

The cancellation in this species is much finer than in *M. spirata*, and the whorls are not angulate at the sutures.

3. *MUMIOLA TESSELLATA*, *A. Ad.*

M. testa ovata, rimata, sordide alba, anfractibus normalibus 5, planiusculis, liris granosis longitudinalibus confertis, et sulcis validis transversis concinne tessellatis; apertura ovato-oblonga, plica columellari transversa, valida, mediana.

Hab. Tanabe; O-Sima.

An ovate, tessellated species, of very neat form, and peculiar style of sculpture.

Catalogue of Hymenopterous Insects collected by Mr. A. R. WALLACE in the Islands of Mysol, Ceram, Waigiou, Bouru and Timor. By FREDERICK SMITH, Assistant in the Zoological Department, British Museum. Communicated by W. W. SAUNDERS, Esq., F.R.S. & L.S.

[Read Jan. 15, 1863.]

It will be observed, on comparing the contents of the present collection with others described in previous papers, that the species most widely distributed belong to the families *Vespidæ* and *Sphegidae*, both containing insects of powerful flight; whilst among the apterous genera, or those in which the females are only temporarily winged, as in the *Formicidæ*, the range of distribution is much more circumscribed; it is, consequently, here that the largest number of new species are found.

In this paper, no less than four new species of the family *Thynnidæ* are described, one belonging to the genus *Ælurus*, the first, I believe, that has occurred out of Australia. We hope shortly to be enabled to draw up a set of tables showing the range of geographical distribution of the numerous species of Hymenoptera described in the various previous papers on the insects of the Eastern Archipelago.

Fam. EVANIDÆ, *Leach.*

Gen. MEGISCHUS, *Brullé.*

1. *Megischus tarsalis*, *Smith, Proc. Linn. Soc. v. 137. 2.*

Hab. Ceram; Bachian.

2. *Megischus viduus*, *Smith, Proc. Linn. Soc. v. 138. 3.*

Hab. Kaisaa; Ceram.

3. *MEGISCHUS SPOLIATOR.* *M. niger*, mandibulis et antennarum

basi rufis; thorace rugoso; pedibus anticis et intermediis ferrugineis, tarsis posterioribus rubris; alis hyalinis.

Female. Length 7 lines. Black; the mandibles, palpi, and five basal joints of the antennæ ferruginous; the face rugose; the front with three short acute tubercles placed in a triangle, behind which the head is transversely rugulose; behind the eyes is a broad cream-coloured stripe, which extends to the base of the mandibles. The thorax rugose, with large punctures on the metathorax; the anterior and intermediate legs ferruginous, the coxæ of the latter black; the posterior tarsi ferruginous. Abdomen: the first segment, which forms the petiole, transversely striated; the rest of the abdomen smooth and shining; the ovipositor more than one-third longer than the body; the wings hyaline, the nervures black.

Hab. Waigiu.

4. *MEGISCHUS INSIDIATOR.* *M. niger*, capite et antennarum basi rufis; pedibus anticis et intermediis obscure ferrugineis, tarsis posterioribus pallide rubris; alis subhyalinis.

Male. Length 9 lines. The head and base of the antennæ ferruginous; the former transversely striated, with the posterior margin of the vertex smooth and shining, or with a few distant punctures. Thorax strongly, but not closely punctured; the wings fusco-hyaline; the anterior and intermediate tibiæ rufo-testaceous, with the femora obscurely so; the posterior femora with two stout teeth beneath and six minute ones between them; the posterior tibiæ, at their apex, and the tarsi pale rufo-testaceous. The abdomen elongate, lanceolate at the apex, and entirely smooth and shining.

Hab. Mysol.

Fam. ICHNEUMONIDÆ, *Leach.*

Gen. CRYPTUS, *Fabr.*

1. *Cryptus albopictus*, *Smith, Proc. Linn. Soc. v. 61. 3.*

Hab. Mysol; Makassar.

