

the abdomen wetted, and I placed them on some blotting-paper until they were dry. On returning them to the water, two remained underneath a floating piece of cork, and the hair being now dry retained the pellicle of air which is ordinarily observed. One of the two came out of the water, attached the cork to the glass, and wove a web against the latter, against which it rested about a quarter of an inch above the surface of the water. After remaining there about two days, it resumed its aquatic habits, and like all the others formed its winter habitation. I have now no fewer than ten which have formed their cells, in which they are perfectly at rest, and evidently hibernating.

The general habits of this interesting animal are well described by De Lignac, De Geer, Walckenaer, and others, and an excellent *résumé* of the whole observations is given by the latter author, in his '*Histoire Naturelle des Insectes Aptères*.'

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Catalogue of the Dipterous Insects collected at Singapore and Malacca by Mr. A. R. WALLACE, with Descriptions of New Species. By FRANCIS WALKER, Esq., F.L.S.

[Read January 15th, 1856.]

MR. A. R. WALLACE, so well known for his natural-history researches in the valley of the Amazons, and for the extensive and valuable collections sent home by him from that portion of South America, has now turned his attention to the eastern world, and is actively investigating the natural history of the East Indian Islands, after having spent some months on the Malay Peninsula. A large portion of Mr. Wallace's entomological collections pass into my hands, and being desirous of making his labours scientifically useful, I have requested Mr. F. Walker, who has such an intimate knowledge of the insects belonging to the order *Diptera*, to draw up the following catalogue of the dipterous insects discovered by Mr. Wallace at Singapore and Malacca. My object in so doing is to establish a kind of starting-point for tracing hereafter, when all Mr. Wallace's collections shall have come to hand, the geographical distribution of the *Diptera* in the very interesting portion of the globe which Mr. Wallace is now investigating with such indefatigable zeal. Singapore and Malacca, at the extremity of the Malay Peninsula, are well placed for carrying out the purpose I have in view, being in connexion northwards through the



Burman Empire with the expanded continent of Asia, and southwards in close approximation with that archipelago of splendid islands which run in a chain to the north coast of Australia, and send off a branch northwards through the Philippine Islands to the coast of China, touching there again the mainland of Asia. The present catalogue will be followed very shortly by one detailing the species of *Diptera* discovered in Borneo, the materials for which are now nearly all in this country, and other catalogues will follow until Mr. Wallace's discoveries in the *Diptera* are exhausted. That Mr. Wallace will be able to visit all the islands of the Indian Archipelago is not to be expected; but still, his plan of exploring those which have been but little examined in a natural-history point of view, will open up a large amount of information, which, when combined with the labours of other naturalists who have been working in the same districts, will give sufficient facts for laying down some laws on the geographical distribution of the insects belonging to the Order which forms the subject of the following catalogue. The specimens collected at Singapore and Malacca were taken during the six months commencing with May and terminating with October. Where the altitude of the locality above the level of the sea of any species is known, this will be found noted in the proper place. Figures will be given to illustrate new genera or any very remarkable species.

WILLIAM WILSON SAUNDERS.

14th January, 1856.

Fam. BIBIONIDÆ, *Haliday*.

Gen. PLECIA, *Hoffmansegg*.

1. PLECIA DORSALIS, n. s., mas et fœm. Atræ, thorace rufo, alis nigricantibus.

*Male and female.* Deep black. Thorax bright pale red. Wings blackish.

Length of the body  $2\frac{1}{2}$ – $3\frac{1}{2}$  lines; of the wings 7–8 lines.

The totally red thorax of this species distinguishes it from *P. fulvicollis*, Wied., and from *P. ignicollis*, Walk.

Singapore and Mount Ophir.

Fam. CULICIDÆ, *Haliday*.

Gen. CULEX, *Linn.*

2. *Culex splendens*, Wied. *Auss. Zweifl.* i. 3. 3.

Singapore. Inhabits also Java.

3. *Culex fuscus*, Wied. *Auss. Zweifl.* i. 6. 9.

Malacca. Inhabits also Hindostan.



4. *CULEX ANNULIPES*, n. s., fœm. Obscurè fuscus, thoracis abdominisque lateribus albo-punctatis, pedibus albo-cinctis, alis sublimpidis venis fusco-ciliatis.

*Female*. Dark brown. Sides of the thorax and of the abdomen with minute white dots. Legs with numerous white bands. Wings nearly limpid; veins brown, ciliated. Length of the body  $2\frac{1}{2}$  lines; of the wings 4 lines.

Singapore. (Jungle.)

### Fam. TIPULIDÆ.

#### Gen. LIMNOBIA, *Meigen*.

##### Div. I. *Meig. Zweifl.* i. 131. pl. 5. f. 5.

5. *LIMNOBIA LEUCOTELUS*, n. s., mas. Atra, alis nigricantibus, maculâ discali limpidâ, margine postico subcinereo, apice albo.

*Male*. Deep black. Wings blackish, with a discal limpid spot; posterior border slightly greyish for rather more than half the length from the base; tips white. Length of the body 6 lines; of the wings 12 lines.

Singapore.

6. *LIMNOBIA PLECIOIDES*, n. s., fœm. Atra, thorace pallidè rufo, alis nigricantibus.

*Female*. Deep black. Thorax pale red. Wings blackish. Length of the body 7 lines; of the wings 12 lines.

Singapore.

##### Div. L. *Meig. Zweifl.* i. 132. pl. 5. f. 4.

The structure of the wing-veins in the above division is almost, but not quite, identical with that of the following species.

7. *LIMNOBIA DICHROA*, n. s., fœm. Atra, antennis ferrugineis basi apiceque nigris, abdomine luteo, basi fasciâque latissimâ posticâ nigris, pedibus testaceis, femoribus tibiisque apice tarsisque nigris, alis fuscescentibus costâ testaceâ.

*Female*. Deep black. Antennæ ferruginous, black at the base and at the tips. Abdomen luteous, black at the base and with a very broad black band beyond the middle. Legs testaceous; tarsi and tips of the femora and of the tibiæ black. Wings brownish, testaceous at the base and along the costa. Length of the body 9 lines; of the wings 16 lines.

Mount Ophir.

#### Gen. CTENOPHORA, *Fabr.*

8. *CTENOPHORA CHRYSOPHILA*, n. s., fœm. Lutea, abdominis apice nigro, pedibus pallidè luteis, femoribus apice tibiis tarsisque nigris, alis flavescenscentibus apice nigris margine postico interruptè nigricante.

*Female*. Bright luteous. Abdomen black towards the tip. Legs pale luteous; tibiæ, tarsi, and tips of the femora black. Wings yellowish, black towards the tips, irregularly and interruptedly blackish along the posterior border. Length of the body 8 lines; of the wings 16 lines.

Singapore.



Fam. STRATIOMIDÆ, *Haliday*.Gen. PTILOCERA, *Wied.*

9. *Ptilocera quadridentata*, *Fabr. Syst. Antl.* 86. 33. (Stratiomys.)

Malacca and Singapore. Inhabits also Java, Sumatra, and the Philippine Islands.

Gen. STRATIOMYS, *Geoffroy*.

10. *Stratiomys Lutatius*, *Walk. Cat. Dipt.* pt. 3. 532.

Malacca.

Gen. CLITELLARIA, *Meigen*.

11. *Clitellaria bivittata*, *Fabr. Syst. Antl.* 79. 5. (Stratiomys.)

Singapore. Inhabits also Java and Sumatra.

12. *Clitellaria varia*, *Walk. Cat. Dipt.* 2nd Ser. pt. 1. 63.

Malacca. Inhabits also Java.

13. *CLITELLARIA FLAVICEPS*, n. s., fœm. Nigra, capite flavo, thorace cinereo trivittato, scutello bispinoso, abdomine purpureo-cyaneo, alis cinereis apud costam nigricantibus.

*Female*. Black. Head pale yellow. Antennæ a little shorter than the thorax. Thorax a little narrower in front, with three grey stripes. Scutellum with two stout spines. Abdomen purplish blue; disk beneath hoary. Wings dark grey, blackish along the costa; veins black. Halteres whitish.

*Var. β*. Smaller. Spines of the scutellum and tarsi whitish, with black tips. Length of the body  $2\frac{1}{2}$ – $3\frac{1}{2}$  lines; of the wings 5–7 lines.

Singapore.

Gen. CYCLOGASTER, *Macquart*.

14. *CYCLOGASTER RADIANS*, n. s., fœm. Nigra, capite nitido, antennis fulvis aristâ albidâ, thorace cinereo radiis quinque nigris, abdomine subrotundo, tarsis albidis, alis cinereis.

*Female*. Black, rather broad. Head shining. Antennæ tawny, with a pubescent white arista which is as long as the preceding part. Thorax cinereous, with five black rays, three in front and one on each side. Scutellum obconical, prominent. Abdomen nearly round, cinereous, with three rows of black spots. Knees and the adjoining part tawny; tarsi whitish. Wings limpid; veins testaceous. Halteres whitish. Length of the body 3 lines; of the wings 5 lines.

Singapore.

Gen. PHYLLOPHORA, *Macquart*.

15. *PHYLLOPHORA ANGUSTA*, n. s., mas. Nigra, angusta, sublinearis, antennis setaceis basi fulvis, thorace producto cinereo-bivittato, pedibus testaceis, femoribus posterioribus suprâ piceis, alis cinereis, venis halteribusque fuscis.

*Male*. Black, narrow, nearly linear. Antennæ setaceous, tawny towards the base, a little longer than the head. Thorax elongated, with two cinereous stripes. Scutellum with four very minute spines. Abdomen hardly broader



and not longer than the thorax. Legs testaceous; posterior femora piceous above. Wings cinereous; veins and halteres brown. Length of the body  $2\frac{1}{2}$  lines; of the wings  $4\frac{1}{2}$  lines.

Singapore.

Gen. EUDMETA, *Wied.*

16. *Eudmeta marginata*, *Fabr. Syst. Antl.* 63. 3. (Hermetia.)

Singapore. Inhabits also Java, Sumatra, and Hindostan.

Gen. MASSICYTA, n. g. (Plate I. fig. 1.)

*Corpus* longiusculum, sat angustum. *Caput* transversum, breve, thorace vix latius. *Antennæ* graciles, thorace paulò breviores; articulus 1<sup>us</sup> linearis; 2<sup>us</sup> longi-fusiformis, 1<sup>o</sup> vix longior; 3<sup>us</sup> acuminatus, minimus. *Thorax* longi-ellipticus. *Abdomen* obclavatum, subpetiolatum, thorace plus duplò longius. *Pedes* graciles. *Alæ* elongatæ, sat angustæ.

Body rather long and narrow. Head transverse, short, very little broader than the thorax. *Antennæ* slender, a little shorter than the thorax; 1st joint linear; 2nd elongate fusiform, very little longer than the 1st; 3rd acuminated, very minute. Thorax elongate elliptical. Abdomen obclavate, subpetiolated, a little more than twice the length of the thorax. Legs slender. Wings rather long and narrow; mediastinal, subcostal, radial and cubital veins, and median veinlet of the usual structure; 1st, 2nd and 4th externo-medial veins complete; 3rd abbreviated; subanal joining the anal at some distance from the border; discal areolet irregularly hexagonal, elongated, narrower towards the tip of the wing.

17. *MASSICYTA BICOLOR*, n. s., fœm. Nigra, antennis basi testaceis apice albis, pectore scutelloque flavis, illo nigro bimaculato, abdomine testaceo fasciato, pedibus flavis, femoribus anterioribus tibiisque posticis fusco fasciatis, femoribus posticis nigris, alis cinereis, apud costam subluridis.

*Female*. Black, shining, with testaceous pubescence. Mouth testaceous. *Antennæ* testaceous towards the base, white at the tips. Pectus and scutellum yellow, the former with a large black spot on each side. Abdomen with testaceous bands. Legs yellow; hind femora black; anterior femora and hind tibiæ with brown bands. Wings grey, with a slight lurid tinge along the costa; veins black. Halteres pale yellow. Length of the body 6-7 lines; of the wings 10-12 lines.

Singapore.

Gen. SARGUS, *Fabr.*

18. *Sargus longipennis*, *Wied. Auss. Zweifl.* ii. 34. 11.

Malacca. Inhabits also Java.

19. *SARGUS LURIDUS*, n. s., mas. Ferrugineus, capite pectoreque testaceis, antennis fulvis, abdominis segmentis testaceo-fasciatis, apice nigro, pedibus testaceis, tibiis posticis apice nigris, tarsis posticis nigris apice albidis, alis luridis apice fuscis.

*Male*. Ferruginous. Head and pectus testaceous. *Antennæ* tawny. Abdomen black towards the tip; a testaceous band on the hind border of each



segment. Legs testaceous; hind tibiæ black towards the tips; hind tarsi black, with whitish tips. Wings lurid, brown towards the tips; veins brown. Halteres testaceous. Length of the body 7 lines; of the wings 14 lines.

Singapore.

Fam. TABANIDÆ, *Leach*.

Gen. TABANUS, *Linn*.

20. *Tabanus univentrìs*, *Walk. Cat. Dipt.* pt. 1. 151.

