

MUSCIDAE OF THE MARQUESAS ISLANDS *

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INTRODUCTION

The family Muscidae inhabits all faunal regions. Some of the species are practically cosmopolitan because of the ease with which they are conveyed from point to point by commercial agencies and the facility with which they adapt themselves to their various habitats. Most of these widely distributed species are found in their larval stages in decaying vegetable matter or in what is very similar, manure, and occasionally in carrion. Hence no particular interest attends their presence even in well isolated regions or in distant islands. It is, however, of much interest to discover unique forms of even widely distributed genera. Although the material from the Marquesas is not exceptional in this respect, it does contain several new species. These are dealt with below, as are also all representatives of the family at this time available to me.

A striking feature of the Pacific Entomological Survey collection from the Marquesas Islands is the absence of any member of the subfamily Anthomyiinae. This subfamily is essentially a northern one. It is most profuse in the Palearctic and Nearctic regions and is represented but meagerly elsewhere. A large percentage of the more widely distributed species belongs to that group which is most readily transportable by commercial agencies and which is found in the larval stages in decaying vegetable matter.

SUBFAMILY LISPINAE

As far as they are known, the members of this group are aquatic in the larval stages, and the adults are found along the sides of streams or on the banks of ponds or other bodies of water. Three genera are already recognized, but the species in the collection from the Marquesas does not fit well into any one of these. It differs noticeably in the much narrower parafacials, which are almost invariably devoid of hairs. This character is unique in the subfamily, as far as I have seen. I consider that the divergence from typical forms of *Lispa* justifies the erection of a new genus for the reception of the species and refer to the following description for full discussion of the generic characters.

* Pacific Entomological Survey Publication I, article 21. Issued December 15, 1932.

Genus COENOLISPA, new genus

Subfamily characters: pteropleura with some hairs on center; frons of both sexes more than one-fifth of head width, without cruciate interfrontal bristles; palpi with a leaf-like apical expansion; lower calypter much larger than upper; scutellum bare below; sixth wing vein not attaining margin of wing; basal segment of hind tarsus without a basal ventral bristle.

Distinguished from all three known genera by the lack of hairs on the parafacials, which are much narrower than usual, the possession of 1 + 3 pairs of long dorsocentral bristles on the mesonotum; and the triangularly arranged three sternopleural bristles. The genal bristle is lacking, and there are two bristles on the presutural sublateral area of the mesonotum.

Genotype, *Coenolispa erratica*, new species.

Coenolispa erratica, new species (fig. 47).

Male

Head black, occiput grey dusted, frons grey dusted on the orbits, which become white anteriorly, ocellar triangle brownish grey dusted, face, parafacials, and genae white dusted; antennae black, extreme apex of second and base of third segment reddish yellow; palpi yellow, darker at bases and whitish at apices. Head in profile as in fig. 47, *a*; frons at vertex a little more than one-fifth of the head width, slightly wider just anterior to the ocelli and narrowed somewhat to anterior margin, the orbits poorly differentiated, especially on upper half, and almost linear, the triangle narrow, carried to anterior margin, distinguished by the yellowish dust; inner verticals much longer than the outer pair and distinctly proximad of them; postverticals undeveloped; ocellars long; two upper pairs of orbitals reclinate, the others incurved, the anterior pair very long and strong. Parafacials bare; face flat in center.

Thorax black, quite densely yellowish grey dusted, mesonotum with four black vittae, the submedian pair along the lines of dorsocentrals and more or less fused with the broader sublateral pair; a fifth vitta sometimes evident at least on the posterior part between the submedian pair which is carried on to the disc of the scutellum but not to its apex; grey dusting much more dense on lateral margins than on disc of mesonotum. Dorsocentrals long, 1 + 3, with occasionally a short setula anterior to the presutural one; one intra-alar; prealar and prescutellar acrostichals undeveloped.

Abdomen colored as thorax, the base and apex of each tergite densely grey dusted, and second and third with an additional grey central line that separates the shining black part into two large transverse spots, the fourth tergite without the central line, apical bristles on all tergites, becoming longer from basal to apical tergite, quite conspicuous and strong on fourth, and one or more median lateral bristles on each tergite. Hypopygium rather small, forceps as in fig. 47, *b*; fifth sternite with a shallow central apical emargination.