2. *CRYPTUS VOLATILIS.* *C. ferrugineus*, antennis nigris, medio albis; alis hyalinis.

Female. Length 7 lines. Ferruginous; the flagellum black, with the seventh and five following joints white; the claw-joint of the tarsi fuscous; the wings hyaline, the nervures fuscous, the costa and stigma ferruginous.

Hab. Mysol.

3. *CRYPTUS TARSATUS.* *C. ferrugineus*, antennis tarsisque nigris; alis hyalinis, apice fusco fumatis.

Male. Length $6\frac{1}{3}$ lines. Ferruginous, inclining to ochraceous; the thorax beneath, the metathorax, and base of the legs pale ochraceous; the flagellum, posterior tarsi, and the apical joints of the anterior and

intermediate pair black; the wings hyaline, with a fuscous cloud beyond the base of the marginal cell.

Hab. Mysol.

This species very closely resembles the *C. sicarius* from Bachian: it is probably the male of that insect.

Gen. MESOSTENUS, *Brullé*.

1. MESOSTENUS MULTIPICTUS. *M. niger*, capite thoraceque albo pictis; segmentis abdominalibus albo marginatis; pedibus nigro, albo et ferrugineo lavatis; alis hyalinis.

Female. Length 7 lines; ovipositor $4\frac{1}{2}$ lines. Black; a spot on the labrum, an irregular transverse line on the face at the insertion of the antennæ, a line on the cheeks, and another behind the eyes white; the seventh and four following joints of the antennæ white. An ovate spot on the disk of the mesothorax, the tegulæ, scutellum, a spot at the base and apex of the metathorax, and another on each side white; two white spots beneath the wings; the legs spotted and striped with white and black, also coloured with ferruginous tints. The abdomen annulated with white, more or less inclining to ochraceous; some of the bands attenuated or slightly interrupted in the middle; the wings hyaline.

Hab. Mysol.

2. MESOSTENUS PULCHERRIMUS. *M. niger*, antennis medio albis; capite thoraceque albo punctatis; abdominis fasciis albis; alis hyalinis.

Female. Length $5\frac{1}{2}$ lines. Black; two angular spots on the vertex, uniting in front of the ocelli, and five joints in the middle of the antennæ white. Thorax: a semicircular spot on the disk, the scutellum, the spines on the metathorax, two spots on the sides, the anterior and intermediate coxæ, a spot on the posterior pair, the trochanters, the anterior and intermediate tibiæ outside, the base of the posterior pair, and the second and third joints of the intermediate and posterior tarsi white; the posterior femora with a fulvous stripe outside, and a white one within; the anterior femora fulvous, with a white stripe beneath; the intermediate pair are fulvous above and black beneath; wings hyaline and iridescent; the nervures black. Abdomen shining; all the segments, except the fifth and six, annulated with white on their posterior margins; the ovipositor shorter than the abdomen.

Hab. Waigiou.

Gen. PIMPLA, *Fabr.*

1. *Pimpla braconoides*, *Smith*, *Proc. Linn. Soc.* iii. 172. 2 (*var.*).

Hab. Mysol; Key Island.

2. PIMPLA ARROGANS. *P. ferrugineo-lutea*, antennis strigisque tribus thoracis nigris; alis hyalinis, apice unimaculato.

Female. Length 9 lines; of ovipositor 4 lines. Reddish yellow, pale beneath; the face, clypeus, and front of the scape yellow; the antennæ

black, beneath obscurely rufo-fuscous; the thorax with three longitudinal black stripes, and, as well as the abdomen, closely punctured; the apical margins of the latter incrassate, smooth, and shining; legs stout; femora incrassate; the tips of the claws of the tarsi black; wings hyaline, with a dark brown macula at the apex of the marginal cell.

Hab. Ceram.

3. *PIMPLA APICALIS*. *P. flavo-rufa*, scapo supra nigro; alis hyalinis; abdominis segmentis duobus apicalibus nigris.