The description in the above reference will not well apply to the two following varieties of this species.

*Var. 1. Female.* Brown. Head testaceous in front and beneath. Thorax with two testaceous stripes. Abdomen ferruginous, tawny beneath and with a dorsal stripe of tawny triangular spots. Legs blackish; femora and tibiæ partly testaceous. Wings dark grey.—*Var. 2.* Like *Var. 1.* Abdomen blackish above, with a dorsal stripe of testaceous spots.

Mount Ophir. Inhabits also Borneo.

21. *TABANUS PARTITUS*, n. s., fœm. *Nigricans*, subtùs albidus, antennis fulvis apice nigris, thorace cinerascente cano-quadrivittato, abdomine piceo albidotrivittato, pedibus testaceis, femoribus tibiisque apice tarsisque nigricantibus, alis subcinereis.

*Female.* Blackish; underside and head behind with whitish tomentum. Antennæ dull tawny, black towards the tips; angle of the 3rd joint minute and obtuse. Thorax greyish, with four hoary stripes. Abdomen piceous, with three whitish stripes. Legs testaceous; tarsi and tips of the femora and of the tibiæ blackish. Wings greyish, stigma and veins black; fore branch of the cubital vein simple, nearly straight. Length of the body 6 lines; of the wings 10 lines.

Singapore.

*Note.*—*T. rubidus*, *Wied.*, is very closely allied to the above species, but may be distinguished from it by the following characters.

*T. rubidus.* Front with the callus quite entire. Antennæ blackish. Middle stripe of the abdomen composed of triangular spots. Wings greyish.

*T. partitus.* Smaller. Front with the callus almost interrupted. Antennæ pale tawny, with darker tips. Middle stripe of the abdomen entire, parallel. Wings quite limpid.

Gen. CHRYSOPS, *Meigen*.

22. *Chrysops dispar*, *Fabr. Syst. Antl.* 112. 5.

Mount Ophir and Malacca. Inhabits also Hindostan and Java.

Fam. ASILIDÆ, *Leach*.

Subfam. DASYPOGONITES, *Walk*.

Gen. DISCOCEPHALA, *Macquart*.

23. *DISCOCEPHALA DORSALIS*, n. s., fœm. *Nigricans*, thorace subgibboso,



lateribus pectoreque testaceis, pedibus posticis longiusculis sat validis, tibiis posticis subarcuatis, alis subcinereis apice obscurioribus.

*Female.* Blackish. Thorax somewhat gibbous; sides and pectus testaceous. Hind legs rather long and stout; hind tibiæ somewhat curved. Wings greyish, rather darker at the tips; veins black. Length of the body 5 lines; of the wings 12 lines.

Malacca.

Subfam. LAPHRITES; *Walk.*

Gen. LAPHRIA, *Fabr.*

24. *Laphria Reinwardtii*, *Wied. Auss. Zweifl.* i. 503. 7.

Malacca. Inhabits also Java and Sumatra.

25. LAPHRIA NOTABILIS, n. s., mas et fœm. Nigra, capite thoracisque maculis quatuor transversis lateralibus auratis aut albis, abdominis lateribus albo-maculatis, pedibus pallidè flavis aut albis, femoribus tibiisque apice tarsisque nigris, alis fuscis basim versus sublimpidis.

*Male and Female.* Black. Head with pale gilded or white tomentum. Face convex towards the epistoma. Mystax with a few black bristles. Proboscis straight, porrect, linear. Third joint of the antennæ slender, linear, about twice the length of the 1st and 2nd together. Thorax with two transverse marks on each side of gilded or white tomentum; scutellum, sides of the hind part of the thorax, and spots on the pectus of the same hue. Segments of the abdomen with a white spot and a few black setæ on each side. Legs pale yellow or white, with hairs of the same hue and with a few black setæ; coxæ, tarsi, and tips of the femora and of the tibiæ black. Wings dark brown, almost limpid towards the base which is brown. Halteres pale yellow or whitish. Length of the body 7-9 lines; of the wings 14-18 lines.

Malacca and Mount Ophir.

26. *Laphria Vulcanus*, *Wied. Auss. Zweifl.* i. 514. 25.

Malacca. Inhabits also Java.

27. *Laphria alternans*, *Wied. Auss. Zweifl.* i. 511. 20.

Singapore. Inhabits also Java.

28. LAPHRIA ORCUS, n. s., fœm. Nigra, nigro-hirsuta, scutello nigro-cyaneo, abdomine pedibusque nigro-purpureis, alis nigricantibus areolarum discis pallidioribus, halteribus albidis.

*Female.* Black, with black hairs and bristles. Face slightly convex. Mystax with numerous black bristles, extending over the whole surface. Scutellum dark blue. Abdomen and legs dark purple, the latter with whitish hairs on the coxæ. Wings blackish; disks of several of the areolets much paler; veins black. Halteres whitish. Length of the body 8 lines; of the wings 14 lines.

Malacca.

29. *Laphria aurifacies*, *Macq. Dipt. Exot. Suppl.* iii. 22. 33. pl. 2. f. 5.

Singapore and Malacca. Inhabits also the Moluccas.

30. *Laphria elegans*, *Walk. Cat. Dipt.* 2nd Ser. 551. 126.

Mount Ophir. Inhabits also Hindostan.



31. *LAPHRIA BASIFERA*, n. s., fœm. Obscurè nigra, capite albido tomentoso, mystace nigro, antennarum articulo 3° fusiformi, thorace cano-sexvittato, abdominis lateribus albido-maculatis, apice compresso, alis subcinereis basi sublimpidis costæ dimidio apicali fuscescente.

*Female.* Dull black. Head with whitish tomentum and hairs. Face slightly convex towards the epistoma. Mystax with several black bristles. Proboscis lanceolate, stout, straight. Third joint of the antennæ fusiform, as long as the 1st and the 2nd. Thorax with six hoary stripes; the middle pair parallel, linear, very slender and almost contiguous. Abdomen with whitish spots along each side, compressed at the tip. Legs with whitish hairs and with black bristles. Wings greyish, almost limpid towards the base, brownish along the apical part of the costa; veins black. Length of the body 6 lines; of the wings 12 lines.

Singapore.

This may be the female of the following species.

32. *LAPHRIA RADICALIS*, n. s., mas. Nigra, capite argenteo, mystace nigro, antennarum articulo 3° lineari, thorace strigis quatuor lateralibus transversis vittisque duabus intermediis albidis, abdominis lateribus albido-maculatis, ventre testaceo, alis nigro-fuscis dimidio basali limpido.

*Male.* Black. Head beneath with whitish hairs. Face flat, with silvery-white tomentum. Mystax with a few black bristles. Proboscis linear, rather slender. Third joint of the antennæ linear, a little longer than the 1st and the 2nd. Thorax with two transverse whitish marks on each side, and with two whitish middle stripes which are broader and further apart than those of *L. basifera*. Pectus with testaceous whitish tomentum. Abdomen with a row of whitish spots along each side; underside testaceous except at the tip. Legs with blackish hairs; femora with testaceous hairs. Wings blackish brown, limpid for almost half the length from the base; veins black. Halteres whitish. Length of the body 5 lines; of the wings 10 lines.

Mount Ophir, at the height of 4000 feet.

33. *LAPHRIA INAUREA*, n. s., fœm. Obscurè nigra, capite, thoracis lateribus, pectore abdominisque marginibus fulvo-tomentosis, mystace nigro, antennarum articulo 3° longi-fusiformi, thorace cinereo-bivittato, abdomine ferrugineo, apice nigro, alis obscurè fuscis basi pallidioribus.

*Female.* Dull black. Head, sides of the thorax, pectus, and hind borders of the abdominal segments with tawny tomentum. Face slightly convex towards the epistoma. Mystax with a few black bristles. Third joint of the antennæ very elongate-fusiform, longer than the 1st and the 2nd. Thorax with two parallel cinereous stripes. Abdomen ferruginous, black and shining towards the tip; underside somewhat cinereous. Legs with tawny hairs. Wings dark brown, somewhat paler towards the base; veins black. Halteres testaceous. Length of the body 8 lines; of the wings 14 lines.

Singapore.

34. *LAPHRIA BASIGUTTA*, n. s., mas. Nigra, capite aureo, mystace nigro, antennarum articulo 3° lineari, thorace abdomineque fulvo-tomentosis, alis nigricantibus basi sublimpidis.

*Male.* Black. Face almost flat, with pale gilded tomentum. Mystax with



very few black bristles. Proboscis linear, more slender than that of *L. radicalis*. Third joint of the antennæ linear, a little longer than the 1st and the 2nd, more slender than that of *L. radicalis*. Thorax with dull tawny tomentum; pectus more cinereous. Abdomen more slightly tawny. Legs with cinereous hairs and black bristles. Wings blackish, almost limpid towards the base; veins black. Halteres tawny. Length of the body 5 lines; of the wings 9 lines.

Singapore.

35. *LAPHRIA FUSIFERA*, n. s., fœm. Nigra, cinereo-tomentosa, capite albido, mystace nigro, antennarum articulo 3<sup>o</sup> fusiformi, thoracis vittis duabus pectoreque canis, abdomine apicem versus rufo, alis subcinereis apud costæ dimidium apicale fuscescentibus.

Allied to *L. crassipes*, Fabr. *Female*. Black, with greyish tomentum. Head whitish in front, with white hairs beneath; face very convex towards the epistoma. Mystax with a few black bristles. Proboscis oblique, ascending, stout, straight, lanceolate. Third joint of the antennæ fusiform. Thorax with two hoary stripes; sutures and pectus hoary. Abdomen pale red towards the tip which is compressed. Legs with whitish hairs and black bristles. Wings greyish, brownish for half the breadth along the apical half of the costa; veins black. Length of the body 6 lines; of the wings 12 lines.

Singapore.

36. *LAPHRIA SOBRIA*, n. s., fœm. Nigra, fulvo-tomentosa, capite albo, mystace nigro, abdominis apice glabro, tibiis ferrugineis, alis cinereis basi sublimpidis.

*Female*. Black. Face flat, with shining white tomentum. Mystax with a few black bristles. Proboscis straight, slender, linear. Thorax and abdomen with tawny tomentum, the latter bare and shining towards the tip. Pectus more cinereous. Tibiæ somewhat ferruginous. Wings dark cinereous, almost limpid towards the base; veins black. Halteres testaceous. Length of the body 5 lines; of the wings 10 lines.

Singapore.

37. *LAPHRIA PLANA*, n. s., mas. Nigra, cinereo-tomentosa, capite albido, mystace nigro, antennarum articulo 3<sup>o</sup> elliptico, pedibus fulvis, alis cinereis, halteribus albidis.

*Male*. Black, with cinereous tomentum. Face whitish, flat. Mystax with very few black bristles. Proboscis straight, porrect, slightly lanceolate, somewhat short. Third joint of the antennæ elliptical, a little shorter than the 1st. Pectus hoary. Legs tawny. Wings grey; veins black. Halteres whitish. Length of the body 4 lines; of the wings 10 lines.

Singapore.

38. *LAPHRIA IMBELLIS*, n. s., fœm. Nigra, cinereo-tomentosa, capite albido, mystace albo, antennis fulvis, thoracis strigis transversis quatuor lateralibus vittisque tribus intermediis canis, abdominis segmentis maculis lateralibus albidis, pedibus fusco-fulvis, alis limpidis apice fuscis, halteribus albidis.

*Female*. Black, with cinereous tomentum. Head with white hairs beneath. Face whitish, slightly convex towards the epistoma. Mystax with a few



white bristles. Proboscis lanceolate, short, straight, porrect. Antennæ tawny. Thorax with two transverse hoary marks on each side, and with three indistinct hoary stripes. Pectus whitish. Abdominal segments with a transverse whitish spot on each side of the hind border. Legs tawny, with paler hairs; coxæ black; anterior tarsi towards the tips, hind tarsi at the base, and hind tibiæ brown. Wings limpid, brown at the tips; veins black. Halteres whitish. Length of the body 5 lines; of the wings 10 lines.

Singapore.

Subfam. ASILITES, *Walk.*

Gen. ASILUS, *Linn.*

39. *ASILUS FUSIFORMIS*, n. s., fœm. Niger, cinereo-tomentosus, capite albido, mystace testaceo, thoracis vittis tribus pectoreque canis, abdominis apice compresso glabro, pedibus rufis, tarsis nigris, femoribus anterioribus nigromaculatis, alis subcinereis.

*Female.* Black, with cinereous tomentum. Head whitish in front, rather thickly clothed with whitish hairs; a few black bristles behind; face slightly convex towards the epistoma. Mystax with several testaceous bristles. Proboscis stout, straight, lanceolate. Palpi with thick black bristles. Antennæ black. Thorax with three indistinct hoary stripes. Pectus hoary. Abdomen oblanceolate, with whitish and black hairs, compressed, shining, and bare towards the tip. Legs red, very stout, beset with black spines; tarsi except at the base and knees black; a black spot on each of the anterior femora. Wings slightly cinereous; veins black, tawny at the base and along the costa. Halteres testaceous. Length of the body 13 lines; of the wings 24 lines.

