga (*Jaffuel, Piriόn*); Lo Aguirre (*Ruiz*).

Triploechus minor sp. n.

Eyes of ♂ narrowly separated (by a width equal to nearly half the width of the ocellarium); eyes of ♀ widely separated as usual. Antennae all black. Hair on occiput, frons and face of ♂ almost all whitish; front of ♀ with black hairs more numerous. Integument of thorax and abdomen all black. Notopleural bristles black. Colouring of abdominal pubescence apparently as in *heteroneurus* (types rather denuded). Legs, black, with brownish tibiae. Wings (Pl. V, fig. 2) smoky, a lit-

tle more intensively so on basal half and towards costa; in ♂ rather distinctly widened beyond middle, costa with small tubercles as in *heteroneurus*. Wing length 6.5 mm.

CHILE: Marga-Marga, x. 1922, type and one other ♂ in British Museum (*F. Jaffuel*); Perales, x. 1924, 1 ♂ (*A. Pirion*). Also 2 ♂ 4 ♀ in Bigot's collection.

Triploechus pallipes sp. n.

Eyes of ♀ perhaps slightly less widely separated than in *heteroneurus*. Antennae with first and second segments reddish-ochreous, third black. Hair on occiput and face white; a band of ochreous pubescence across front. Integument of thorax and abdomen mainly blackish, but posterior margin of scutellum and of most abdominal tergites reddish. Notopleural bristles yellow. Pubescence of dorsum of abdomen mostly ochreous, even on segment 3, but a narrow blackish median stripe on 5-7; a tuft of black hair on each side of segment 3, beyond which the lateral hairs are white. Legs yellowish, with white pubescence, only tips of tarsi somewhat darkened. Wings nearly clear, costal cell yellowish; hair at base of costa yellow. Venation as in *heteroneurus*. Costa with fine hairs only, as in ♀ of *heteroneurus*. Wing-length 10 mm.

CHILE: Santiago, 2 ♀ (*Ruiz*); H. las Mercedes, 3. I. 1933, 1 ♀ (*Ruiz*).

Triploechus angustipennis sp. n.

Eyes of ♂ in contact. Hair on occiput whitish, on face yellowish and not very dense; integument of face largely yellowish, obviously paler than in *heteroneurus*. Antennae all black, more uniformly slender than in *heteroneurus*. Integument of thorax and abdomen all black. Notopleural bristles brown. Pubescence of abdomen coloured as in *heteroneurus*. Legs black, tibiae brownish. Wings narrower than in *heteroneurus*, and more extensively smoky; costa in ♂ without tubercles. Wing-length 9-10 mm.

ARGENTINA: Patquia, La Rioja, X. 1932, 6 ♂ (*K. J. Hayward*).

Bombylius valdivianus Phil.

This species agrees with typical *Bombylius* in having the first posterior cell closed and the upper basal cell much longer than the lower, and must on our present classification be placed in the subgenus *Bombylius*. It differs conspicuously from

typical species, however, in the very slight development of the alula which has only an inconspicuous fringe (see fig. 3), as well as in the larger head and the separated eyes of the male. Specimens examined by me show the following features:

Eyes of ♂ separated by a distance equal to width of ocellarium, of ♀ by a width nearly equal to that of one eye. Antennae and palpi black. Integument of thorax and abdomen all dark grey; pubescence yellowish, mixed with some black hairs on abdomen. Legs yellow, entirely so in ♀, but bases of femora black beneath in ♂. Wings only very slightly smoky at base, rather more so in ♂ than in ♀; cross-vein r-m far beyond middle of discal cell.

CHILE: La Union, Rafuco, 1929 (*Ruiz*); Bellavista, Mulchen (*Ruiz*). Pailatioseque ?, XII. 1927 (*Pirión*).

ARGENTINA: N. W. Chubut (*H. E. Box*).

Bombylius ruizi sp. n.

♀. Resembles *B. valdivianus* in structural characters, notably in venation and in the small alula (fig. 3) but differs as follows: Antennae and palpi yellow. Margin of scutellum, first abdominal tergite, and posterior corners of following tergites reddish-yellow. Wings not at all smoky at base. Pubescence of body brighter yellow.

CHILE: H. Las Mercedes, 1. II. 1932, 1 ♀ (*F. Ruiz*).

Bombylius flavescens Phil.