Male. Length 7 lines. Reddish-yellow; the face and the mandibles yellow; the scape above, a minute spot on the disk of the thorax, and the two apical segments of the abdomen black; the thorax shining and smooth; the metathorax with a semicircular space at its base enclosed by an elevated carina, from which two oblique carinæ run on each side to a lateral carina, which extends from the base to the apex. Abdomen closely punctured, each segment having a transverse curved line; the basal segment impunctate.

Hab. Ceram.

4. *PIMPLA INSIDIATOR*. *P. rufo-flava*, abdomine supra nigro, segmentis flavo marginatis; mesothorace nigro trivittato; alis hyalinis, apice cellulæ marginalis fusco unimaculato.

Female. Length 6 lines; of the ovipositor $2\frac{1}{2}$ lines. Reddish yellow; antennæ fuscous above and ferruginous beneath; the face testaceous yellow; a spot in front of the ocelli, and three longitudinal stripes on the thorax black; the wings hyaline, with a dark brown macula at the apex of the marginal cell. Abdomen black above, the basal and apical segments reddish yellow, the apical margins of all the segments yellow; the pectus black. The *male* differs in having the abdomen reddish yellow, the margins pale, with the base of the third and fourth segments black, the fifth and sixth entirely black, and the base only of the apical one black.

Hab. Mysol.

5. *PIMPLA DESTRUCTOR*. *P. rufo-flava*, antennis tarsisque et abdominis segmentis posterioribus nigris, marginibus apicalibus fasciis flavis; alis hyalinis.

Female. Length 5 lines. Reddish yellow; the face, mandibles, and cheeks pale yellow; the antennæ black, with the scape yellow in front; the claws of the anterior tarsi, the claw-joint of the intermediate pair, and the tarsi and apex of the posterior tibiæ fuscous; the wings hyaline, the nervures dark brown; the mesothorax with two longitudinal pale lines. Abdomen: the two basal segments yellow, the rest black, with their apical margins yellow.

Hab. Mysol.

6. *PIMPLA INCISA*. *P. nigra*, capite, thorace pedibusque anticis et intermediis ferrugineis; alis nigro-fuscis.

Female. Length 8 lines; the ovipositor as long as the body. The head, scape of the antennæ, thorax, anterior and intermediate legs ferruginous, smooth and shining; the face yellow; the flagellum black; the wings dark brown. Abdomen elongate, attenuated at the base and apex; the margins of the segments deeply constricted, and each segment, excepting the basal and two apical ones, with a transverse deeply impressed curved line; rather strongly and regularly punctured.

Hab. Ceram.

7. *PIMPLA INIMICA.* *P. flavo-rufa*, antennis tarsisque posterioribus nigris; alis hyalinis, iridescentibus.

Female. Length 5 lines. Yellowish red; the antennæ black, with the scape ferruginous; the pectus yellow; the wings hyaline, with a yellowish tinge; the nervures ferruginous. Abdomen: the margins of the segments paler than the other parts; the ovipositor black.

Hab. Mysol.

8. *PIMPLA CAUDATA.* *P. lutea*; antennis supra fuscis; abdominis segmentis utrinque puncto nigro; ovipositore nigro.

Female. Length $4\frac{1}{2}$ lines. Pale yellow, the abdomen darkest; the scape yellow in front; the flagellum fulvous beneath, above fuscous; the thorax immaculate; the wings hyaline, with the nervures black; the legs incrassate. Abdomen: the third, fourth, and fifth segments with a minute black spot on each side; the seventh with a minute black transverse spot on each side, at the basal margin; the ovipositor black.

Hab. Mysol.

Gen. RHYSSA, Grav.

1. *Rhyssa vestigator*, *Smith, Proc. Linn. Soc.* iii. 174. 2.

Hab. Mysol; Aru.

2. *RHYSSA VIATOR.* *R. nigra*, capite thoraceque flavo variis, abdomine pedibusque ferrugineis; alis hyalinis, macula fusca ad apicem.

