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XXXV.—*Exotic* Muscaridæ (*Diptera*).—V.*

By J. R. Malloch, Washington, D.C.

Subfamily *Phaoniinæ*.

Genus Euphaonia, nov.

Generic characters.—Arista pubescent; eyes hairy; frons of female with a strong pair of cruciate bristles; upper orbital directed backward and outward, second directed inward. Thorax with strong presutural acrostichals; prealar very long; prosternum, pteropleura, and hypopleura bare. Hind tibia with calcar. First posterior cell not narrowed apically.

Genotype, the following species.

Euphaonia fulvohumeralis, sp. n.

Female.—Metallic dark blue. Head black, opaque, orbits and face with whitish pruinescence. Thorax not vittate; humeri and region immediately surrounding them and a streak from them to bases of wings reddish fulvous; scutellum slightly violaceous on disc. Abdomen unmarked. Legs black. Wings greyish. Calyptræ brown. Knobs of halteres fuscous.

Eyes short-haired; frons one-third of the head-width; orbits without forwardly directed bristle at middle; parafacial linear; cheek as high as width of third antennal segment, the latter 1·5 as long as second segment; pubescence of arista not longer than its basal diameter. Thorax with two pairs of strong presutural acrostichals; postsutural dorso-centrals 4; posthumeral and presutural bristles duplicated; scutellum not haired below; sterno-pleurals 1:2. Fore tibia with one antero-dorsal and one posterior bristle; mid-tibia with about six posterior bristles; hind femur with about three preapical antero-ventral bristles; hind tibia with four or five antero-ventral setulæ and three antero-dorsal bristles, calcar long, apical postero-dorsal bristle minute. Outer cross-vein straight.

Length 6 mm.

Type, Port Famine, Tierra del Fuego, South America (*Charles Darwin*).

* For Part IV., see Ann. & Mag. Nat. Hist. (9) viii., Oct. 1921, pp. 414–425.

Genus METOPOMYIA, nov.

Generic characters.—Related to *Helina*, R.-D. Differs in having the pteropleura hairy, and the ventral surface of the scutellum with fine sparse hairs as in Anthomyiinæ. The hind tibia has no calcar, but there are one or two short bristles on the postero-dorsal surface. The wing-veins are bare and the fourth vein is not curved forward at apex. The prosternum and propleura are bare, the prealar bristle is long, there are no strong presutural acrostichals present, the eyes are bare in both sexes, and the frons is as in typical species of *Helina*.

Genotype, the following species.

Metopomyia atropunctipes, sp. n.

Male and female.—Shining testaceous yellow. Antennæ brownish, third segment black; palpi brownish yellow, fuscous apically. Dorsum of thorax with two faint reddish vittæ, a small blackish spot above the propleural bristle, and a fuscous streak from humeral angle to base of wings which extends narrowly on to dorsum and more broadly over pleura. First tergite (sec. ver.) with a large fuscous spot on each side, third and fourth largely infuscated in male, less noticeably so in female. Apices of femora with a broad, sharply defined, black band, apices of tibiæ less deeply infuscated, their bases more or less browned; tarsi fuscous. Wings clear, extreme base of costa, humeral cross-vein, first vein opposite humeral, and the base of third vein brown or fuscous. Calyptræ and halteres yellowish.

Male.—Narrowest part of frons about equal in width to anterior ocellus, the silvery orbits contiguous at middle; parafacial narrower than third antennal segment; cheek fully twice as high as width of third antennal segment; vibrissal angle produced well beyond base of antennæ, a few setulæ above vibrissæ; longest hairs on arista subequal in length to width of third antennal segment. Thorax with four pairs of postsutural dorso-centrals. Abdomen ovate; sides of first tergite at blackened area with rather dense, moderately long, black bristles; fifth sternite with a broad, shallow, rounded posterior emargination. Legs slender; fore tibia unarmed at middle; fore tarsi slender, longer than fore tibiæ, basal segment without long, slender, erect, sensory hairs; mid-femur with a series of fine erect hairs on basal half or more of postero-ventral surface; mid-tibia with two

posterior bristles; hind femur with a complete series of antero-ventral bristles and a series of finer bristles on basal half of postero-ventral surface; hind tibia with one or two antero-ventral, two antero-dorsal, and two postero-dorsal bristles. Outer cross-vein much curved.