In regard to its venation this species is intermediate between *Bombylius* and *Systoechus*, the upper basal cell being distinctly though not greatly longer than the lower, and crossvein *r-m* well before middle of discal cell. I referred it in 1930 to *Systoechus*, but Paramonov (1933) regards it as a true *Bombylius*. The alula (cf. fig. 4) is much better developed than in *B. valdivianus* and with a longer fringe, though not so large as in the European *Bombylius*. Specimens examined by me show the following features:

Eyes of ♂ rather broadly in contact, of ♀ separated by the usual wide front. Antennae and palpi yellow. Integument of thorax brownish with three grey stripes, of abdomen brownish in middle, more or less broadly reddish at sides. Pubescence mostly deep yellowish, lighter at tip of abdomen and white on under side of head and thorax; pubescence long and erect at bases of abdominal tergites, short and decumbent on posterior margins of tergites and in middle line no black hairs mixed with pale pubescence of abdomen. Legs yellow. Wings

clear, with faint clouds over cross-veins and yellowish costal cell.

CHILE: Rofuco, H. Las Mercedes and Florida, Alta (*Ruiz*); Marga-Marga (*Pirión*).

Bombylius haywardi sp. n.

Somewhat resembles *B. flavescens* Phil., but smaller, and differs as follows: Integument of thorax dark brownish-grey, without stripes. Integument of abdomen mainly yellowish; in ♂ with a large blackish area at base of tergite 2, and smaller black area on 3 and a spot on 4; in ♀ with small dark areas on 2 and 3 only. Erect and decumbent yellow pubescence of abdomen more evenly mixed, the erect pubescence less dense. Wing-length 6 mm.

ARGENTINA: Patquia, La Rioja, X. 1932, 2 ♂ 7 ♀ (*K. J. Hayward*).

Sericusia gen. n.

A genus apparently intermediate between Bombylinae and Usiinae as defined by Bezzi, but with more obvious affinity to the former. Differs from *Bombylius* (sens. lat.) in venation (see fig. 5) R 5 running straight to the wing-margin with only a very slight bend at the origin of R 4, and *M 1* being gently convex above and ending in the wing-margin parallel with or even slightly divergent from *R 5*, and the anal cell being closed on the wing-margin or only very narrowly open. Proboscis long and slender, as in *Bombylius*. Antennae close together with the third segment long, slender and bare. Eyes entire, in contact in ♂, widely separated in ♀ ; ocelli close together. Face short (owing to the oval opening extending nearly up to the antennae), densely hairy. Whole body with dense hair but without bristles, apparently even the notopleural or supra-alar bristles absent. Abdomen rather narrow and conical. Tibiae with distinct bristles, most obvious on hind pair. Pulvilli as long as claws.

Genotype, the following new species.

Sericusia lanata sp. n.

Integument of body black in ♂ (greyish towards tip of abdomen), slaty-grey throughout in ♀. Vestiture of whole body (face, frons of ♀, occiput, thorax and abdomen both above and below) consisting of long white silky hairs; no obvious scales anywhere on body. Legs black, femora densely

clothed with narrow decumbent hair-like scales and with some erect white hairs. Wings completely hyaline; veins yellowish towards base; hairs at base of costa white, as are the fringes of the squama and alula. Halteres yellow. Wing-length about 5 mm.

ARGENTINA: Patquia, La Rioja, X. 1932, type ♂ and 3 ♀ in British Museum (*K. J. Hayward*).

This small species is superficially like the several others belonging to different genera, such as *Sericosoma*, *Mallophthiria* or *Geron*.

Cythereinae

Sericosoma Macq.

Only one species of this genus has been described hitherto but several certainly occur in Chile and southern Argentina, at least four (and probably five or six) being represented among the twelve specimens I have examined. All these agree in a peculiar feature which has not been noted before: the ocelli are unusually large and unusually wide apart, so that although the frons of the male is quite wide (one-fourth or almost one-third of the width of the broad head) the lateral ocelli are separated by less than their own diameter from the eyes. The front of the female is wider (almost half the width of the head), and the lateral ocelli are more remote from the eyes.

Sericosoma fascifrons Macq.

The identity of this species, the genotype, unfortunately cannot be established at present. Macquart's description and figure was based upon a male said to be in the Paris Museum, for which the following characters were noted or illustrated: Third antennal segment narrowed aplically and also for a short distance at base. «Face et front hérissés de poils blancs; ce dernier a bande transversale de poils noir. Antennes noirs, les deux premiers articels a poils noirs. Thorax et abdomen hérissés de poils blancs, soyeux. Pieds noirs cuisses a petites écailles blanches. Ailes claires; un peu de jaunâtre a la base» (his yellowish colour of the wing shown in the figure as extending as far as the base of the discal cell). No mention is made of scales on the face or abdomen, which Macquart would surely have noticed had they been present.