Malacca.

40. *ASILUS LINEOSUS*, n. s., fœm. Fuscus, capite subaurato, mystace testaceo nigroque, antennis pedibusque nigris, thorace aureo-quadrivittato, abdomine fulvo-fasciato, apice nigro compresso transversè ruguloso, tibiis luteis apice nigris, alis cinereis.

*Female.* Dark brown. Head with pale gilded tomentum, clothed beneath with whitish hairs; face convex towards the epistoma. Mystax with several testaceous bristles and with a few more slender black bristles. Proboscis stout, straight, lanceolate. Palpi thickly beset with black bristles. Antennæ black; arista almost thrice the length of the 3rd joint which is fusiform. Thorax with four dull pale gilded stripes; sides and pectus cinereous. Abdomen oblanceolate, with broad fawn-coloured bands, black, shining, compressed and transversely rugulose towards the tip. Legs black, armed with black spines; tibiæ pale luteous, with black tips; onychia pale luteous. Wings cinereous; veins black. Halteres ferruginous. Length of the body 12 lines; of the wings 20 lines.

Singapore.

41. *ASILUS DEBILIS*, n. s., mas. Cinereus, capite flavido-albo, mystace testaceo nigroque, antennis fulvis, thorace fusco-bivittato, abdominis segmentis cano-



fasciatis, pedibus testaceis, femoribus tibiisque apice tarsisque nigricantibus, alis sublimpidis apice nigricantibus.

*Male.* Cinereous. Head with yellowish-white tomentum, clothed beneath with white hairs; face very slightly convex towards the epistoma. Mystax with a few testaceous, and with still fewer black bristles. Proboscis black, slightly lanceolate, rather slender. Antennæ tawny; 3rd joint and arista black, the latter four times the length of the former which is fusiform. Thorax with two brown stripes. Pectus hoary. Abdomen with a hoary band on the hind border of each segment. Legs testaceous, with very few black bristles; tarsi, except at the base and tips of the femora and of the tibiæ, black; hind femora and hind tibiæ mostly black. Wings nearly limpid, blackish towards the tips; veins black. Halteres testaceous. Length of the body 7 lines; of the wings 14 lines.

Malacca.

42. *ASILUS LATIFASCIA*, n. s., mas. Cinereo-niger, capite albido, mystace testaceo, thoracis vittis quatuor pectoreque canis, abdomine ferrugineo, basi apiceque nigris, pedibus fulvis nigro-variis, alis nigricantibus margine postico fusco.

*Male.* Black, with a slight cinereous tinge. Head with some whitish hairs beneath. Face whitish, flat. Mystax with many pale testaceous bristles. Proboscis straight, slightly lanceolate. Antennæ black. Thorax with four slight hoary stripes. Pectus hoary. Abdomen ferruginous, black at the base and towards the tip. Legs tawny; tarsi, hind femora, and tips of the posterior tibiæ black; anterior femora black above. Wings blackish, brown along the hind border; veins black. Halteres testaceous. Length of the body 9 lines; of the wings 16 lines.

Singapore.

43. *Asilus Barium*, *Walk. Cat. Dipt.* pt. 2. 426.

Mount Ophir. Inhabits also Ceylon and Sumatra.

#### Gen. *OMMATIUS*, *Illiger*.

44. *Ommatius Pennus*, *Walk. Cat. Dipt.* pt. 2. 469.

Malacca. Inhabits also Sumatra, Borneo, and Corea.

45. *Ommatius Hecale*, *Walk. Cat. Dipt.* pt. 2. 476.

Singapore.

46. *OMMATIUS GRACILIS*, n. s., mas. Nigro-fuscus, facie atrâ, thoracis lateribus pectoreque canis, pedibus fulvis, femoribus tibiisque apice tarsisque nigris, alis sublimpidis apice cinereis.

*Male.* Blackish-brown. Face flat, deep black. Proboscis black, rather slender, slightly lanceolate. Antennæ black. Pectus and sides of the thorax hoary. Abdomen dull black. Legs tawny; tarsi and tips of the femora and of the tibiæ black. Wings nearly limpid, dark grey towards the tips; veins black. Halteres testaceous. Length of the body 6 lines; of the wings 10 lines.

Mount Ophir.



Fam. LEPTIDÆ, *Westw.*Gen. LEPTIS, *Fabr.*

47. LEPTIS DECISA, n. s., mas. Nigra, capite albo, antennis testaceis basi nigris, thoracis callis testaceis, vittis duabus pectoreque canis, abdomine testaceo, vittâ dorsali fasciisque nigris, femoribus testaceis apice nigris, alis sublimpidis fasciâ apiceque fuscis.

*Male.* Black. Head white in front. Antennæ testaceous, black towards the base. Humeral calli testaceous. Thorax with two hoary stripes; sides and pectus hoary. Abdomen testaceous, with a black dorsal stripe and a black band on the hind border of each segment. Femora testaceous, with black tips; hind femora black for more than half the length from the tips. Wings nearly limpid, pale brown towards the tips, and with a darker brown band which tapers irregularly from the costa to the hind border and crosses the base of the discal areolet; veins black. Halteres testaceous. Length of the body  $4\frac{1}{2}$  lines; of the wings 9 lines.

Malacca.

Fam. BOMBYLIDÆ, *Leach.*Gen. ANTHRAX, *Fabr.*

48. ANTHRAX DEGENEREA, n. s., mas et fœm. Nigra, pectore albido, abdominis lateribus ferrugineis, ventre testaceo, alis subcinereis, pedibus basi testaceis. Mas. Alis basi et apud costam nigro-fuscis. Fœm. Alis plus dimidio basali nigro-fuscis.

*Male and Female.* Dull black. Head not broader than long. Antennæ small; 3rd joint short-conical; arista somewhat longer than the 3rd joint. Pectus whitish. Abdomen blackish-brown, ferruginous on each side, testaceous beneath. Legs long, slender. Wings greyish; veins black; radial vein curved towards its tip; fore fork of the cubital undulating, parallel to the radial, forming near its base an obtuse angle which emits the stump of a vein; hind fork straight; three nearly straight externo-medial veins; 2nd connected with the 3rd by an undulating and very oblique veinlet; subanal vein near the anal on the border. Halteres testaceous.—*Male.* Hind femora testaceous towards the base; anterior femora dark testaceous. Wings blackish-brown at the base and along the costa.—*Female.* Hind femora testaceous with black tips; anterior femora paler testaceous. Wings blackish-brown for much more than half the length from the base. Length of the body  $3\frac{1}{2}$  lines; of the wings 10 lines.

Singapore.

Fam. DOLICHOPIDÆ, *Leach.*Gen. PSILOPUS, *Meigen.*

49. PSILOPUS CLARUS, n. s., mas. Viridis, capite cyaneo, facie pectoreque albis, antennis nigris, abdominis segmentis nigro-fasciatis, pedibus testaceis, tibiis posticis apice tarsisque nigris, alis limpidis.

*Male.* Green. Head bright blue, white in front. Proboscis, legs and halteres



testaceous. Antennæ black; arista as long as the thorax. Pectus white. Abdominal segments with black bands. Legs long; tarsi and tips of the hind tibiæ black. Wings limpid; veins black; fore branch of the præbrachial vein slightly curved; hind branch extending to the border; discal transverse vein rather deeply undulating. Length of the body  $4\frac{1}{2}$  lines; of the wings 8 lines.

Mount Ophir.

50. *PSILOPUS ROBUSTUS*, n. s., fœm. Purpureo-cyaneus, capite purpureo, facie pectoreque albis, antennis pedibus halteribusque testaceis, thorace viridi-vario, abdominis fasciis nigris, tarsis apice nigricantibus, alis subcinereis.

*Female*. Purplish-blue. Head bright purple, white in front. Proboscis and antennæ testaceous; arista black, full as long as the thorax. Thorax green on each side and in front. Pectus white. Abdomen with black bands. Legs long, pale testaceous; tarsi blackish towards the tips. Wings slightly greyish; veins black; fore branch of the præbrachial vein moderately curved; discal transverse vein moderately undulating. Halteres pale testaceous. Length of the body  $2\frac{1}{2}$  lines; of the wings 6 lines.

This may be the female of *P. clarus*.

Singapore.

51. *PSILOPUS SUBNOTATUS*, n. s., mas. Cyaneus, capite purpureo, facie pectoreque albis, proboscide antennis pedibusque testaceis, thoracis lateribus anticis viridibus, abdomine viridi-cyaneo basi apiceque purpurascente, tarsis apice nigricantibus, alis subcinereis albido-bifasciatis.

*Male*. Blue. Head purple above, white in front. Proboscis and antennæ testaceous; arista black, nearly as long as the thorax. Thorax green on each side in front. Pectus white. Abdomen greenish-blue, purplish at the base and at the tip. Legs testaceous, rather long; tarsi blackish towards the tips. Wings slightly greyish, with two imperfect whitish bands; hind border white towards the tip; costa interruptedly blackish; veins black; fore branch of the præbrachial vein almost straight; hind branch extending to the border; discal transverse vein almost straight, hardly undulating. Halteres pale testaceous. Length of the body  $2\frac{1}{2}$  lines; of the wings 6 lines.

Mount Ophir.

52. *PSILOPUS POSTICUS*, n. s., mas. Viridis, proboscide antennis abdominis fasciis pedibusque nigris, tibiis luridis, alis nigris apud marginem posticum sublimpidis.

*Male*. Dark green. Head above bluish-green. Proboscis and antennæ black; arista nearly as long as the body. Abdomen with black bands. Legs black; posterior tibiæ lurid; fore tibiæ testaceous. Wings black, rather narrow, nearly limpid along the hind border; veins black; fore branch of the præbrachial vein slightly curved; discal transverse vein slightly undulating. Halteres black. Length of the body 2 lines; of the wings 5 lines.

Malacca.

53. *PSILOPUS TENEBROSUS*, n. s., fœm. Purpureo-niger, facie pectoreque albis, abdomine purpureo, pedibus fulvis, femoribus apice tarsisque nigricantibus, alis nigricantibus margine postico fasciâque sublimpidis.



*Female.* Purplish-black. Head dull black, white in front. Proboscis piceous. Antennæ black; arista rather shorter than the thorax. Pectus white. Abdomen dark purple. Legs tawny; tarsi and tips of the femora blackish. Wings blackish, nearly limpid along the hind border, and at two-thirds of the length with a nearly limpid band which extends from the hind border to the cubital vein; veins and halteres black; fore branch of the præbrachial vein very deeply curved; discal transverse vein almost straight. Length of the body 3 lines; of the wings 6 lines.

Singapore.

Fam. SYRPHIDÆ, *Leach.*

Gen. CERIA, *Fabr.*

54. *Ceria Javana*, *Wied. Auss. Zweifl.* ii. 81. 1.

Malacca. Inhabits also Java.

Gen. ERISTALIS, *Latr.*

55. *Eristalis Amphierates*, *Walk. Cat. Dipt.* pt. 3. 623.

Malacca. Inhabits also Hindostan, Java, and China.

56. *Eristalis niger*? *Wied. Auss. Zweifl.* ii. 183. 45.

Singapore. Inhabits also Java?

57. *ERISTALIS SINGULARIS*, n. s., fœm. Ater, aristâ nudâ, pedibus posticis subincrassatis, tibiis anterioribus basi testaceis, alis subcinereis apud costæ medium nigricantibus.

*Female.* Deep black. Head shining in front. Arista bare. Legs shining; hind femora rather thick; hind tibiæ slightly dilated; anterior tibiæ pale testaceous towards the base. Wings greyish, with a blackish tinge along the middle of the costa; veins black. Length of the body 4 lines; of the wings 8 lines.

Singapore.

Gen. HELOPHILUS, *Meigen.*

58. *HELOPHILUS INSIGNIS*, n. s., fœm. Nigricans, capitis lateribus anticis pectorisque fasciis duabus testaceis, antennis ferrugineis, thoracis vittis quatuor, scutello abdominisque fasciis tribus luteis, hujus marginibus subchalybeis, tibiis fulvis apice nigricantibus, alis subcinereis basi subluridis apud costæ dimidium apicale fuscescentibus.

*Female.* Blackish. Head pale testaceous on each side in front. Antennæ ferruginous. Thorax with four luteous stripes. Pectus with a testaceous band on each side. Scutellum luteous. Abdomen with three luteous bands; 1st broad, interrupted; 2nd narrower than the 1st, broader than the 3rd; hind borders of the segments slightly chalybeous and shining. Tibiæ tawny, with blackish tips. Wings slightly greyish, with a lurid tinge at the base, and a slight brownish tinge along the costa beyond the middle; veins black, tawny towards the costa. Halteres testaceous. Length of the body 8 lines; of the wings 14 lines.

Singapore.



Gen. XYLOTA, *Meigen*.

59. XYLOTA CONFORMIS, n. s., fœm. *Ænea*, capite femoribusque chalybeis, antennis fulvis, thorace testaceo-bivittato, abdominis fasciis duabus latis interruptis pedibusque testaceis, alis subcinereis.