Legs black, femora grey dusted, fore tibiae largely yellowish, most distinctly so basally, mid and hind pairs yellowish at bases only. Fore coxae whitish grey dusted, with two series of widely spaced bristles on anterior side from base to apex; fore femur with a series of rather closely placed short regular bristles on the entire anteroventral surface and a more widely spaced series of much longer and stronger bristles on posteroventral surface; posteroventral surface with a few intermixed shorter and finer bristles basally; mid femur with a few long widely spaced bristles on the anteroventral and posteroventral surfaces centrally; hind femur much as the mid one; fore tibia with a long curved bristle at middle on posterior surface which is about half as

long as the tibia, apical posterior and dorsal bristles much shorter and straight, the ventral setulose hairs not exceptionally developed; mid tibia with the same type of median posterior bristle but the apex with a moderately long ventral bristle, and the ventral setulose hairs longer than on the fore tibia; hind tibia with a long anterodorsal bristle just beyond middle, a shorter anteroventral one a little nearer apex, the preapical dorsal bristle about as long as the anteroventral, and a slightly curved and stronger apical ventral bristle; tarsi normal, basal segment of fore pair longer than the next two segments combined.

Wings rather narrow, rounded at apex, brownish hyaline, more darkened from beyond first vein to apex of costa. Outer cross vein straight, inner cross vein at middle of discal cell, ultimate section of fourth vein a little longer than penultimate section, and not converging towards third at apex.

Calypteres white, margins yellowish. Halteres pale yellow.

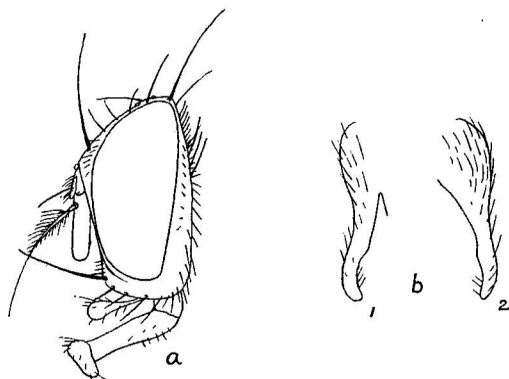


FIGURE 47. *Coenolispa erratica*, new genus, new species. *a*, head in profile, male. *b*, hypopygial forceps of male: 1, right, from below; 2, left, in profile.

Female

Length, 7 to 8.5 mm. Differs from the male in having the central vitta on the mesonotum better developed, the ventral setulose hairs on the mid tibia especially longer and stronger, and the abdomen stouter, more ovate, with the genitalia furnished with short dense curled fuscous hairs.

Hivaoa: Tapeata, east slope of Mount Ootua, altitude 2,500 feet, May 25, 1929, type male; Matauuna, altitude 3,800 feet, March 5, 1930, allotype; Matauuna, altitude 3,760 feet, August 1, 1929, in miscellaneous sweeping, paratypes; Mumford and Adamson.

Uapou: Hakahetau Valley, altitude 1,000 to 2,000 feet, January 1, 1930, paratypes, R. R. Whitten.

There is some variation in the extent of pale color on the tibiae but no structural distinction that I can find to justify a belief that there are two species in the material. The facial dust also varies from pure white to yellowish white, but most of the specimens have been wet and thus are not in very good condition for determination of the degree of variation from the type.

SUBFAMILY PHAONIINAE

A widely distributed subfamily, containing most of the genera of tropical occurrence, and a wealth of species, especially in the Orient. All the genera represented in the collection are already described.

Genus *OPHYRA* Robineau-Desvoidy

The members of this genus as far as I know are scavengers, the larvae living in manure and other decaying matter. The flies frequently occur on flowers, and when on the wing have a peculiar habit of standing stationary for considerable periods much as do many species of the genus *Fannia* Robineau-Desvoidy, and many genera of the family Syrphidae.

***Ophyra chalcogaster* Wiedemann.**

A species widely distributed from China southward, originally described from Java. The character by means of which both sexes may be distinguished from all others in the genus is to be found in the very distinct white apices of the ventral surface of the segments of the fore tarsi, all other species having the fore tarsi black.

There are no specimens in the collection from the Marquesas Islands, but it undoubtedly ought to occur there, as there are two males from the Society Islands in the material before me, and the new species described below occurs in both groups.

***Ophyra trochanterata*, new species.**

Male

Of the same general aeneous glossy black color as the other members of the genus, but with the palpi brownish yellow, a character met with in the genus only in *O. aenescens* Wiedemann, apart from the present species.