Through the kindness of Monsieur E. Séguy I have been able to examine the two specimens still standing as this species in the Paris Museum. Both are females with entirely

hyaline wings and therefore cannot be Macquart's types, even if they belong to the same species, which is unlikely. Both are in bad condition, but one has the head well preserved and has the greater part of the face covered with decumbent scales; which is not the case in any of the other specimens I have examined.

Mr. J. E. Collin has kindly lent me for study the five specimens in Bigot's collection determined as *S. fascifrons*. These belong to several distinct species but I do not think that any of them can be the true *S. fascifrons*.

Sericosoma squamiventris sp. n.

♂. Eyes with the facets of the upper third slightly larger than those of the lower third, but the two areas not clearly defined. Third antennal segment distinctly narrowed on the distal half, but very slightly widened again immediately before the minute terminal style. First antennal segment with long *white* hair. Face clothed with long white silky hairs, but no scales; a few decumbent scales are present, mixed with white hairs, above the antennae and below the frontal band of black hair. Hair above bases of antennae and on occiput creamy-yellowish; a path of broadish creamy-yellow scales on middle of upper part of occiput between vertex and neck. Hair on thorax yellowish-brown above, white below. Vestiture of abdomen all creamy-white (not pure white) both above and below; on most of dorsum and venter this vestiture consists of narrow decumbent scales mixed with some erect hairs, on the sides the erect hairs are much denser and the scales relatively fewer. Legs clothed with cream-coloured scales; front femora with long white hairs; hind tibiae and tarsi with short bristles but no hairs. Wings yellowish-brown, at the base, this tinging extending as far as the base of the discal cell and leaving a small clear spot in the upper corner of the lower basal cell. No trace of darkening on cross-veins. Halteres yellowish. Wing-length about 8 mm.

CHILE: Type ♂ in the British Museum from Reñaca, II. 1933 (*Dr. E. P. Reed*). Also 2 ♂♂ in the Bigot collection agreeing in all respects with the type. A third ♂ in the Bigot collection is very similar, but much smaller and with the wings hyaline to the base; a ♀ in the same collection is also similar but again has hyaline wings and the scales in the mid-dorsal region of the abdomen are mostly black. These two specimens probably belong to different species.

S. squamiventris agrees with the original descripcion and figure of *S. fascifrons* in regard to the wings, but I do not

think it can possibly be Macquart's species on account of the yellowish-brown (not white) hair on the dorsum of the thorax and the scaly abdomen.

Sericosoma fulva sp. n.

♂. Head as in *S. squamiventris*. Thoracic hair rather dark-brownish above, mostly black on shoulders and on sides, so that the whole thorax appears blackfrom above; white hair confined to coxae. Abdomen with the dorsal vestiture scaly as in *S. squamiventris;* long dense hair at sides and beneath. Scales on a broad median stripe black, those towards each side yellowish; lateral hair yellowish above, black below; ventral hair black except down mid-ventral line, where it is white. Legs black, with yellow scales. Wings slightly infuscated on rather more than the basal half, the infuscation extending to end of discal cell.

CHILE: L. Verde, III. 1933, 3 ♂ (*Dr. E. P. Reed*). Type in the British Museum.

Sericosoma bigotiana sp. n.

♂. Eyes with the facets of the upper half noticeably larger than those of the lower half, the two areas rather sharply defined. Third antennal segment of even width throughout, not tapering distally or basally. First antennal segment with long *black* hairs. Hair inmediately above antennae white, as is that of the vertical tuft. No scales on face, and none on occiput between neck and vertex. Hair on thorax long and whitish both above and below. Abdomen with long erect hairs only (no scales even dorsally, although the specimen is almost perfect); the hairs are white dorsally and along a mid-ventral line, black ventro-laterally. Legs with white scales; front femora with long white hairs; hind tibiae and tarsi with short bristles but no hairs. Wings entirely hyaline. Halteres with base of knob dark.

CHILE: Type in Bigot's collection, now in the possession of Mr. J. E. Collin.

This differs from Macquart's description and figure of *S. fascifrons* in the shape of the third antennal segment, partly black abdominal hair, and hyaline wings.