*Female*. *Æneous*. Head chalybeous, with whitish tomentum in front, with short white hairs beneath. Proboscis black. Antennæ tawny; arista bare. Thorax with two testaceous tomentose stripes. Pectus with a testaceous band on each side. Abdomen with two broad interrupted testaceous bands. Legs testaceous; femora chalybeous; tarsi with brownish tips. Wings slightly greyish; veins black; stigma brown. Halteres testaceous. Length of the body 5 lines; of the wings 10 lines.

Singapore.

Gen. MILEZIA, *Latr.*

60. *Milesia macularis*, *Wied. Auss. Zweifl.* ii. 107. 5.

Singapore. Inhabits also Java.

61. *Milesia Reinwardtii*, *Wied. Auss. Zweifl.* ii. 104. 1.

Singapore. Inhabits also Java.

62. MILEZIA VESPOIDES, n. s., mas. *Atra*, verticis maculâ trigonâ testaceâ, abdominis fasciâ latissimâ luteâ, femoribus posticis extûs apices versus ferrugineis, alis fuscis apice luridis margine postico cinereis.

*Male*. Deep black. Head with a minute elongate-triangular testaceous spot on the vertex; fore part and humeral calli shining. Abdomen partly clothed with black hairs, with a very broad luteous band which occupies rather more than half the hind part of the 2nd segment and the fore half of the 3rd. Hind femora ferruginous on the outer sides towards the tips. Wings dark brown, lurid towards the tips, grey along the hind border. Halteres pale testaceous. Length of the body 11 lines; of the wings 22 lines.

Singapore.

Gen. SYRPHUS, *Fabr.*

63. SYRPHUS CONSEQUENS, n. s., mas et fœm. Luteus, vertice nigro, antennis nigro-vittatis, thoracis disco chalybeo, abdominis fasciis quatuor atris, femoribus posticis apice necnon tibiis tarsisque posticis nigris, alis subcinereis apud costam subfuscis.

Closely allied to *S. ericetorum*.—*Male and Female*. Pale luteous. Head black and shining on the vertex by the antennæ, pale testaceous in front. Proboscis tawny. Antennæ tawny, with a black dorsal stripe; arista black. Disk of the thorax chalybeous. Abdomen with four deep black bands on the hind borders of the segments. Hind tibiæ, hind tarsi, and tips of hind femora black. Wings slightly greyish, with a brown tinge along the costa; veins black. Halteres pale testaceous.—*Female*. Vertical callus capitate. Length of the body  $4\frac{1}{2}$ – $5\frac{1}{2}$  lines; of the wings 10–12 lines.

Singapore and Mount Ophir.

64. SYRPHUS DUPLEX, n. s., mas et fœm. Chalybeo-niger, gracilis, antennis maris piceis fœminæ fulvis, abdominis fasciis tribus interruptis testaceis,



femoribus anterioribus testaceis apice nigris, posticis basi testaceis, alis subcinereis.

*Male and Female.* Chalybeous black, slender. Antennæ of the male piceous, of the female tawny. Abdomen with three dull interrupted testaceous bands, slightly compressed for three-quarters of the length in the male. Legs black; anterior femora testaceous with black tips; hind femora testaceous at the base. Wings greyish; veins and stigma black. Halteres testaceous. Length of the body 6 lines; of the wings 12 lines.

Singapore.

65. *SYRPHUS TRILIGATUS*, n. s., mas. Flavus gracilis, antennis fulvis, thoracis disco chalybeo-nigro, pectore et metathorace nigris, abdominis fasciis quatuor latis quatuorque angustis nigris, femoribus posticis nigro latè fasciatis, tibiis tarsisque posticis nigris, alis subcinereis.

*Male.* Pale yellow, rather slender. Antennæ tawny. Disk of the thorax chalybeous black. Pectus and metathorax mostly black. Abdomen with eight black bands which are alternately broad and narrow. Hind femora with a broad black band; hind tibiæ and hind tarsi black. Wings greyish; stigma brown; veins black. Halteres pale testaceous. Length of the body  $4\frac{1}{2}$  lines; of the wings 9 lines.

Mount Ophir.

### Fam. MUSCIDÆ, Latr.

#### Subfam. TACHINIDÆ, Walk.

#### Gen. ECHINOMYIA, Duméril.

66. *ECHINOMYIA BREVIPENNIS*, n. s., mas. Nigra, capite anticè albo, frontilibus ferrugineis, scutello abdominisque fasciis testaceis, alis subcinereis parvis basi limpidis.

*Male.* Black, stout. Head white, with white hairs beneath; front and vertex black, shining; frontalia ferruginous, slightly widening from the vertex to the antennæ; epistoma slightly prominent. Antennæ extending to two-thirds of the length of the face; 3rd joint truncated, not much longer than broad, much broader and shorter than the 2nd; arista stout, tapering from its two indistinct basal joints, full twice the length of the 3rd joint. Scutellum testaceous. Abdomen elongate-oval, longer than the thorax. Wings greyish, rather short, limpid towards the base; veins black, testaceous towards the base; præbrachial vein forming a very slightly acute angle at its flexure, near which it is very deeply curved inward, and is thence straight to its tip which joins the tip of the costal; discal transverse vein straight, parted by much less than its length from the border, and by little more than half its length from the flexure of the præbrachial. Alulæ greyish, with testaceous borders. Length of the body 6 lines; of the wings 9 lines.

Mount Ophir, at the height of 4000 feet.

#### Gen. TACHINA, Fabr.

67. *TACHINA OPHIRICA*, n. s., fœm. Cinerea, latiuscula, capite argenteo, fron-



talibus atris, thoracis vittis quatuor interruptis nigris, scutelli margine abdominisque fasciis canis, alis subcinereis.

*Female.* Cinereous, rather short and broad. Head hoary, silvery-white above and in front; frontalia deep black, slightly widening from the vertex to the antennæ; facialia without bristles; epistoma hardly prominent. Antennæ extending to about three-quarters of the length of the face; 3rd joint linear, slender, rounded at the tip, about twice the length of the 2nd; arista stout for about half its length, very much longer than the 3rd joint. Thorax with four slender interrupted black stripes; scutellum with a hoary border. Abdomen black, obconical, hardly longer than the thorax; a broad hoary band on the fore border of each segment. Wings slightly greyish; veins black; præbrachial vein forming an almost right and rather well-defined angle from whence it is slightly curved inward to its tip; discal transverse vein hardly curved inward, parted by rather less than its length from the border and from the flexure of the præbrachial. Alulæ white. Length of the body 4 lines; of the wings 8 lines.

Mount Ophir, at the height of 4000 feet.

#### Gen. MASICERA, *Macquart*.

68. *Masicera tomentosa*, *Macq. Dipt. Exot. Suppl. 2.*

Mount Ophir, at the height of 4000 feet.

69. *MASICERA VICARIA*, n. s., fœm. Nigra, longiuscula, capite albo, frontilibus atris, thoracis vittis quatuor, lateribus scutello abdominisque fasciis duabus latis interruptis canis, alis cinereis.

*Female.* Black, rather long. Head white, with short white hairs beneath and behind; frontalia linear, deep black; facialia without bristles; epistoma not prominent. Eyes pubescent. Antennæ extending nearly to the epistoma; 3rd joint linear, slender, slightly rounded at the tip, about four times the length of the 2nd; arista rather stout for full one-third of the length from the base, very much longer than the 3rd joint. Thorax with four hoary stripes; sides and scutellum hoary. Abdomen elongate-obconical, much longer than the thorax, with two broad interrupted hoary bands. Legs stout. Wings grey; veins black; præbrachial vein forming a rather obtuse angle at its flexure, from whence it is slightly curved inward to its tip; discal transverse vein undulating, parted by very little less than its length from the border and from the flexure of the præbrachial. Alulæ whitish. Length of the body 5 lines; of the wings 9 lines.

Singapore.

#### Gen. EURIGASTER, *Macquart*.

70. *EURIGASTER MUSCOIDES*, n. s., fœm. Nigra lata, capite albido, frontilibus nigris, palpis testaceis, thorace cano nigro-quadrivittato, scutelli apice fulvo, abdomine cano-fasciato, alis cinereis apud costam fusciscentibus.

*Female.* Black, broad, with long bristles. Head whitish; frontalia black, linear; facialia without bristles; epistoma not prominent. Eyes pubescent. Palpi testaceous. Antennæ extending to the epistoma; 3rd joint linear, rounded at the tip, full four times the length of the 2nd; arista



slender, very much longer than the 3rd joint. Thorax hoary, with four black stripes. Scutellum tawny towards the tip. Abdomen obconical, hardly longer than the thorax, with a broad hoary band on each segment. Legs slender, hardly setose. Wings grey, brownish in front; veins black; præbrachial vein forming a slightly obtuse angle at its flexure, from whence it is slightly curved inward to its tip; discal transverse vein straight except a slight curve by its hind end, parted by much less than its length from the border, and by rather more than its length from the flexure of the præbrachial. Alulæ white. Length of the body 3 lines; of the wings 6 lines. Singapore.

Gen. ZAMBESA, n. g. (Plate I. fig. 2.)

*Mas.* Corpus longum, angustum, subcylindricum. *Facies* verticalis, subretracta. *Facialia* nuda. *Epistoma* planum. *Palpi* longiusculi, sat graciles. *Antennarum* articulus 3<sup>us</sup> gracilis, linearis, 2<sup>o</sup> sexties longior; aristâ gracillimâ. *Oculi* nudi. *Abdomen* lineare, thorace multò longius. *Pedes* longiusculi. *Alæ* sat angustæ.

*Male.* Body long, narrow, almost cylindrical. Face vertical, slightly retracted towards the base. Facialia without bristles. Eyes remote, bare. Palpi rather long and slender. Antennæ extending to the epistoma; 3rd joint slender, linear, rounded at the tip, six times the length of the 2nd; arista very slender, rather longer than the 3rd joint. Abdomen linear, much longer than the thorax. Legs rather long. Wings rather narrow; costal vein ending at hardly in front of the tip of the wing; brachial vein joining the cubital.

71. ZAMBESA OCYPTEROÏDES, n. s., mas. Nigra, capite albo, frontalibus atris, antennarum articulo 3<sup>o</sup> fulvo, thorace cano nigro-quadrivittato, abdominis fasciis duabus latis interruptis semihyalinis albido-testaceis, femoribus testaceis apice nigris, tibiis piceis, alis limpidis, apice margineque postico cinereis.

*Male.* Black. Head white, with short white hairs beneath; frontalia deep black, linear. Proboscis testaceous. Palpi black. Third joint of the antennæ tawny. Thorax hoary, with four black stripes, of which the outer pair are very much broader than the inner pair. Abdomen a little narrower than the thorax, with two broad whitish testaceous semihyaline bands which are interrupted above. Femora testaceous, with black tips; tibiæ piceous. Wings limpid, grey towards the tips and along the hind borders; veins black; præbrachial vein forming an obtuse angle at its flexure from whence it is slightly curved inward to its tip, which joins the cubital very near the border; discal transverse vein very slightly curved inward, parted by less than its length from the border, and by more than its length from the flexure of the præbrachial. Alulæ white. Length of the body 5 lines; of the wings 10 lines.

Singapore.

Subfam. DEXIDES, *Walk.*

Gen. DEXIA, *Meigen.*

72. DEXIA DIVERGENS, n. s. (gen. Thelaira, *Desc.*), mas. Cana longa an-



gusta, capite albo, frontalibus atris, proboscide palpis antennisque testaceis, aristâ plumosâ, thorace nigro-quadrivittato, abdomine testaceo semihyalino, vittâ fasciisque nigris, pedibus longis testaceis, tarsis nigris, alis subcinereis.

*Male.* Body hoary, long, narrow, with long black bristles. Head white; frontalia deep black, widening from the vertex to the antennæ; facialia without bristles; epistoma not prominent. Eyes bare. Proboscis and palpi testaceous. Antennæ testaceous, not nearly extending to the epistoma; 3rd joint slender; arista black, plumose. Thorax with four black stripes, of which the outer pair are broader than the inner pair. Abdomen testaceous, semihyaline, with a black dorsal stripe, and with a black band on the hind border of each segment. Legs long, testaceous; tarsi black. Wings greyish; veins black; præbrachial vein forming a hardly obtuse angle at its flexure, from whence it is indistinctly undulating to its tip which joins the costal at a little in front of the tip of the wing; discal transverse vein slightly curved inward near its hind end, parted by hardly more than half its length from the border, and by hardly less than its length from the flexure of the præbrachial. Alulæ whitish. Length of the body 6 lines; of the wings 11 lines.

Mount Ophir.

#### Subfam. SARCOPHAGIDES.

#### Gen. SARCOPHAGA, *Meigen*.

73. *Sarcophaga ruficornis*, *Fabr. Syst. Antl.* 287. 12. (Musca.)  
Malacca. Inhabits also Hindostan.

74. *SARCOPHAGA RECIPROCA*, n. s., fœm. Cana, capite albo, frontalibus palpis antennis thoracis vittis pedibusque nigris, abdomine subtessellato, alis subcinereis.