Female.—Frons a little less than one-third of the head-width, orbits narrow. Mid and hind femora lacking the postero-ventral series of fine bristles.

Length 7–8 mm.

Type, male, and allotype, Victoria, Australia (*C. French*).

Genus Dimorphia, nov.

Generic characters.—Similar to *Muscina*, R.-D., in general habitus. Prosternum, pteropleura, hypopleura, declivous postero-lateral part of mesonotum, and ventral surface of scutellum bare. Cephalic characters as in *Helina*, R.-D. Arista plumose. Hind tibia without calcar on postero-dorsal surface and no setulæ on that surface. Anterior intra-alar bristle present but weak in female, absent in male; scutellum elongated, subtriangular; prealar short, but strong. Abdomen ovate. Base of auxiliary vein, stem of veins 2+3 above and below, and vein 3 for a variable distance beyond the furcation setulose in both sexes, and fourth vein setulose on the greater portion of its length above and below in female, rarely sparsely setulose in male; fourth vein distinctly curved forward at apex.

Genotype, *Cyrtoneura flavicornis*, Macquart.

One other described species known to me, *Anthomyia tristis*, Wiedemann (*Spilogaster latevittata*, Bigot, *Anthomyia subpunctata*, Walker), belongs to this genus. It has the antennæ and palpi black or fuscous, while *flavicornis* has both yellow.

Stein lists four species with the name *flavicornis* in his composite genus *Mydæa* in his recent catalogue of the world's species of Anthomyiidæ. Not one of the species so listed was described in that genus, and but one, *flavicornis*, Coquillett, belongs to the genus *Mydæa* in the strict sense.

I have before me specimens of *tristis* from British East Africa and Natal, and of *flavicornis* from the same localities and from north of Mt. Kenia.

In addition to the foregoing I have what appears to be an undescribed species of the genus, closely related to *flavicornis*, which is briefly characterised below.

Dimorphia flavithorax, sp. n.

Female.—Head black, face brownish, frons with grey pruinescence, face silvery; antennæ and palpi yellow, but not so clear as in *flavicornis*. Thorax entirely yellow, the dorsum with the vittæ indicated by whitish pruinescence, which is visible anteriorly when viewed from above and behind. Abdomen yellow, largely infuscated above. Legs yellow, tarsi brownish. Wings slightly yellowish. Calyptræ and halteres yellow.

Frons a little less than one-third of the head-width; longest hairs on arista about twice as long as width of third antennal segment. Fore tibia without a median bristle; mid-tibia with two or three posterior bristles; hind tibia with one antero-ventral and one antero-dorsal bristle. Apex of first posterior cell nearly as wide as that cell at outer cross-vein.

Length 6–8 mm.

Type, Malvern, Natal, vi. 1897 (*G. A. K. Marshall*). Paratype, Masai Reserve, B.E.A., 13. v. 1913 (*T. J. Anderson*).

The first posterior cell in *flavicornis* is much narrower at apex than in *flavithorax*; in *tristis* it is about as wide as in the latter.

Helina, Robineau-Desvoidy.

It appears to me pertinent to indicate that the above generic name is that which covers most of the exotic Muscaridæ described by Stein as belonging to the genus *Mydæa*. The latter genus when limited in scope to contain only those species which agree in characters with the genotype, *pagana*, Fabricius, is found to be confined to the northern half of the two hemispheres—at least, so far as I have been able to discover. The closely related genus *Myiospila*, R.-D., which is doubtfully distinct, occurs much farther south; I have seen species of this genus from Australia and South America. Many of Stein's species originally described in *Mydæa* do not find their true affinities in *Helina* either, and new genera have been erected for their reception, some of them in this series of papers.

Helina fuscoflava, sp. n.