Male. Length $9\frac{1}{2}$ lines. Black; the thorax above transversely rugulose; the face and orbits of the eyes yellow; the posterior margin of the prothorax and a spot beneath the wings yellow; the anterior coxæ yellow beneath; the legs ferruginous, with the intermediate and posterior coxæ, the posterior femora, and the intermediate pair above black; the wings hyaline; the nervures black, with a narrow brown stripe crossing at the middle of the marginal cell and terminating in the second submarginal cell. Abdomen smooth, shining, and obscurely ferruginous, becoming black at the base; the apical margins of the segments bright ferruginous.

Hab. Mysol.

Gen. GLYPTA, Grav.

1. *GLYPTA FRACTICORNIS.* *G. viridi-cyanea*, antennæ pedibusque albo annulatis; alis anticis fascia transversa fusca.

Female. Length $4\frac{3}{4}$ lines. Bright-green, shining; the thorax with rather distant punctures on the disk; the scutellum and metathorax more strongly punctured; the second and third segments with oblique depressions, the first and second punctured. The antennæ, from the eleventh to the seventeenth joints, white, elbowed at the eighteenth, and from thence tapering to a point. The anterior legs, trochanters, base of the tibiæ, and the tarsi white, the apical joint of the latter black; the wings hyaline; the stigma white, the apical half black; the base of the costal nervures white; a fuscous line runs along the apical portion of the externo-medial cell; a fuscous stain also runs from the base of the marginal cell nearly across the anterior wings; the apical margins of the third and seventh segments of the abdomen with a white fascia. The *male* differs in having the antennæ simple, the wings without fasciæ, the body more elongate, and the abdomen without white marginal fasciæ.

Hab. Mysol.

Fam. BRACONIDÆ, *Westw.*

Gen. BRACON, *Fabr.*

1. BRACON OCCULTATOR. *B. rufescenti-flavus*, antennis et ovipositore nigris; alis fuscis, macula hyalina.

Female. Length 5 lines. The head, thorax, and legs of a clay-coloured yellow; the abdomen of a ferruginous yellow; the antennæ black, with the scape yellow; the wings dark fuscous, yellow at the base, with a subhyaline yellow macula beyond the stigma, the nervures testaceous, with the stigma black. The first segment of the abdomen with a deep channel on each side; the second and third segments with a central longitudinal carina; the second has besides this a lateral abbreviated carina on each side at its base, and is also irregularly longitudinally striated; the basal half of the third segment is also striated; the ovipositor black and as long as the thorax and abdomen.

Hab. Mysol.

2. BRACON PENETRATOR. *B. niger*, capite, thorace pedibusque antice et intermediis ferrugineis; alis nigro-fuscis, macula hyalina.

Female. Length 6 lines. The head, thorax, anterior and intermediate legs ferruginous; the head has a yellowish tinge; the antennæ black, with the scape yellow; wings dark brown, with a small hyaline macula beyond the discoidal cells, their extreme base reddish yellow; the posterior legs have the coxæ, trochanters, and knees ferruginous. The first segment of the abdomen with a deep longitudinal channel on each side, and a central carina; the second segment coarsely and irregularly striated at the base, and a longitudinal channel at the lateral margins.

Hab. Mysol.

Gen. AGATHIS, *Latr.*

1. AGATHIS DECEPTOR. *A. ferruginea*, abdomine longitudinaliter striato, apice nigro; alis flavo-hyalinis, apice late fuscis.

Female. Length 6 lines. Ferruginous; the eyes, antennæ, and two apical segments of the abdomen black; the first, second, and third segments of the abdomen strongly and evenly grooved or striated longitudinally; the ovipositor ferruginous, the valves black; the wings yellow-hyaline, with a broad, dark fuscous apical border.

Hab. Ceram.