*Female.* Hoary. Head white; frontalia black, linear. Proboscis, palpi and antennæ black. Thorax with three black stripes, and with black lines intersecting the two intermediate hoary stripes. Abdomen slightly tessellated. Legs black. Wings greyish; veins black; præbrachial forming a right angle at its flexure, near which it is much curved inward, and is thence straight to its tip; discal transverse vein slightly undulating, parted by less than its length from the border, and by little more than half its length from the flexure of the præbrachial. Alulæ white. Length of the body 6 lines; of the wings 11 lines.

Singapore. A smaller specimen from Malacca apparently belongs to this species.

75. *SARCOPHAGA ALIENA*, n. s., fœm. Cana, capite albo, frontalibus palpis antennis thoracis vittis pedibusque nigris, abdomine tessellato, alis subcinereis.

*Female.* Hoary. Head white; frontalia black, slightly widening in front. Proboscis, palpi and antennæ black. Thorax with three black stripes, and with black lines intersecting the two intermediate hoary stripes. Abdomen tessellated. Legs black. Wings slightly greyish; veins black; præbrachial forming a very slightly acute angle at its flexure, near which it is much curved inward, and is thence straight to its tip; discal transverse vein



hardly undulating, parted by a little less than its length from the border, and by much more than half its length from the flexure of the præbrachial vein. Alulæ white. Length of the body 4 lines; of the wings 8 lines.

Mount Ophir.

Subfam. MUSCIDES.

Gen. IDIA, *Meigen*.

76. IDIA TENEBROSA, n. s., fœm. Obscurè viridis punctata, capite pedibus halteribusque nigris, antennis piceis, alis fusco-cinereis apud costam nigris.

*Female*. Dull green. Head slightly tuberculated above, black and shining in front. Frontalia dull black, hardly decreasing in breadth to the base of the antennæ which are piceous. Thorax very minutely punctured, with a slight hoary tinge which is interrupted by three slender indistinct black stripes. Abdomen shining, thickly punctured. Legs black. Wings brownish grey, black along the costa. Alulæ grey, with black borders. Halteres black. Length of the body  $4\frac{1}{2}$  lines; of the wings 7 lines.

Mount Ophir. Inhabits also South Africa.

77. IDIA BICOLOR, n. s., fœm. Viridis, capite albido, facie nigrâ, frontalibus obscurè nigris, antennis fulvis, thorace nigro-quadrivittato, abdomine æneo-marginato, vittâ dorsali nigrâ, pedibus nigris, alis cinereis costâ apiceque nigricantibus, halteribus albidis.

*Female*. Green. Head whitish and shining above, black and shining in front. Frontalia dull black, linear, furcate hindward. Antennæ tawny. Thorax with a slight hoary bloom and with four slender black stripes. Abdomen æneous at the tip and along each side, and with a slight black dorsal stripe. Legs black; coxæ and femora green. Wings grey, blackish along the costa and at the tips. Alulæ dingy whitish. Halteres whitish. Length of the body 3 lines; of the wings 5 lines.

Malacca.

Gen. MUSCA, *Linn*.

78. Musca flaviceps, *Macq. Dipt. Exot.* ii. 2. 145. 23. pl. 18. f. 1. (Lucilia.) (Genus Chrysomyia, *Desv.*)

Singapore. Inhabits also Hindostan.

79. MUSCA CHRYSOÏDES, n. s. (genus Chrysomyia, *Desv.*), mas. Sericeo-viridis, capite testaceo, palpis antennisque fulvis, abdominis vittâ dorsali fascisque nigris, alis subcinereis apice obscurioribus.

*Male*. Sericeous green, hardly shining. Head testaceous. Proboscis black. Palpi and antennæ tawny. Abdomen with a black dorsal stripe, and with a black band on the hind border of each segment. Legs black; coxæ and femora green. Wings greyish, much darker towards the tips; veins black, tawny along the costa; præbrachial vein forming a very obtuse and somewhat rounded angle at its flexure, from whence it is slightly curved inward to its tip; discal transverse vein deeply undulating, parted by much less than its length from the border, and by a little less than its length from the flexure of the præbrachial vein. Alulæ dingy testaceous. Length of the body 5 lines; of the wings 10 lines.

Malacca and Mount Ophir.



80. *MUSCA PORPHYRINA*, n. s. (genus *Lucilia*, *Desv.*), fœm. Purpurea, capite albido, antennis pedibusque nigris, palpis fulvis, abdomine æneo-purpureo, alis cinereis.

*Female*. Purple. Head whitish. Proboscis and antennæ black. Palpi tawny. Thorax with a slight hoary tinge which is very indistinctly striped. Abdomen bronze-purple. Legs black. Wings grey; veins black; præbrachial vein forming a very slightly obtuse angle at its flexure, from whence it is very slightly curved inward to its tip; discal transverse vein nearly straight, parted by little more than half its length from the border and from the flexure of the præbrachial. Alulæ dark grey. Length of the body  $4\frac{1}{2}$  lines; of the wings 9 lines.

Mount Ophir, at the height of 4000 feet.

81. *MUSCA TRITA*, n. s. (genus *Lucilia*, *Desv.*), fœm. Cyaneo-viridis, capite pedibusque nigris, facie albâ, thoracis lateribus subpurpurascentibus, abdominis lateribus apiceque albido-tomentosis, alis sublimpidis.

*Female*. Bright bluish-green. Head and appendages and legs black; face white. Sides of the thorax slightly purplish. Abdomen green, with slight whitish tomentum along each side and at the tip. Wings almost limpid; veins black; præbrachial vein forming a very obtuse and slightly rounded angle at its flexure, from whence to its tip it is hardly curved inward; discal transverse vein hardly curved inward, parted by much less than its length from the border and by a little less than its length from the flexure of the præbrachial vein. Alulæ greyish. Length of the body 3 lines; of the wings 6 lines.

Malacca.

82. *MUSCA DEFIXA*, n. s. (genus *Lucilia*, *Desv.*), mas. Cyaneo-viridis, capite albido, epistomate testaceo, palpis pedibusque nigris, antennis fulvis, alis subcinereis.

*Male*. Bluish-green. Head whitish; epistoma testaceous. Proboscis, palpi and legs black. Antennæ tawny. Wings greyish; veins black; præbrachial vein forming a slightly obtuse and slightly rounded angle at its flexure, from whence to its tip it is moderately curved inward; discal transverse vein slightly undulating, parted by one-third of its length from the border, and by less than half its length from the flexure of the præbrachial. Alulæ grey. Length of the body 3 lines; of the wings 6 lines.

Singapore.

83. *MUSCA REFLECTENS*, n. s. (genus *Pollenia*, *Desv.*), fœm. Purpureo-cyanea, viridi-varia, capite fulvo, frontalibus cinereis, palpis antennisque testaceis, pectore testaceo, maculis duabus purpureo-cyaneis, abdomine cano-subtessellato, apice æneo, pedibus validis nigris, tibiis fulvis, alis subcinerascentibus.

*Female*. Purplish-blue tinged with green, hardly shining. Head fawn-colour, testaceous in front; frontalia cinereous. Proboscis black. Palpi, antennæ and pectus testaceous, the latter with a purplish-blue mark on each side. Abdomen slightly tessellated with hoary tomentum, æneous at the tip. Legs black, stout; tibiæ tawny. Wings very slightly greyish; veins black, testaceous towards the base and along the costa; præbrachial



vein forming a very obtuse angle at its flexure, from whence it is slightly undulating to its tip; discal transverse vein very deeply undulating, parted by full half its length from the border, and by much less than its length from the flexure of the præbrachial vein. Alulæ white. Length of the body 5 lines; of the wings 10 lines.

Malacca.

84. *MUSCA INFIXA*, n.s. (genus *Silbomyia*, *Macq.*), fœm. Viridi-cyanea, capite albido, frontalibus antennisque nigris, palpis fulvis, thoracis vittis quatuor abdomineque purpureis, pedibus piceis, femoribus cyanascentibus, alis cinereis costâ venisque fusco-marginatis.

*Female.* Greenish-blue. Head whitish. Frontalia, proboscis and antennæ black. Palpi tawny. Thorax with four purple stripes. Abdomen purple. Legs piceous; femora bluish. Wings grey, brownish along the costa and along the borders of the veins, which are black; præbrachial vein forming an almost right and somewhat rounded angle at its flexure, from whence it is very slightly curved inward to its tip; discal transverse vein very slightly undulating, parted by full half its length from the border, and by much more than its length from the flexure of the præbrachial vein. Alulæ dark grey. Length of the body 5 lines; of the wings 10 lines.

Singapore.

85. *MUSCA FUMIPENNIS*, n.s. (genus *Silbomyia*, *Macq.*), fœm. Cyaneo-viridis, capite testaceo, frontalibus piceis, palpis antennisque testaceis, thoracis vittis quatuor subobsoletis purpurascentibus, scutello abdomineque purpureo-cyaneis, pedibus nigris robustis densè pilosis, alis fuscis, apud costæ dimidium basale sublimpidis.

*Female.* Bluish-green. Head pale testaceous; frontalia piceous. Proboscis black. Palpi and antennæ testaceous. Thorax with four very indistinct purplish stripes. Scutellum and abdomen purplish-blue. Legs black, stout, thickly pilose; fore coxæ tawny. Wings brown, paler at the tips and along the hind border, nearly limpid along the costa for half the breadth, and rather less than half the length from the base; veins black; præbrachial vein forming a very slightly oblique and much-rounded angle at its flexure, from whence it is moderately curved inward to its tip; discal transverse vein nearly straight, parted by rather more than half its length from the border, and by much less than its length from the flexure of the præbrachial vein. Alulæ grey. Length of the body 5 lines; of the wings 10 lines.

Singapore.

86. *MUSCA DOTATA*, n.s. (genus *Phormia*? *Desv.*), mas. Viridis, capite antico albo, palpis antennisque fulvis, abdominis vittâ dorsali nigrâ fasciisque nigro-æneis, pedibus nigris, alis cinereis, dimidio apicali antico nigro-fusco.

*Male.* Green. Head white in front. Proboscis black. Palpi and antennæ tawny. Abdomen with a black dorsal stripe, and with blackish bronze bands. Legs black. Wings grey; apical half blackish-brown, excepting the hind border; veins black; præbrachial vein forming a very obtuse and somewhat rounded angle at its flexure, from whence it is very slightly



curved inward to its tip; discal transverse vein moderately undulating, parted by little more than half its length from the border and by rather less than its length from the flexure of the præbrachial. Alulæ grey. Length of the body  $3\frac{1}{2}$  lines; of the wings 7 lines.

Singapore.

87. *MUSCA DIFFIDENS*, n. s. (genus *Pyrellia*, *Desv.*), fœm. Cyaneo-viridis, capite albido, palpis antennis pedibusque nigris, alis vix cinerascens.

*Female*. Bright bluish-green. Head whitish. Proboscis, palpi, antennæ and legs black. Wings hardly greyish; veins black; præbrachial vein gently curved at its flexure, from whence it is almost straight to its tip; discal transverse vein almost straight, parted by much less than its length from the border, and by much more than its length from the curve of the præbrachial vein. Alulæ whitish. Length of the body 3 lines; of the wings 6 lines.

Singapore.

88. *MUSCA CONFIXA*, n. s. (genus *Pyrellia*, *Desv.*), fœm. Lætè viridis cyaneo purpureoque varia, capite nigro, antice albido, palpis testaceis, antennis nigris basi rufescentibus, abdominis apice subæneo, pedibus nigris, alis cinereis.

*Female*. Bright green, tinged with blue and purple along each side. Head black above, whitish in front. Proboscis black. Palpi testaceous. Antennæ black; first and second joints reddish. Abdomen slightly æneous at the tip. Legs black; femora green. Wings grey; veins black; præbrachial vein gently curved at its flexure, between which and its tip it is slightly curved inward; discal transverse vein moderately undulating, parted by much less than its length from the border, and by a little less than its length from the flexure of the præbrachial vein. Alulæ dark grey. Length of the body  $3\frac{1}{2}$  lines; of the wings 7 lines.

Mount Ophir, at the height of 4000 feet.

89. *MUSCA REFIXA*, n. s. (genus *Pyrellia*, *Desv.*), fœm. Purpurea, lateribus subtusque cyanea aut cyaneo-viridis, capite antico, palpis pedibusque nigris, antennarum articulo tertio piceo, alis subcinereis.

*Female*. Purple shining, blue on each side and beneath. Head in front, proboscis, palpi and legs black. Third joint of the antennæ piceous. Wings slightly greyish; veins black; præbrachial vein forming a gentle curve at its flexure, which is very near the border, indistinctly curved outward from thence to its tip; discal transverse vein almost straight, parted by little more than half its length from the border, and by about its length from the flexure of the præbrachial vein. Alulæ grey. Length of the body  $2\frac{1}{2}$ – $2\frac{3}{4}$  lines; of the wings  $5$ – $5\frac{1}{2}$  lines.

*Var. β*. Bluish-green. Scutellum purplish-blue. Discal transverse vein very indistinctly curved inward.

Singapore.

90. *MUSCA PERFIXA*, n. s. (genus *Pyrellia*, *Desv.*), fœm. Purpurea, capite palpis antennis pedibusque nigris, alis limpidis.