Female.—Head testaceous yellow, frons red, upper half velvety black, orbits greyish pruinescent; third antennal segment black, except at base; palpi rufous. Thorax

testaceous yellow, with three broad brownish-red vittæ, which become fuscous posteriorly, the median one continued over disc of scutellum; pleura with a fuscous streak on upper margin from humeri to base of wings. Abdomen dark brown, paler on sides of tergites anteriorly, the dorsum with slight grey pruinescence, which is most distinct on the centre in the form of a slender vitta when seen from behind. Legs pale yellow, apical third of each femur and all of the tarsi black. Wings yellowish, veins dark brown, cross-veins not noticeably infuscated. Calyptræ and halteres yellow.

Eyes bare, separated by a little less than one-third of the head-width; orbits narrow, frontal bristling normal; parafacial linear; cheek as high as width of third antennal segment, the latter about three times as long as second; arista plumose; palpi slender. Thorax with four pairs of postsutural dorso-central bristles, no presutural acrostichals well developed, and a moderately long prealar bristle; sternopleurals 1 : 2. Abdomen ovate, pointed apically. Fore tibia without median bristles; fore tarsus slender, longer than tibia; mid-tibia with two posterior bristles; hind femur with one preapical antero-ventral bristle; hind tibia with one antero-dorsal and one antero-ventral bristle. Wings rather broad, first posterior cell widened apically, last section of fourth vein about 1·5 as long as penultimate section, the latter not much longer than outer cross-vein.

Length 5·5 mm.

Type, Mt. Wellington, Tasmania, 3. x. 1912 (*A. White*).

This species closely resembles *Metopomyia atropunctipes*, described in this paper, in colour, the markings of the legs being very distinctive.

Helina pellucidiventris, sp. n.

Male and female.—Head fuscous; frons, face, and cheeks densely white pruinescent, almost silvery; antennæ entirely yellow, third segment infuscated except at apex; palpi luteous. Thorax densely grey pruinescent, with faintly indicated vittæ in front of suture; humeri and apex of scutellum faintly yellowish in male, conspicuously so in female. Abdomen testaceous yellow, opaque, with a brown or fuscous vitta, which may be complete or incomplete, and a pair of spots on second and another on third tergite of same colour, and sometimes a minute pair on fourth. Legs testaceous yellow, slightly darkened. Wings clear, yellow

at bases, cross-veins very indistinctly clouded. Calyptræ and halteres yellowish.

Male.—Eyes bare, separated by more than twice the width of third antennal segment; orbits setulose to middle, wider than narrowest part of interfrontalia; ocellars very long; parafacial almost linear; cheek higher than width of third antennal segment, the latter nearly twice as long as second segment; longest hairs on arista as long as width of third antennal segment. Thorax with three pairs of dorso-centrals behind suture; prealar absent; sterno-pleurals 2 : 2; hypopleura bare; presutural acrostichals short but distinct; both intra-alars long. Abdomen elongate-ovate; fifth sternite with a rather deep excision; basal sternite bare. Fore tibia without a median bristle; mid-femur with a series of bristles on basal half of postero-ventral surface; mid-tibia with two or three posterior bristles; hind femur with a few bristles on apical half of antero-ventral surface and one or two shorter bristles on basal half of postero-ventral; hind tibia with one antero-ventral and two antero-dorsal bristles. Outer cross-vein slightly curved.

Female.—Frons almost one-third of the head-width at vertex, widened anteriorly.

Length 6 mm.

Type, male, allotype, and six male paratypes, Kasauli, North-west India (*F. Wyville-Thomson*).

Attached to one specimen is a MS. label as follows:—"Caught in enormous numbers in houses here in the dry hot weather. They sat quietly on walls, beds, etc., and did not bother one, going out at sunset and coming in in the morning."

Belongs to the same group as *duplicata*, Meigen, but I know of no allied species having the same habits.

Helina lucida (Stein).

Mydæa lucida, Stein, Ann. Nat. Mus. Hungar. xi. p. 493 (1913).

This species and the next one belong to a group closely allied to the preceding one, the abdomen being largely yellowish pellucid with similar black marks, but both have the thorax with conspicuous black marks and the eyes of the male are more widely separated, the frons being distinctly wider than the width of the third antennal segment. The postsutural transverse black fascia on thorax in *lucida* is entire, while in the next species it is more or less distinctly interrupted on each side of the median line, the fascia

resembling three large spots. The anterior margin of thoracic dorsum in this species has only the submedian pair of black spots present, while in *fasciata* there are four black spots present.