Head black; frontal orbits and upper fourth of parafacials glossy black, remainder of parafacials, face, and cheeks except the vibrissal angles, densely grey dusted or tomentose; frontal lunule with the usual dense silvery grey tomentum; back of head shining black, slightly grey dusted along eyes on lower half or more. Antennae black, second segment brownish; palpi brownish yellow. Frons at narrowest point linear, anterior half or more with setulose hairs; vertical bristles lacking, the ocellars well developed. Third antennal segment about 2.5 times as long as second, its extremity falling short of reaching level of vibrissae; arista swollen at extreme base where there is some very short pubescence; palpi moderately wide.

Thorax glossy aeneous black. Dorsocentrals 2 + 4, the two presutural pairs much stronger than the three anterior presutural pairs; anterior acrostichal hairs in four well-defined series, the prescutellar acrostichals undeveloped.

Abdomen more distinctly aeneous or bronzy than the thorax, the basal two visible tergites when seen from the apex and viewed along the disc from low down with slight greyish dust and a dark dorsocentral vitta, the two apical tergites glossy. Discal hairs on the basal two tergites much denser than on the apical two, especially the fourth, the third and fourth with some fine hair-like apical bristles that are longer than the discal

hairs. Second sternite basally and fourth apically with numerous long erect hair-like bristles which are directed downward, fifth with the apex broadly and shallowly emarginate and a transverse strip of bristly hairs similar to those on fourth near apex, the tips of the hairs more distinctly curled than those of fourth or second sternites.

Legs black, glossy. Fore legs normal, but the posteroventral surface of the femur with the bristles rather strong and very closely placed; mid femur with four or five very short stubbly thorns or bristles near base on the posteroventral and one or two on the anteroventral surface; mid tibia with two well-developed posterior submedian bristles, the ventral hairs on apical third or more dense, but not longer than the diameter of the tibia; hind trochanters with quite dense soft curled hairs on ventral surface which are about as long as basal diameter of the femur, the femur with the usual complete anterodorsal series of bristles, five or more stronger bristles on the apical half or less of the anteroventral surface, two or three very short stubbly bristles near base on anteroventral surface, and one rather fine and not very long bristle close to base on ventral surface; tarsi normal, claws and pulvilli of moderate size.

Wings brownish hyaline, veins dull yellow basally, third and fourth veins converging slightly at apices.

Calypteres brownish yellow, lower one merging into dark brown apically. Halteres with black knobs.

Female

Length, 6 to 7 mm. Similar to male in general coloration and characters, differing in having the frons almost one-third of the head width, with the frontal triangle glossy, almost parallel-sided to middle, where there is an incurved bristle inserted in each lateral edge, and from that point to anterior margin slightly narrowed, all four verticals present but short, and the upper third of each orbit with two or three outer bristles, the anterior one of which is proclinate. Mid and hind femora lacking the short basal ventral bristles; hind trochanters without exceptional hairing.

Hivaoa: Mataovau, altitude 390 feet, June 5, 1929, type male, allotype and 2 paratypes, Mumford and Adamson.

Mohotani: seashore, January 31, 1931, 23 paratypes, mostly females, LeBronnec and H. Tauraa.

I have also a male specimen from Tahiti, Society Islands, collected in the Papeenu Valley, at 500 feet altitude, on October 25, 1928, by A. M. Adamson.

This species is very similar to *Ophyra nigra* Wiedemann, which is, I believe, a prior name for *O. spiniger* Stein. This species and *O. simplex* Stein are similar to the new species in general characters and in having the mid and hind femora with short stubbly bristles on ventral surfaces basally, but in addition to having the palpi black these two older species have the hind tibia with different ventral armature, *O. nigra* having about four long bristly hairs on the anteroventral and posteroventral surfaces of the apical third or more, and *O. simplex* having similar armature on the anteroventral surface only. In *O. trochanterata* the anteroventral surface has the usual two short anteroventral bristles similar to those present in most females, and there are no well-developed hairs on any surface, though those on the anterodorsal surface are a little longer than usual; the calcar is longer than

usual in both sexes. There are no dense curled hairs on the ventral surface of the hind trochanters of the two older species referred to here.

It appears pertinent to note here that a character recently suggested by Hendel⁵³ for the separation of this family from the acalyprate series, the parallel position of the outer and inner vertical bristles, falls down in even this genus, and particularly in the one previously described herein as well as many others in the family.

Genus LIMNOPHORA Robineau-Desvoidy

The genus as accepted here contains species in which the prosternum is haired on the sides, the third wing vein is haired at its base, the basal abdominal sternite is bare, and the fourth wing vein is usually bent slightly forward apically.