*Female*. Very nearly allied to *M. refixa*. Purple, shining. Head and appendages and legs black. Wings limpid; veins black; præbrachial vein



forming a gentle curve at its flexure which is very near the border, straight from thence to its tip; discal transverse vein almost straight, parted by about half its length from the border, and by a little more than its length from the flexure of the præbrachial vein. Alulæ whitish. Length of the body 3 lines; of the wings 6 lines.

Mount Ophir.

91. *MUSCA AFFIXA*, n. s. (genus *Morellia*, *Desv.*), mas. Obscurè nigra, capite antico albo, thoracis vittis tribus latis albidis, abdomine subtessellato, alis subcinereis.

*Male.* Dull black. Head white in front. Thorax with three broad whitish stripes. Abdomen slightly tessellated. Wings greyish; veins black; præbrachial vein forming a gentle curve at its flexure which is very near the border, nearly straight from its flexure to its tip; discal transverse vein hardly undulating, parted by less than half its length from the border, and by little less than its length from the flexure of the præbrachial vein. Alulæ grey. Length of the body 4 lines; of the wings 7 lines.

Mount Ophir.

#### Subfam. ANTHOMYIDES, *Walk.*

##### Gen. *ARICIA*, *Macq.*

92. *ARICIA ARGENTATA*, n. s., mas. Cana, capite argenteo, palpis antennis pedibusque nigris, thoracis vittis duabus nigricantibus, scutelli apice testaceo, abdominis maculis quatuor nigris dorsalibus basi testaceo, femoribus testaceis, alis subcinereis.

*Male.* Hoary. Head silvery-white. Proboscis, palpi, antennæ and legs black. Thorax with two blackish stripes. Scutellum towards the tip and femora testaceous. Abdomen with four black dorsal spots, testaceous towards the base. Wings and alulæ slightly greyish; veins black, testaceous towards the base; cubital and præbrachial veins slightly diverging for about two-thirds of their length from the præbrachial transverse vein, very slightly converging from thence to the border; discal transverse vein oblique, slightly curved inward along its hind half, parted by a little more than its length from the præbrachial transverse, and by much less than its length from the border. Length of the body  $3\frac{1}{2}$  lines; of the wings 6 lines.

Malacca.

##### Gen. *HYDROTÆA*, *Macq.*

93. *HYDROTÆA SOLENNIS*, n. s., mas. Nigra, capite cano, thorace subcinereo nigro-trivittato, abdomine longi-obconico, tibiis ferrugineis, alis subcinereis.

*Male.* Black. Head hoary in front. Thorax slightly cinereous, with three black stripes. Abdomen elongate-obconical. Tibiæ ferruginous. Wings slightly greyish; veins black, testaceous at the base; cubital and præbrachial veins slightly diverging for nearly two-thirds of their length from the præbrachial transverse vein, very slightly converging from thence to the border; discal transverse vein oblique, curved inward in the middle, parted by about its length from the præbrachial transverse and by little more than



half its length from the border. Alulæ greyish. Length of the body  $2\frac{3}{4}$  lines; of the wings 5 lines.

Mount Ophir, at the height of 4000 feet.

94. *ARICIA PATULA*, n. s., mas. Nigra sat lata, antennis, thoracis lateribus, abdomine pedibusque fulvis, abdominis apice tarsisque nigris, alis cinereis.

*Male*. Black, rather broad. Eyes bright red. Antennæ, sides of the thorax, scutellum, abdomen and legs tawny. Abdomen hardly longer than broad, black towards the tip. Tarsi black. Wings and alulæ grey; veins black, tawny towards the base; cubital and præbrachial veins diverging for more than two-thirds of their length from the præbrachial transverse, parallel from thence to their tips; discal transverse vein very oblique, curved inward near its hind end, parted by more than half its length from the border, and by very little more than its length from the præbrachial transverse vein. Length of the body  $3\frac{1}{2}$  lines; of the wings 7 lines.

Singapore.

Subfam. HELOMYZIDES, *Fallen*.

Gen. *XARNUTA*, n. g. (*Plate I. fig. 4.*) (*Trypetidae*)

*Helomyza affinis*; mas et fœm. Corpus sat latum. Antennarum articulus 3<sup>us</sup> linearis; arista ~~nuda~~ *plumosa*. Femora antica subtus tenuiter spinosa. Alæ latiusculæ.

Allied to *Helomyza*. *Male and Female*. Body rather broad. Third joint of the antennæ linear, rounded at the tip; arista ~~bare~~ *with short plumose*. Fore femora with slender spines. Wings somewhat broad; discal transverse vein slightly oblique, parted by much less than half its length from the border, and by about its length from the præbrachial transverse vein.

95. *XARNUTA LEUCOTELUS*, n. s., mas et fœm. Ferrugineo-fulva, antennis testaceis, pedibus fulvis, alis nigro-fuscis apice albis, margine postico subcinereo.—Fœm. Abdominis apice nigro.

*Male and Female*. Ferruginous tawny, with black bristles. Head rather paler. Antennæ testaceous; arista black. Legs tawny; fore femora with black spines beneath. Wings blackish-brown, greyish along the hind border for more than half the breadth and less than half the length from the base; extreme tips white; veins black. Alulæ whitish testaceous.

*Female*. Tip of the abdomen black. Length of the body  $3\frac{1}{2}$  lines; of the wings 7 lines.

Singapore.

Gen. *HELOMYZA*, *Fallen*.

96. *HELOMYZA INTEREUNS*, n. s., mas. Fulva, capite metathorace pectore pedibusque testaceis, abdominis maculis transversis nigricantibus, tarsis ferrugineis, alis subcinereis apices versus et apud venam transversam discalem fuscis.

*Male*. Tawny with black bristles. Head, metathorax, pectus, legs and halteres testaceous. Abdomen with a transverse blackish mark on the disk of each segment towards the tip. Tarsi somewhat ferruginous. Wings slightly greyish; tips brown, which hue is darkest in front; veins tawny,



black towards the tips; transverse veins black. Discal transverse vein clouded with brown, parted by much less than its length from the border, and by much more than twice its length from the præbrachial transverse vein. Alulæ whitish. Length of the body  $2\frac{1}{2}$  lines; of the wings 5 lines. Malacca.

97. *HELOMYZA EXEUNS*, n. s., mas. Fulva, capite antico, metathorace pectore pedibusque testaceis, abdominis maculis transversis nigricantibus, tarsis ferrugineis apice fuscis, alis subcinereis maculâ apicibusque fuscis.

Very nearly allied to *H. intereuns*. *Male*. Tawny. Head in front, metathorax, pectus, legs and halteres testaceous. Abdomen with a transverse blackish mark on the disk of each segment. Tarsi ferruginous, with black tips. Wings slightly greyish; tips brown; veins black, tawny at the base; a brown spot on the discal transverse vein, which is straight, slightly oblique, parted by less than its length from the border, and by about thrice its length from the discal transverse vein. Alulæ whitish. Length of the body  $2\frac{1}{4}$  lines; of the wings  $4\frac{1}{2}$  lines.

Mount Ophir.

### Subfam. LAUXANIDES, *Walk.*

#### Gen. LAUXANIA, *Latr.*

98. *LAUXANIA EUCERA*, n. s., mas. Nigra cinereo-tomentosa, capite atrobiguttato, antennis piceis longissimis, aristâ albâ, abdomine pedibusque fulvis, femoribus tibiisque nigro-fasciatis, alis subcinereis apud costam subluridis.

*Male*. Black, with greyish tomentum. Head with a deep black spot on each side between the eyes. Proboscis dull tawny. Palpi black. Antennæ piceous; 1st joint long; 3rd slender, cylindrical, longer than the 1st and the 2nd together; arista white, pubescent, longer than the 3rd joint. Abdomen and legs tawny; femora and tibiæ with black bands; tarsi with black tips. Wings greyish, slightly lurid along the costa; veins black; discal transverse vein straight, slightly oblique, parted by less than its length from the border, and by more than twice its length from the præbrachial transverse vein. Halteres tawny. Length of the body 2 lines; of the wings  $4\frac{1}{2}$  lines.

Singapore.

99. *LAUXANIA DETEREUNS*, n. s., fœm. Nigra, nitens, antennis piceis, aristâ nigrâ, tarsis anticis basi tibiisque tarsisque posterioribus testaceis, alis subcinereis.

*Female*. Black, shining, with black bristles. Antennæ piceous; 3rd joint elongate-conical, much shorter than that of *L. eucera*; arista black, pubescent, full thrice the length of the 3rd joint. Fore tarsi at the base and posterior tibiæ and tarsi testaceous. Wings slightly greyish; veins and halteres testaceous; discal transverse vein straight, almost upright, parted by almost its length from the border and by nearly twice its length from the præbrachial transverse vein. Length of the body  $1\frac{1}{4}$  line; of the wings 3 lines.

Mount Ophir, at the height of 4000 feet.



Gen. CELYPHUS, *Dalman*.

100. *Celyphus obtectus*, *Dalman*, *Analecta Entomologica*, 32. 1. pl. 2. B. f. 1-5.

Malacca. Inhabits also Hindostan and the Philippine Islands.

Subfam. ORTALIDES, *Haliday*.Gen. LAMPROGASTER, *Macq.*

101. LAMPROGASTER ZONATA, n. s., fœm. Nigra, capite flavo nigro-vario, antennis piceis, thorace flavo-quadrivittato, abdomine flavo-bifasciato, tarsis albis, alis subcinereis maculis costalibus fasciâque fuscis.

*Female*. Black, shining. Head pale yellow, with four black shining stripes in front; vertex, with a broad dull black stripe which occupies the whole breadth behind, is notched on each side between the eyes, and is narrower in front. Antennæ piceous; 3rd joint nearly linear, rounded at the tip; arista minutely plumose, more than twice the length of the 3rd joint. Thorax with four yellow stripes, one on each side in front of the wings, and one on each side of the scutum. Abdomen with two yellow bands; 1st slender; 2nd apical, dilated in the middle of the fore border; knees tawny; tarsi white, with blackish tips. Wings greyish, slightly lurid and with brown marks at the base and along the costa, and with a brown band which extends along the præbrachial vein to half the space between the latter and the border; discal transverse vein straight, upright, parted by about one-third of its length from the border, and by much more than its length from the præbrachial transverse, which is oblique. Halteres tawny. Length of the body 5 lines; of the wings 10 lines.

Singapore.

102. LAMPROGASTER GLABRA, n. s., mas. Nigra, antennis piceis, abdominis fasciâ subapicali flavâ, tarsis albis, alis sublimpidis maculis basalibus fasciisque quatuor fuscis.

*Male*. Black, shining. Antennæ piceous, in structure like those of *L. zonata*. Abdomen with a slender yellow band near the tip. Tarsi white, with black tips. Wings nearly limpid, with four brown bands, slightly testaceous and with some indistinct brown marks at the base; 1st and 3rd bands entire; 1st broader and darker than the others; 2nd and 4th interrupted; veins black, testaceous towards the base; discal transverse vein straight, upright, parted by one-fourth of its length from the border, and by more than its length from the præbrachial transverse vein, which is also upright. Halteres tawny. Length of the body 3 lines; of the wings 6 lines.

Singapore.

103. LAMPROGASTER TRANSVERSA, n. s., fœm. Nigra, capite fulvo fasciis duabus nigris unâque albidâ, antennis fulvis, thoracis vittis quatuor dorsalibus fulvis duabusque lateralibus albidis, abdomine nigro-purpureo basi fulvo maculisque duabus subapicalibus flavis, pedibus fulvis, tarsis albidis, alis subcinereis fusco sexfasciatis.

*Female*. Black. Head tawny, with two black bands above and a whitish band in front. Antennæ tawny. Thorax with four dorsal tawny stripes which



are confluent in front and with two lateral whitish stripes. Abdomen blackish-purple, tawny at the base, and with a yellow spot on each side near the tip which is lanceolate. Legs tawny; tarsi whitish, with black tips; hind tibiæ with brownish tips. Wings slightly greyish, with about six irregular macular brown bands; veins brown, tawny at the base; discal transverse vein nearly straight and upright, parted by much less than its length from the border, and by more than its length from the præbrachial transverse vein, which is oblique. Halteres testaceous. Length of the body 4 lines; of the wings 8 lines.

Malacca.

104. *LAMPROGASTER VITTATA*, n. s., mas. Nigra, capite ex parte flavo, antennis fulvis, thorace flavo-bivittato, scutello flavo-marginato, abdominis vittâ dorsali flavâ, tarsis albis, alis nigricantibus basi fasciisque quatuor albidis.

*Male*. Black, shining. Head pale yellow in front, beneath and about the eyes. Antennæ tawny. Thorax with two yellow stripes; scutellum with a yellow border. Pectus with an oblique yellow band on each side. Abdomen with a yellow dorsal stripe. Tarsi white, with black tips. Wings blackish, whitish at the base, and with four whitish bands; 1st band irregular; 2nd and 3rd entire; 4th interrupted; veins black; discal transverse vein straight, upright, parted by about one-fourth of its length from the border, and by much more than its length from the præbrachial transverse vein, which is slightly oblique. Halteres testaceous. Length of the body 3 lines; of the wings 6 lines.