Localities: three males, Benguella, Angola, S.W. Africa, 300 miles from coast, xii. 1904 (*Dr. F. C. Wellman*); one male, Bihé, Angola, xii. 1903–iii. 1904 (*Dr. F. C. Wellman*); one male and one female, Ruwe, Congo Free State, 4 & 8. v. 1907 (*Dr. A. Yale-Massey*).

One of the Benguella specimens bears a manuscript-label as follows: "Very sluggish, sylvan, but often seen on outside of native kraals, etc."

It is possible that this insect has similar habits to the preceding one, and is more active after sundown than through the day. Ordinarily the related species are—at least in temperate regions—exceedingly active during the daytime and are difficult to approach.

The Ruwe specimens were taken "in houses" (MS. note attached to specimens).

Helina fasciata (Jaennicke).

Spilogaster fasciata, Jaennicke, Neue Exot. Dipt. p. 370 (1866).

Two males and one female, Lagari, B.E.A. (*C. S. Betton*). No indication is given as to the habits of this species.

Genus Darwinomyia, nov.

Generic characters.—Related to *Phaonia*; differs in having the frons of the female with a pair of strong cruciate bristles, the genital apparatus of the same sex with numerous stiff, erect, setulose hairs, and the hind tibia in both sexes with several bristles basad of the calcar on the postero-dorsal surface. From *Trichopticus*, Rondani, it differs in having the hind coxæ bare at apices above. From *Dendrophaonia*, Malloch (genotype *querceti*, Bouché) it differs in having the forwardly directed orbital bristle absent in female and the cheek without a strong upwardly directed bristle in the male. The male resembles the stout forms of *Trichopticus* (=*Lasiops*, Meigen) in habitus, but, as pointed out above, there are no setulose hairs at apices of hind coxæ above. The wing-veins are bare and the first posterior cell is not narrowed at apex.

Genotype, the following species.

Darwinomyia univittata, sp. n.

Male and female.—Head yellowish red, occiput infuscated, the interfrontalia in female red; orbits greyish; third antennal segment slightly darkened apically; palpi yellow. Thorax yellowish red, mesonotum with a broad black central vitta; propleura below, mesopleura, and pteropleura blackened; centre of metanotum black. Abdomen black or fuscous, male with a luteous mark on each side of basal (second) tergite. Legs reddish yellow, fore femora, apical half of hind femora, and the tarsi infuscated in both sexes, hind tibiæ infuscated basally in male. Wings clear, yellowish at bases. Calyptræ and halteres yellow.

Male.—Eyes short-haired, separated by little more than width of anterior ocellus; orbits setulose almost to anterior ocellus; parafacials linear; cheek higher than width of third antennal segment; arista with very short pubescence; palpi slender. Thorax with three pairs of very long presutural acrostichal bristles; prealar long; postsutural dorso-central bristles 4; hypopleura with some fine hairs on upper margin in front of spiracle; venter of scutellum bare. Abdomen ovate, basal sternite bare; ventral hairs very long; hypopygium small; fifth sternite with a small rounded posterior excision. Fore tibia with one antero-dorsal and one posterior bristle; fore tarsus slender, longer than tibia, without long sensory hairs along posterior side of basal segment; mid-femur with a group of erect fine hairs before middle on anterior surface, and beyond them the same surface is furnished with microscopic erect hairs which become stronger towards the apex, finally assuming the proportion of short spines, same femur with two strong bristles basad of middle and about seven weaker bristles on apical half of postero-ventral surface; mid-tibia with four or five postero-dorsal and four or five postero-ventral bristles; tarsus normal, hind femur slightly curved, with about five bristles on apical half of antero-ventral surface, the postero-ventral surface bare; hind tibia curved, the calcar distinct, antero-ventral, antero-dorsal, and postero-dorsal surfaces each with a series of long hairs, those on the antero-dorsal surface strongest, apical postero-dorsal bristle indistinguishable. Wing slightly pointed; outer cross-vein slightly curved.