It is of course possible that this specimen and the two males of *S. squamiventris* in Bigot's collection were received from Macquart and comprised the material on which he based his description, and that this description was a composite one based on these two species. But this cannot be established,

and for the present at least it seems best to give new names to each.

Sericosoma pubipes sp. n.

♂. Eyes as in *S. bigotiana* the area of enlarged facets perhaps proportionately larger, occupying slightly more than half of the entire eye. Third antennal segment constricted for some distance near the base, the distal three-fifths or thereabouts slightly but obviously widened. First antennal segment clothed with pure white hair. Hair on face dense and pure white mixed with some white decumbent scales between and immediately above the antennae; a narrow border of white scales adjoining eyes. A few small yellowish scales are present in the band of black hair on the front. Vertical tuft of hair pure white as are the other hairs on the occiput and the small scales bordering the eyes behind. A patch of scales, partly white and partly yellow, on occiput between neck and vertex. Hair on thorax and abdomen all long dense and pure white except for some black bristly hairs at tip of abdomen; some small decumbent yellow scales dorsally on both thorax and abdomen. Legs clothed with white scales; hind tibiae and tarsi with moderately long and dense black hair. Wings hyaline, with slight fuscous clouds over all the cross-veins and at base of vein *R 4;* no darkening at base of wing. Halteres blackish, as is the whole of the integument of the body.

ARGENTINA: Chubut Territory, XII. 1919. (*H. E. Bos*). Type ♂ in British Museum.

This is the specimen recorded by me in 1930 as *S. fascifrons*, but it now appears to me amply distinct from any of the other species of the genus, notably on account of the form of the third antennal segment and the hairy hind legs. I also perceive differences in the male hypopygium between this and the allied species.

Phthiriinae

Phthiria austrandina sp. n.

♂. Entirely black including antennae legs halteres, and pubescence of whole body; only a few shorter yellowish hairs among the long black ones on thorax and abdomen. Eyes in contact. Frons, face, and first antennal segment with long dense black hair. Wings smoky, stigmatic region darker. Proboscis slender, longer than head and thorax together. Palpi short. *R 4+5* forking well before end of discal cell. Wing-length 4-5 mm.

♀. Eyes widely separated as usual in this sex. Frons black, with an orange spot on upper part adjacent to each eye. Cheeks orange, this colour extending up to level of antennae and on lower part of occiput as a narrow margin to eyes; upper half of posterior orbits black like rest of occiput. Thorax black, with a short orange-yellow stripe from shoulder to wing base, but no yellow mark above wing-base; an irregular yellow stripe on pleurae above bases of coxae; scutellum orange-yellow. Thorax and abdomen with short decumbent yellow pubescence (not dense) in addition to longer black hairs. Halteres blackish as in ♂.

CHILE: Casa Pangue, Llanquihue Prov., XII. 1926. (*F. & M. Edwards*), type ♀, paratypes 4 ♂, 15 ♀ in British Museum.

I recorded these specimens in 1930 as *P. chilena* Rond., but now have reason to believe that the determination was incorrect. Philippi's *P. vulgaris* (which is most probably the same as *P. chilena* Rond., and the female of *P. barbata* Rond. = *P. barbata* Phil.), was said to have the hinder orbits yellow. I have seen specimens from Marga-Marga (*Pirion*) in which this is the case, and these specimens no doubt represent the true *P. chilena*, the Casa Pangue specimens with black upper posterior orbits and darker wings being specifically distinct.

Phthiria pirioni sp. n.

♂. Face grey, densely clothed with black hair; cheeks and lower part of occiput greyish with long pale hair. Antennae black, first two segments with long black hair, third long, slender, bare. Proboscis very little longer than head, with rather large and divergent but not fleshy labelle. Palpi black, short-haired, slightly swollen spically, reaching to base of labella. Thorax black, with an ill-defined double grey stripe in middle in front, and slightly dusted with grey on lower part of pleurae; hairs mostly black. Abdomen black, with rathe-scanty hair and pubescence which is black above, yellowish at sides. Legs all black; front coxae with whitish hair; femora with black hair. Wings and halteres blackish. Venation differing from that of *P. chilena* and *P. austrandina* in the shorter fork of *R 4-5*, the base of which is level with the outer end of the discal cell. Wing-length 7 mm.

CHILE: Marga-Marga, IX. 1929, type and one other ♀ in British Museum.

This species differs from all others of the genus nkown to me in its unusually short proboscis and long palpi.