Singapore.

105. *LAMPROGASTER GUTTATA*, n. s., fœm. Cinerea, capite nigro trimaculato anticè testaceo, antennis fulvis, thorace cano-quinquevittato, lateribus testaceis, abdominis fasciâ anticâ fulvâ, tarsis albidis, alis subcinereis fasciis octo subinterruptis fuscis.

*Female*. Black, with cinereous tomentum. Head partly dull testaceous in front; vertex with three black spots, two in front and one behind. Antennæ tawny; arista pubescent. Thorax with five hoary stripes which are connected in front by a transverse band; sides testaceous. Pectus with an oblique dull testaceous stripe on each side. Abdomen with a tawny band on the hind border of the first segment; oviduct slender, lanceolate. Tarsi whitish, with black tips. Wings greyish, with about eight irregular and partly interrupted brown bands; veins and halteres testaceous; discal transverse vein nearly straight and upright, parted by about one-fourth of its length from the border, and by more than its length from the præbrachial transverse vein. Length of the body 3 lines; of the wings 6 lines.

Singapore.

106. *LAMPROGASTER TRUNCATULA*, n. s., fœm. Nigra robusta, abdominis apice compresso lanceolato, tarsis albis, alis subcinereis lituris transversis fuscescentibus fasciisque duabus nigro-fuscis.

*Female*. Black, stout, slightly shining. Arista pubescent. Abdomen compressed and lanceolate at the tip. Tarsi white, with black tips. Wings slightly greyish, with several slight transverse brownish marks, and with



two blackish-brown bands; the 1st broad, basal, not extending beyond half the breadth from the costa; the 2nd narrow, entire, near the 1st; veins black; discal transverse vein straight and upright, parted by one-third of its length from the border, and by very much more than its length from the præbrachial transverse vein. Halteres testaceous. Length of the body  $2\frac{1}{2}$  lines; of the wings 5 lines.

Singapore.

Gen. XANGELINA, n. g. (Plate I. fig. 3.)

*Fœm.* Corpus latiusculum, parce setosum. Caput antice subdilatatum; facies magna. Antennæ breves; articulus 3<sup>us</sup> longi-conicus; arista longa, gracilis, plumata. Abdomen brevi-ovatum, thorace non longius. Pedes breviusculi. Alæ mediocriter latæ; venæ rectæ.

*Female.* Body rather broad, with a few bristles. Head somewhat dilated in front; face large. Antennæ short; 3rd joint elongate-conical; arista long, slender, plumose. Abdomen short-oval, not longer than the thorax. Legs rather short. Wings moderately broad; subcostal vein extending to about one-fourth of the length of the wing; mediastinal extending a little beyond the subcostal; radial ending at about seven-eighths of the length; cubital ending at the tip; cubital and præbrachial almost parallel beyond the discal transverse vein, which is straight and upright, and parted by very much more than its length from the præbrachial transverse, and by much less than its length from the border.

107. XANGELINA BASIGUTTA, n. s., fœm. Testacea, scutello fusco, abdomine fulvo, alis subcinereis guttâ costali nigrâ venis transversis nigro-sublimbatis.

*Female.* Testaceous. Proboscis partly brownish. Scutellum brown. Abdomen tawny. Wings slightly greyish; veins black; a black dot at the tip of the subcostal vein; transverse veins slightly clouded with black. Length of the body 2 lines; of the wings 4 lines.

Malacca.

Gen. PLATYSTOMA.

108. PLATYSTOMA RIGIDA, n. s., mas. Ferrugineo-fusca, capite subtùs albo, antennis piceis, pectore albido, pedibus nigris, alis nigricantibus albo confertim at interruptè guttatis.

*Male.* Ferruginous-brown, tomentose. Head white behind and beneath, ferruginous and shining in front. Antennæ piceous; arista slightly plumose. Pectus whitish. Legs black. Wings blackish, thickly studded with white dots, which disappear at the base and on an undulating band beyond the middle; veins black. Length of the body 3 lines; of the wings 6 lines.

Singapore.

109. PLATYSTOMA STELLATA, n. s., mas. Cinereo-nigra, capite subtùs albido, antennis fulvis, facie abdominis apice pedibusque nigris nitentibus, alis obscurè cinereis guttis confertis at interruptis limpidis.

*Male.* Cinereous-black, tomentose. Head shining black in front, whitish behind and beneath. Antennæ tawny. Abdomen shining black at the



tip. Legs black and shining. Wings dark grey, with numerous limpid dots which are comparatively wanting on a blackish-brown stripe along two-thirds of the length of the costa, and on an exterior upright band which is connected with the above stripe. Length of the body 3 lines; of the wings 6 lines.

Malacca.

Gen. THEMARA, n. g. (Plate I. fig. 5.)

*Mas.* *Corpus* latiusculum, subsetosum. *Caput* thorace paullo angustius.

*Antennæ* epistoma non attingentes; articulus 3<sup>us</sup> lanceolatus, longiusculus; arista latè plumosa. *Abdomen* ellipticum, thorace non longius. *Alæ* latiusculæ, obscuræ, maculis pallidis, venis radiali et cubitali undulatis.

*Male.* Body rather broad. Head and thorax slightly setose. Head a little less broad than the thorax; epistoma not prominent. Proboscis short. Palpi short, porrect. *Antennæ* not reaching the epistoma; 3rd joint lanceolate, rather long; arista deeply plumose, about twice the length of the 3rd joint. *Abdomen* elliptical, as long as the thorax. Wings rather broad, dark, with pale marks; subcostal vein ending at much beyond one-third of the length; mediastinal ending at much beyond half the length; radial undulating, ending at about five-sixths of the length; cubital undulating, ending at the tip of the wing; præbrachial and subanal hardly undulating; discal transverse vein straight, nearly upright, parted by one-tenth of its length from the border, and by more than half its length from the præbrachial transverse.

110. THEMARA AMPLA, n. s., mas. Ferruginea, subtus testacea, scutello, abdominis fuscis fasciis tribus pedibusque testaceis, alis obscure fuscis, maculis tribus anticis luridis tribusque posticis albis.

*Male.* Ferruginous, slightly shining, testaceous beneath. Head in front and appendages testaceous. Scutellum and legs testaceous. *Abdomen* brown above, testaceous at the base and with two testaceous bands. Wings dark brown, with three hyaline triangular spots in front and three on the hind border; the costal spots lurid, the hind spots white. Length of the body 4 lines; of the wings 8 lines.

Singapore.

Gen. STRUMETA, n. g. (Plate II. fig. 4.)

*Fœm.* *Corpus* latiusculum, pubescens, vix setosum. *Abdomen* brevi-ovatum, thorace latius et paullo longius. *Alæ* mediocriter latæ, limpidæ, fasciis fuscis, venâ transversâ præbrachiali undulatâ, perobliquâ.

*Female.* Body rather broad, dull, pubescent, hardly setose. Head rather less broad than the thorax; epistoma not prominent. Proboscis and palpi short. *Antennæ* mutilated in the insect here described. *Abdomen* short oval, broader and a little longer than the thorax. Wings moderately broad, limpid with brown bands; longitudinal veins almost straight; subcostal and mediastinal veins almost contiguous; mediastinal vein ending at much beyond half the length of the wing; radial ending at a little beyond four-fifths of the length; cubital ending at somewhat in front of the tip; discal



transverse vein nearly straight and upright, parted by full one-fourth of its length from the border, and by about its length from the præbrachial transverse which is undulating and very oblique.

111. *STRUMETA CONFORMIS*, n. s., fœm. Cervina, thoracis vittis duabus, metathorace et pectoris disco nigricantibus, pedibus testaceis, alis limpidis fusco-quadrifasciatis.

*Female*. Fawn-colour. Thorax with two blackish stripes. Metathorax and disk of the pectus blackish. Legs and halteres testaceous. Wings limpid, pale brown along the costa, and with four pale brown bands; 1st and 2nd bands connected hindward; veins black, testaceous towards the base. Length of the body 4 lines; of the wings 7 lines.

Singapore.

### Gen. *VALONIA*, n. g. (Plate I. fig. 6.)

*Fœm. Corpus* sat angustum, pubescens. *Caput* anticè subdilatatum. *Antennæ* breviusculæ; articulus 3<sup>us</sup> longi-conicus; arista pubescens. *Abdomen* fusiforme, thorace paullo longius. *Pedes* sat robusti. *Alæ* angustæ, obscuræ, maculis limpidis.

Allied to *Platystoma*.—*Female*. Body rather narrow, dull, pubescent. Head as broad as the thorax, slightly dilated in front; epistoma not prominent. Proboscis and palpi short. *Antennæ* rather short, not reaching the epistoma; 3rd joint elongate-conical; arista pubescent. Abdomen fusiform, a little longer than the thorax. Legs rather stout, especially the hind pair. Wings narrow, dark with limpid spots; subcostal vein ending at before one-third of the length of the wing; mediastinal ending at much beyond half the length; radial ending at a little before three-quarters of the length; cubital and subanal hardly undulating, the former ending at a little in front of the tip of the wing; discal transverse vein straight and upright, parted by less than half its length from the border, and by a little less than its length from the præbrachial transverse.

112. *VALONIA COMPLICATA*, n. s., fœm. Obscurè cinerea, capite testaceo, thorace nigro-punctato, abdomine guttis quatuor lateralibus albis tomentosus subtus testaceo, pedibus fulvis, femoribus posterioribus tibiisque posticis nigris, alis subcinereis guttis plurimis limpidis.

*Female*. Dark grey. Head and appendages testaceous. Thorax punctured with black; humeral calli black, shining. Abdomen with two white tomentous dots on each side; underside testaceous. Legs tawny; posterior femora black, with tawny tips; hind tibiæ blackish except at the base. Wings greyish, with very numerous limpid dots, blackish and without dots along more than half the length of the costa; veins black. Halteres testaceous. Length of the body 3 lines; of the wings 5 lines.

Malacca.

### Gen. *SOPHIRA*, n. g. (Plate II. fig. 1.)

*Fœm. Corpus* sat angustum, pubescens. *Caput* thorace paullo angustius. *Antennarum* articulus 3<sup>us</sup> longiusculus, sublanco-latus; arista plumosa.



*Abdomen* subfusiforme, apice attenuatum, thorace paullo longius. *Pedes* graciles. *Alæ* longiusculæ, sat angustæ, venis limbatis.

*Female.* Body rather narrow, dull, pubescent. Head a little less broad than the thorax; epistoma not prominent. Proboscis and palpi short. Antennæ not reaching the epistoma; 3rd joint rather long, sublanceolate; arista plumose. Abdomen subfusiform, somewhat attenuated at the tip, a little longer than the thorax. Legs slender. Wings rather long and narrow; subcostal vein ending at before one-third of the length of the wing; mediastinal ending at much beyond half the length; radial ending at about seven-eighths of the length; cubital ending at very little in front of the tip; discal transverse vein straight, hardly oblique, parted by one-fourth of its length from the border, and by very much more than its length from the præbrachial transverse.

This genus seems to be somewhat allied to the *Helomyzides*.

113. *SOPHIRA VENUSTA*, n. s., fœm. Testacea, thoracis fasciâ metathorace abdominisque fasciis tribus maculisque duabus subapicalibus nigris, tibiis fusciscentibus, alis limpidis venis fusco-limbatis.

*Female.* Testaceous. Thorax with a black band between the wings. Metathorax black. Abdomen with three black bands, and with a black subapical spot on each side. Tibiæ brownish; tarsi tawny. Wings limpid, lurid in front, striped with brown along most of the veins; veins black, tawny towards the base; cubital vein minutely setose towards the base. Length of the body 4 lines; of the wings 8 lines.

Singapore.

### Gen. RIOXA, n. g. (Plate II. fig. 3.)

*Fœm. Corpus* angustum, pubescens. *Caput* sat parvum, thorace multo angustius.

*Antennarum* articulus 3<sup>us</sup> sublinearis; arista raro plumosa. *Thorax* longioratus. *Abdomen* fusiforme, thorace multo angustius, vix longius. *Pedes* graciles, antici breves. *Alæ* longæ, mediocriter latæ, obscuræ, guttis albis.

*Female.* Body narrow, dull, pubescent. Head rather small, much less broad than the thorax; epistoma not prominent. Proboscis and palpi short. Antennæ not reaching the epistoma; 3rd joint almost linear, moderately long; arista thinly plumose. Thorax elongate-oval. Abdomen fusiform, much narrower, but hardly longer than the thorax. Legs slender; fore legs short. Wings long, moderately broad, dark with white dots; radial vein ending at rather in front of the tip of the wing; discal transverse vein almost straight, very oblique, parted by about one-fourth of its length from the border, and by somewhat less than its length from the præbrachial transverse.

114. *RIOXA LANCEOLATA*, n. s., fœm. Cervina, thorace nigro-quadrivittato, abdomine nigro vittâ dorsali cervinâ, pedibus testaceis, alis nigricantibus strigâ discali guttisque quinque albis.