Female.—Frons one-third of the head-width, orbits narrow; setulæ continued considerably above vibrissæ. Thoracic bristles much shorter and stronger than in male; genital

processes stout; some strong but short bristles on dorsum besides the erect stiff hairs.

Length 7·5–8 mm.

Type, male, Valle del Lago Blanco, Chubut, Patagonia (*J. Koslowsky*). Allotype, Port Famine, Tierra del Fuego (*Charles Darwin*). One female paratype, Valparaiso, Chile (*Charles Darwin*).

This species is a very striking one, both as to colour and structure. It would undoubtedly be placed in *Lasiops* or *Phaonia* by other authors, but my recent diagnostic work on this family has convinced me that such a course is not permissible, and I therefore erect for its reception a new genus which I have dedicated to the honour of the collector of the females above listed.

The genus *Phaonia* finds its greatest development in the northern half of both hemispheres, there being comparatively few species even doubtfully referable here in the southern half of either, and *Lasiops* is entirely northern so far as I know now.

Subfamily *Lispinæ*.

This subfamily, which is distinguished from its allies by having the palpi flattened and dilated at apex and the pteropleara with some erect hairs in centre, as well as the eyes widely separated in both sexes, is widely distributed, occurring in every faunal region in the world. There are about 150 species described, the greater number occurring in the Palæarctic region and in Africa, while there are but four described from South America. Only one genus is represented, but there are some very aberrant forms, if we accept the genotype as the criterion of the genus. One of the most aberrant species known to me I have in this paper used as type of a new subgenus.

Subgenus Xenolispa, nov.

Subgeneric characters.—This subgenus differs from *Lispa* (sens. str.) in having the sterno-pleura with but one bristle, on the upper posterior angle. The presence of but one pair of postsutural dorso-central bristles and the absence of long bristles on the postero-ventral surface of the fore femur, as well as the distinct narrowing of the first posterior cell of the wing, serve to distinguish the subgenus from most of the species of *Lispa*.

Genotype, the following species.

Xenolispa atrifrontata, sp. n.

Female.—Black, shining. Frons black, face and cheeks with dense white dusting, which extends on orbits a little above the bases of antennæ; antennæ black; palpi yellow. Dorsum of thorax and scutellum almost glossy unicolorous black, pleura densely grey-pruinescent, opaque. Abdomen shining black, first tergite with three faint grey-pruinescent spots, one in centre and the others on each side of dorsum near posterior margin; second tergite with a grey central spot and a fainter one on each side at the middle on the lateral curve of segment; third tergite marked as second, but the spots much larger; fourth tergite with a grey spot on each side of dorsum. Legs black, grey-pruinescent. Wings hyaline, veins black. Calyptræ white. Halteres yellow.

Ocellar bristles microscopic; arista plumose; parafacial with a single series of hairs; vibrissæ of moderate length; antennæ distinctly shorter than face. Thorax with only one pair of dorso-centrals; sterno-pleura with only one long bristle; scutellum with four subequal bristles. Fore femur with three or four short bristles at apex on postero-ventral surface, otherwise unarmed; fore tibia without a median bristle; mid-tibia with one posterior bristle; hind femur slender, unarmed; hind tibia with one weak postero-dorsal bristle. First posterior cell distinctly narrowed at apex.

Length 4 mm.

Type, South Queensland, Australia (*Dr. T. L. Bancroft*).

Xenolispa niveimaculata (Stein).

Two specimens, Obuasi, Ashanti, Africa, 18.vii. and 17.viii. 1907 (*W. M. Graham*).

Lispa nivalis, Wiedemann.

One specimen from Obuasi, Ashanti, Africa, and a series from Zungeru, Northern Nigeria.

Lispa pectinipes, Becker.

One female, Obuasi, Ashanti, Africa, 18.iv.1906 (*W. M. Graham*); one female, near Cairo, Egypt, ii.1902 (*P. P. Graves*).

Lispa armipes, Becker.

One male, Sekondi, Ashanti, Africa, 19.ix.1906 (*W. M. Graham*).