There are a number of specimens belonging to the genus in the material before me, but all are in rather poor condition and are with one exception females, which sex is not as readily identifiable specifically as the male. I present the following data on the basis of this rather unsatisfactory material.

All the members of the genus, as far as they are known, in the adult stage frequent streams and other bodies of water. The larvae are aquatic.

I have published a review of the species occurring in the Society Islands⁵⁴ to which students are referred for further information on the genus.

Limnophora nigropolita, new species.

Female

Glossy black, the thorax with very slight brownish dust on the mesonotum, only the humeri distinctly grey dusted, and the abdomen glossy black, with hardly a trace of brownish dust and no markings on the dorsum.

Frons black, dull, the triangle slightly shining, orbits dark brown dusted except at the anterior extremities, where they are whitish grey dusted like the parafacials, face, and genae; antennae, arista, palpi, and proboscis, black, the latter glossy below. Frons at vertex more than one-fourth of the head width, the orbits narrow, all four vertical bristles well-developed, postverticals small, ocellars moderately long; each orbit with two recurved upper and four or five unequal incurved anterior bristles, the anterior one of the latter longest; triangle extending to beyond middle of frons; antennae extending almost to the vibrissae, third segment about 2.5 times as long as second; arista with the longest hairs not more than half as long as width of the third antennal segment; palpi a little longer than antennae, not dilated; gena not exceeding one-fifth of the eye height.

Thorax glossy black, mesonotum with slight brownish dusting, not vittate, the humeri very distinctly grey dusted above; pleura slightly grey dusted, mesopleura brownish dusted posteriorly. Mesonotum with 2 + 3 strong dorsocentrals, the anterior intra-alar small but usually distinct, presutural acrostichal series of hairs four,

⁵³ Hendel, Friedrich, Kritische und synonymische Bemerkungen über Dipteren: Verhandl. Zool.-Bot. Gesells. Wien, 81, p. 6, 1931.

⁵⁴ Malloch, J. R., Exotic Muscaridae (Diptera): Ann. Mag. Nat. Hist., 10th ser., vol. 4, p. 328, 1929.

prescutellar acrostichals small but distinct; sternopleurals 1 + 2, the lower posterior one small.

Abdomen glossy black, less dusted than the thorax. Discal and apical bristles on third and fourth visible tergites well-developed. Genitalia with dense stiff black hairs, but without definite spur-like thorns.

Legs black. Fore tibia without a median bristle; mid tibia with two posterior submedian bristles; hind femur with four or five anteroventral bristles on apical half; hind tibia with one anterodorsal and one anteroventral bristle, the latter a little farther beyond middle than the other; fore tarsal claws of moderate length, not as long as those of the female on *L. nigridorsata* Malloch.

Wings grayish hyaline, veins fuscous. Third vein with or without a setula at base; fourth vein bent slightly forward near apex.

Calypteres brown, margin and fringe of lower one fuscous. Halteres yellow.

Upou: Hakahetau Valley, altitude 2,000 feet, December 6, 1929, on wet rock by stream, type and 1 paratype, A. M. Adamson. Same locality, altitude 1,000 to 2,000 feet, January 29, 1930, paratype, R. R. Whitten.

It is highly probable that the larvae of this species will be found in the stream near the place of capture of the adults. The male is in all probability more distinctly dusted on the thorax and abdomen than is the female.

***Limnophora tepunae*, new species.**

Female

Length, 7 mm.

Black, distinctly shining, the thorax lightly and almost evenly pearly grey dusted on the entire surface, the mesonotum without distinct vittae and with the humeri and lateral margins not more conspicuously dusted than the disc.

Head black, with grey dust even on the frontal orbits, although the latter and the triangle are darker grey than the face; in other respects colored as in the preceding species. Frons a little narrower at vertex than in *L. nigropolita*, the bristles as in that species; antennae a little longer; arista with shorter hairs, which are hardly longer than its basal diameter, and, whereas in the preceding species they are present on practically the entire length, in the present species they are not visible beyond the middle; gena not more than one-sixth of the eye height.

Thorax shining black, quite evenly covered with pearly grey dust which does not obscure the surface, disc of mesonotum slightly more shiny than sides, and with the faintest trace of dark vittae when seen from behind and low down; pleura with grey dust even on posterior portion of the mesopleura. Chaetotaxy as in *L. nigripolita*, but the anterior intra-alar and lower posterior sternopleura both long and strong.

Abdomen more distinctly shining than the mesonotum, with very slight even grey dust, and no dorsal markings. Discal bristles on third visible tergite weaker than those on fourth; genitalia with longer and less dense, slightly curled, hairs.