*Female.* Fawn-colour. Proboscis, legs and halteres testaceous. Thorax with two blackish stripes on each side, the outer pair shortened hindward. Abdomen black, with a fawn-coloured dorsal stripe which is attenuated hindward, and does not extend to the tip. Wings blackish, almost limpid along the hind border for more than half the length from the base, with a white discal streak and with five white dots; 1st dot in a line with the streak; 2nd very minute,



behind the 1st; 3rd on the costa near the tip; 4th larger, apical, near the 5th, which is on the hind border. Length of the body 5 lines; of the wings 10 lines.

Singapore.

Gen. *XIRIA*, n. g. (*Plate II. fig. 2.*)

*Mas.* *Corpus* metallicolor, subsetosum. *Caput* latiusculum. *Palpi* longiusculi. *Antennæ* breves; articulus 3<sup>us</sup> sublinearis; arista latè plumosa. *Thorax* robustus. *Abdomen* lineare, thorace paullo longius et multo angustius. *Pedes* longiusculi, sat validi. *Alæ* mediocriter longæ latæque.

*Male.* Body metallic, slightly setose. Head rather broad, hardly narrower than the thorax; epistoma not prominent. Proboscis short. Palpi porrect, rather long and stout. *Antennæ* short, not nearly reaching the epistoma; 3rd joint almost linear; arista deeply plumose, much more than twice the length of the 3rd joint. Thorax stout. Abdomen linear, a little longer than the thorax and about half its breadth. Legs rather long and stout. Wings moderately long and broad; subcostal vein ending at rather beyond one-third of the length; mediastinal ending at very much beyond half the length; radial ending at beyond five-sixths of the length; cubital ending at hardly in front of the tip; discal transverse nearly straight, slightly oblique, parted by about half its length from the border, and by rather more than its length from the præbrachial transverse.

115. *XIRIA ANTICA*, n. s., mas. Purpurea, capite nigro, antennarum articulo 3<sup>o</sup> ferrugineo, pedibus testaceis, tibiis nigris, tarsis albis anticis ferrugineis, alis sublimpidis apice nigricantibus maculis costalibus albis et nigricantibus.

*Male.* Purple. Head and appendages black. Third joint of the antennæ ferruginous. Legs testaceous; tibiæ black; fore tarsi ferruginous; posterior tarsi white, with brown tips. Wings nearly limpid, with two white and two blackish spots on the costa; tips blackish; veins black, testaceous along the costa. Halteres whitish. Length of the body 4 lines; of the wings 8 lines.

Mount Ophir.

Subfam. *ACHIIDES*, *Walk.*

Gen. *ACHIAS*, *Fabr.*

116. *Achias maculipennis*, *Westw. Oriental Entomology*, 38. pl. 18. f. 4. Singapore. Inhabits also Java.

Subfam. *DIOPSIDES*, *Walk.*

Gen. *DIOPSIS*.

117. *DIOPSIS QUINQUEGUTTATA*, n. s., fœm. Nigra, proboscide pedibusque fulvis, his ex parte fusciscentibus, alis nigricantibus basi apice guttisque quinque sublimpidis. (*Plate II. fig. 7.*)

*Female.* Black, shining. Proboscis tawny. Petioles of the eyes about half the length of the thorax. Scutellum with two spines, which are more than half the length of the thorax. Legs tawny, partly shaded with brown. Wings blackish, nearly limpid at the base and at the tips, and with two interrupted nearly



limpid bands, the first of two dots, the second of three dots; veins black. Length of the body 3 lines; of the wings  $4\frac{1}{2}$  lines.

Mount Ophir.

118. *DIOPSIS QUADRIGUTTATA*, n. s., mas. Picea, capite oculorum petiolis pedibusque fulvis, his ex parte fusciscentibus, alis nigricantibus basi fasciâ subapicali guttis quatuor sublimpidis. (*Plate II. fig. 6.*)

*Male.* Piceous, shining. Head and petioles of the eyes tawny, the latter fully half the length of the thorax. Scutellum with two spines, which are less than half the length of the thorax. Legs tawny, slightly shaded with brown. Wings blackish, nearly limpid at the base and towards the tips, except the extreme part of the latter which is slightly blackish; two interrupted nearly limpid bands, each composed of two dots; veins black. Length of the body  $2\frac{1}{2}$  lines; of the wings 4 lines.

Malacca.

### Subfam. SEPSIDES, *Walk.*

#### Gen. CALOBATA, *Fabr.*

119. *CALOBATA CONFINIS*, n. s., foem. Nigra, capite cyaneo, antennis piceis, femoribus posterioribus albo-cinctis, tarsis anticis albis, alis subcinereis fasciis duabus connexis fuscis, 2<sup>a</sup> apicali.

*Female.* Black, dull. Head blue, shining. Proboscis and antennæ piceous. Posterior femora with a white ring near the tips; hind femora with a white ring at the base; fore tarsi white. Wings greyish, with two brown bands, the first connected on the hind border with the second, which is apical; veins black. Halteres whitish, with black knobs. Length of the body 7 lines; of the wings 10 lines.

Singapore and Mount Ophir.

120. *CALOBATA IMMIXTA*, n. s., foem. Nigra, capite cyanescente, facialibus atris, antennis piceis, pedibus testaceis anticis nigris, tarsis anticis albis, femoribus posterioribus fasciis quatuor nigris, alis subcinereis fasciis duabus subconnexis fusciscentibus, 2<sup>a</sup> apicali.

*Female.* Black, dull. Head bluish, shining; facialia deep black. Proboscis and antennæ piceous. Legs testaceous; fore femora black, testaceous towards the base; fore tibiæ black; fore tarsi white; posterior femora with four black bands; posterior tibiæ dull testaceous, black towards the base; posterior tarsi brownish. Wings slightly greyish, with two brownish bands, the first slightly connected on the hind border with the second which is apical; veins black. Length of the body 5 lines; of the wings 10 lines.

Malacca.

### Subfam. PSILIDES, *Walk.*

#### Gen. MICROPEZA, *Macq.*

121. *MICROPEZA FRAGILIS*, n. s. Fulva, femoribus tibiisque anticis fuscis, tibiis posterioribus basi apiceque fuscis, tarsis anticis posticisque albidis, alis subcinereis guttis tribus apiceque limpidis.

Tawny. Fore femora and fore tibiæ brown; posterior tibiæ brownish at the



base and at the tips; fore tarsi and hind tarsi whitish. Wings very slightly greyish, with three limpid spots forming a curved band near the tips which are also limpid; veins black. Length of the body  $3\frac{1}{2}$ –4 lines; of the wings 5–6 lines.

Singapore and Mount Ophir.

Gen. NERIUS, *Wied.*

122. *Nerius fuscipennis*, *Macq. Dipt. Exot.* ii. 3. 241. 1. pl. 325. f. 5.

Singapore and Mount Ophir. Inhabits also Java and the Philippine Islands.

Gen. TEXARA, n. g. (*Plate II. fig. 5.*)

*Fœm.* *Corpus* gracile, non setosum. *Caput* subproductum; facies brevis. *Antennæ* epistoma attingentes; articulus 3<sup>us</sup> clavatus; arista pubescens, subapicalis. *Thorax* subfusiformis. *Abdomen* lanceolatum, thorace angustius et duplò longius. *Pedes* postici longi, femoribus incrassatis serratis, tarsis anticis subdilatatis. *Alæ* angustæ.

*Female.* Body slender, without bristles. Head slightly produced, as broad as the thorax; face short; epistoma not prominent. *Antennæ* extending to the epistoma; third joint clavate; arista minutely pubescent, seated near the tip of the third joint. *Thorax* subfusiform. *Abdomen* lanceolate, narrower than the thorax and about twice its length. Anterior legs moderately long and stout; fore tarsi slightly dilated; hind legs long; hind femora incrassated, serrated beneath; hind tibiæ slightly curved. Wings narrow; subcostal vein not extending to one-third of the length of the wing; mediastinal vein not extending to half the length; radial extending to a little beyond three-quarters of the length; cubital ending at very little in front of the tip of the wing; discal transverse vein straight, upright, parted by less than its length from the border, and by about thrice its length from the præbrachial transverse.

123. *TEXARA COMPRESSA*, n. s., fœm. Nigra, capite nigro-cyaneo subtùs cano, antennis piceis, aristâ albidâ, alis subcinereis, halteribus albidis.

*Female.* Black. Head bluish-black, with hoary tomentum beneath. *Antennæ* piceous; arista whitish. Wings greyish; veins black. Halteres whitish.

Length of the body 5 lines; of the wings 6 lines.

Singapore.

DESCRIPTION OF PLATES I. AND II.

*Obs.* All the figures are more or less magnified, and the outline-details comprise the side and front views of the head, antennæ, and base of the wings.

PLATE I.

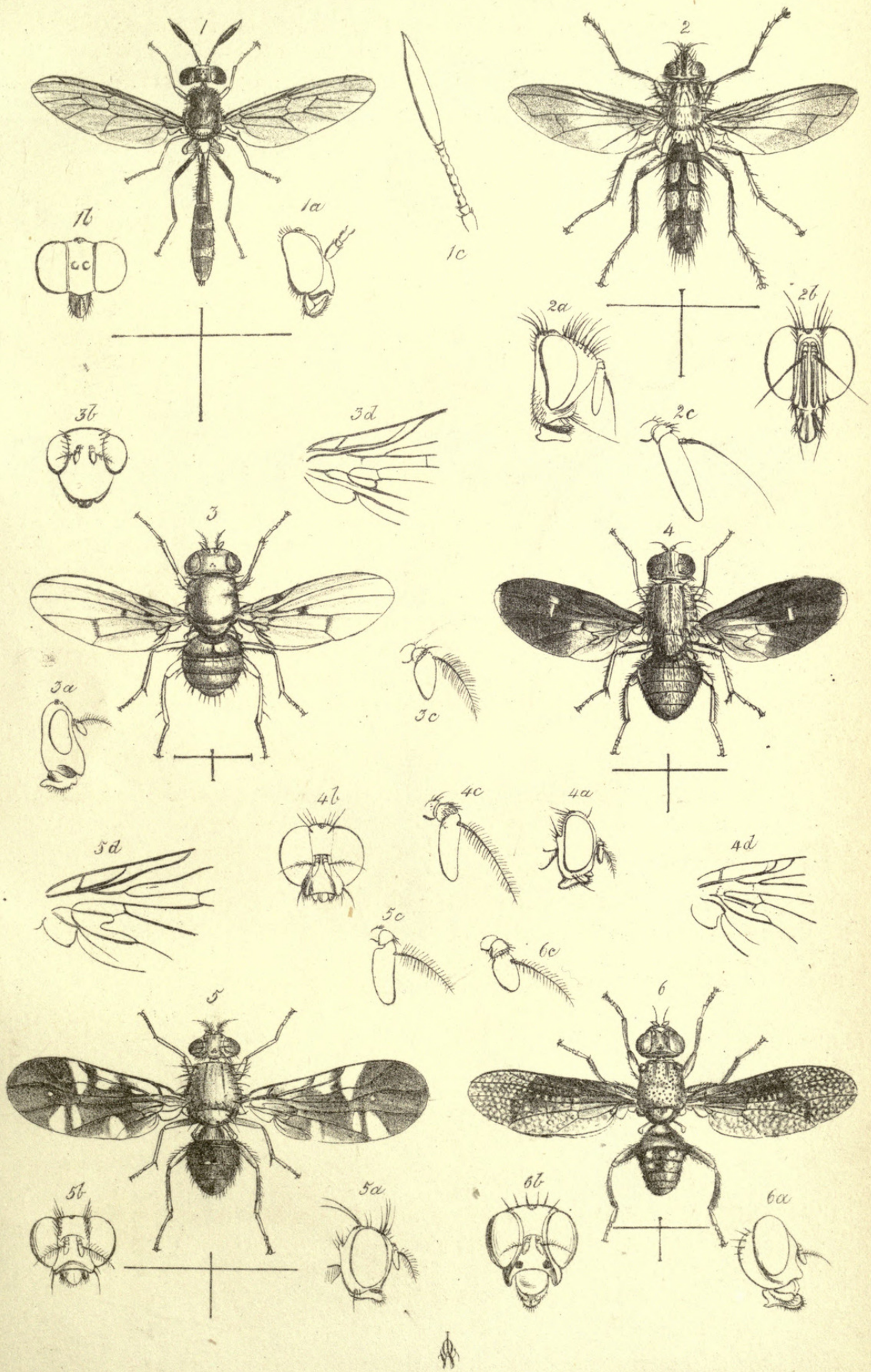
*Fig. 1.* *Massicyta bicolor*; 1*a*, head seen sideways; 1*b*, the head seen in front; 1*c*, antenna.

*Fig. 2.* *Zambesa Ocypteroïdes*; 2*a*, head sideways; 2*b*, ditto in front; 2*c*, antenna.

*Fig. 3.* *Xangelina basigutta*; 3*a*, head sideways; 3*b*, ditto in front; 3*c*, antenna; 3*d*, base of the wing.

*Fig. 4.* *Xarnuta leucotelus*; 4*a*, head sideways; 4*b*, ditto in front; 4*c*, antenna; 4*d*, base of wing.









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