Legs as in the preceding species, tarsal claws a little shorter.

Wings hyaline, veins fuscous to bases. Third vein with a basal setula; fourth vein curved forward near apex.

Calypteres brownish yellow, margin of lower one not darker than disc. Halteres yellow.

Hivaoa: Tepuna, altitude 3,010 feet, August 1, 1929, in miscellaneous sweeping, type female, Mumford and Adamson.

Limnophora, species.

Length, 6 mm.

Two females in too poor condition to determine, but distinct from the two above described. The wings broader, with two or three basal setulae on the third vein, and the calypteres yellow.

Hivaoa: Tapeata, east slope of Mount Ootua, altitude 2,500 feet, May 25, 1929; Mataovau, altitude 390 feet, June 5, 1929, Mumford and Adamson.

Limnophora, species.

Length, 3 mm.

A male specimen which is very closely related to *L. plumiseta* Stein, a species that occurs in Northern Africa and the Malay region. The fore femur has the same fine bristly hairs on the posteroventral surface which are longest at base and slightly curled at apices; the frons is one-third of the head width in the male; and the arista has the longest hairs about half as long as the width of the third antennal segment. Unfortunately the specimen is very badly preserved and though it has the abdomen present it is so greasy that it is impossible to determine if the fifth sternite has the dense short discal hairs that are present in *L. plumiseta*.

Hivaoa: Teava Uhia i te Kohu, altitude 2,100 feet, February 15, 1930, sweeping over *Paspalum conjugatum*, Mumford and Adamson.

Genus **ATHERIGONA** Rondani

This genus contains a large number of species but is, with the exception of one widely distributed form, strictly Old World in its occurrence. All the species of which the larval stages are known feed in fruits, vegetables, or the stems of grasses or grains, and possibly some of them may be considered of economic importance, especially in India and the Malay region. Without accurate data at hand on the habits of the species from the Marquesas, I suspect that all will be found feeding in fruits and vegetables; none of them, apparently, belong to the more slenderly built forms that feed in stems of grains and grasses.

It may be pertinent to note here that a key to the Sumatran species of this genus which I published in 1928⁵⁵ contains an obvious error at caption 17. Here the first section refers the user to 18, and the second refers to 19. The key was compiled from a more extensive one and there were two captions omitted in the abridged form so that because of omission to change the numbers after 17 one must accept the figure 20 as equivalent to 18 and 22 as equivalent to 19. In other respects this key is correct.

⁵⁵ Malloch, J. R., Fauna Sumatrensis, family Muscidae (Diptera): Ent. Mitt., 17, no. 5, p. 311, 1928.

Atherigona excisa (Thomson).

This species belongs to a group in which the males have a very well-developed depression or concavity on the upper side of the fore femur near its apex. This is the only species of that group in which there are no exceptional developments of the leg armature, and the wings have no markings. It has been described under many names from various parts of the Old World and is the only species as yet recorded from the New World, where it has been taken in some localities within the tropical zone. There is no question that it has been introduced into many localities in shipments of fruits, but it is hardly probable that it will prove destructive, as I believe that the larvae attack only injured or decaying fruits and vegetables.

The typical form of the species has the mesonotum densely grey dusted and with no definite brown vittae. The palpi are dark brown to black in both sexes.

Hivaoa: Atuona Valley, altitude 325 feet, July 6, 1929, 1 female, Mumford and Adamson.

Atherigona excisa*, variety *flavipalpis Malloch.

The palpi in this variety are testaceous yellow, and the mesonotum has traces of three brown vittae.

Fatuuku: altitude 860 feet, November 19, 1930, 3 males, H. Tauraa.

Atherigona excisa*, variety *trilineata Stein.

There are no males of this variety in the collection, but several females agree in every respect with Stein's type.

Hatutu [Hatutaa]: altitude 800 feet, September 30, 1929, near nest of *Fregata minor*, A. M. Adamson.

Mohotani: altitude 700 feet, January 31, 1931, LeBronnec and H. Tauraa.

A large number of females from the same locality and on the same date as the preceding variety may belong to either, but they have the palpi fuscous and are in greasy condition, so that it is not possible to allocate them definitely.

***Atherigona ustipennis*, new species.**

Male

Head black, densely grey dusted except on the interfrontalia, the latter dark brown; antennae black; aristae pale brown; palpi brown, paler below apically owing to the presence of dense soft pale down on the under surface. All four verticals strong, postverticals shorter but well-developed. Antennae extending to vibrissal angles, third segment wide, equal to nearly one-half the width of the eye and more than four times as long as second segment; arista with very short pubescence basally, the second segment longer than wide and a little longer than first; palpi at least as long as lower margin of head, slightly clubbed at apices, with short bristles on outer side which are strong

and stubbly basally and become weaker apically, the apical third or more of the under or inner surfaces with dense soft hairs.

Thorax testaceous yellow, disc of mesonotum black and with dense grey dust, in type badly discolored with grease or water so that it is impossible to determine if there are distinct vittae, but in the females that are in better condition there are three dark brown vittae present, the central one of which extends on to the disc of the scutellum, only the margin of which remains of the ground color. The chaetotaxy almost as in the preceding species; humerals two, prealar small but distinct.

Abdomen testaceous yellow, with the dark spots present only on the apical two or three tergites, fourth visible one with two small round spots. General structure as in *A. excisa*, no hypopygial protuberance on dorsum at base.

Legs tawny yellow. Fore femur with the usual dorsal preapical depression deeper than in *A. excisa*, the armature similar to that of the other species. Hind femur with a short knife-like elevation on the ventral surface near apex, opposed to which there is a similar elevation on the ventral surface of the hind tibia near its base. None of the other legs abnormal in structure, the tarsi not exceptionally haired.

Wings hyaline, with a narrow but distinct brown cloud along the tip of the costa from apex of second to apex of fourth veins; first posterior cell narrowed at apex, its width on costa hardly half of the apex of the preceding cell; inner cross vein slightly beyond middle of discal cell.

Calypteres and halteres yellow.

Female

Length, 4 to 5 mm.

Similar to the male in general coloration and structure, but the palpi are not as noticeably widened at apices, the third antennal segment is narrower, the pleura darker, and the abdomen has a pair of large subtriangular dark brown spots on tergites 2 to 4, a pair of smaller round spots on 5, and a dark interrupted central vitta on the dorsum. The wings are stained with brown at apices. The fore femora are almost entirely black, the fore and hind tibiae are slightly darkened at apices as are also the fore and hind tarsi. The hind femora and tibiae lack the knife-like elevation on ventral surface as described for the male.

Hivaoa: Atuona Valley, altitude 325 feet, July 6, 1929, type male, allotype and 3 paratypes, Mumford and Adamson.

Tahuata: Kiinui Valley, altitude 1,210 feet, June 14, 1930, paratype females, LeBronnec and H. Tauraa.

Uahuka: Putatauuu, Vaipae Valley, altitude 880 feet, September 20, 1929, paratype females, A. M. Adamson.

Eiao: coconut plantation near center of island, altitude 1,450 feet, October 1, 1929, in miscellaneous sweeping, A. M. Adamson.

Specimens were collected in the Tipaerui and Fautaua Valleys, Tahiti, Society Islands, in September, 1928, by A. M. Adamson.

There are several described species of the genus in which the wing has an apical brown mark, but in no other except *L. crassiseta* Stein, which has the wings hyaline at apices, are the tarsi of the male without distinctive hairs and the hind femora and tibiae modified as in this species.

SUBFAMILY MUSCINAE

Genus MUSCA Linné

Musca domestica Linné.

A number of specimens in the collection are referable to this species, which is the most widely distributed of all those generally referred to the genus in the widest sense. I have recently restricted the genus to the species in which there are hairs on the center of the propleura, and thus to two forms, the present one and *M. vicina* Macquart. The latter is a very doubtful species; in fact, except for the narrower frons of the male, there is practically nothing to distinguish it from *M. domestica*, and as there is much variation in the character in *M. domestica* I have refused to accept two species, preferring to consider *M. vicina* as at most a variety of the genotype that is apparently confined to the tropical sections of the Old World. In fact, it is a remarkable circumstance that the farther from the tropics the specimens are found, the wider is the frons in the males. I make no attempt to explain this but merely place the matter on record.

Hivaoa, altitude to 1,520 feet; Uahuka, altitude 2,900 feet; Eiao, sea level. Also collected by the Pacific Entomological Survey in the Society Islands.

Genus BYOMYA Robineau-Desvoidy

Byomya sorbens Wiedemann.

This species is generally smaller than the preceding one and has the center of the propleura bare. It is the only other species recorded from Samoa and is apparently widely distributed throughout the Pacific islands.

Uahuka, altitude to 1,450 feet; Eiao, sea level. Also collected in the Society Islands.