2. AGATHIS FLAVIPENNIS. *A. ferruginea*, abdominis segmentis supra longitudinaliter striatis; alis flavo-hyalinis, fusco maculatis.

Female. Length $5\frac{1}{2}$ lines. Ferruginous; the face, anterior legs, and the intermediate coxæ paler than the body; the four basal segments of the abdomen longitudinally striated; the ovipositor ferruginous, with the valves black; the wings yellow, their apical margins slightly fuscous, with an ovate brown macula beneath the stigma.

Hab. Ceram.

Gen. CENOCÆLIUS, *Haliday.*

1. CENOCÆLIUS INSIDIATOR. *C. capite*, thorace, pedibus anterioribus et intermediis ferrugineis; alis fuscis; metathorace pube cinerea tecto; abdomine nitide nigro.

Female. Length $4\frac{3}{4}$ lines. Head and thorax ferruginous, the former subquadrate, wider than the thorax, smooth and shining; the antennæ black; the face thinly covered with white pubescence. Thorax rough and pubescent; the scutellum smooth, shining, and elevated; the metathorax black, and densely covered with white pubescence; the wings dark brown, with the nervures black; the anterior and intermediate legs red, the posterior pair black. Abdomen black, smooth, shining, and impunctate; the basal segment with a short petiole and a deep impression on each side at its apical margin above.

Hab. Mysol.

Fam. FORMICIDÆ, *Leach.*Gen. FORMICA, *Linn.*

1. Formica coxalis, *Smith, Proc. Linn. Soc.* iii. 136. 5.

Hab. Waigiou; Aru; Mysol.

2. Formica fragilis, *Smith, Proc. Linn. Soc.* iii. 136. 3.

Hab. Waigiou; Aru.

3. Formica circumspecta, *Smith, Proc. Linn. Soc.* vi. 37. 4.

Hab. Waigiou; Celebes.

4. Formica quadriceps, *Smith, Proc. Linn. Soc.* iii. 137. 9.

Hab. Ceram; Aru.

5. Formica pallida, *Smith, Proc. Linn. Soc.* ii. 57. 19.

Hab. Martabello; Timor; Bachian; Borneo; Sumatra.

6. *Formica nitida*, *Smith, Proc. Linn. Soc.* iii. 138. 11.

Hab. Mysol ; Aru.

7. *Formica pavid*a, *Proc. Linn. Soc.* v. 96. 9.

Hab. Mysol ; Bachian.

8. *Formica lævissima*, *Smith, Proc. Linn. Soc.* iii. 138. 10.

Hab. Waigiou ; Aru ; Bachian.

9. *FORMICA LONGICEPS*. *F. nigra*, sparse griseo pilosa ; capite oblongo, antennis tarsisque rufo-testaceis ; thorace postice attenuato ; abdominis squamula incrassata, supra rotundata.

Worker. Length 3 lines. Black, and thinly covered with a short griseous pile ; the head oblong-quadrate, slightly narrowed anteriorly ; the mandibles short, very stout, and denticulate on their inner margin ; the antennæ ferruginous, with the apical half of the scape black ; the front with a slightly impressed line down the centre. Thorax oblong, narrowed posteriorly, and slightly compressed ; the prothorax rounded in front, its posterior margin slightly constricted ; the articulations of the legs and the tarsi rufo-testaceous. Abdomen ovate, the posterior margins of the segments narrowly pale testaceous ; the node of the peduncle thick but narrow, with its upper margin rounded.

Hab. Waigiou.

Gen. POLYRHACHIS, *Smith*.

1. *Polyrhachis sexspinosus*, *Latr. Hist. Nat. Fourm.* p. 126, pl. 4. f. 21 ♂.

Hab. Waigiou ; Aru ; Philippines ; India ; Mysol.

2. *Polyrhachis Ithonus*, *Smith, Proc. Linn. Soc.* v. 99. 10.

Hab. Waigiou ; Bachian ; Mysol.

3. *Polyrhachis bihamatus*, *Drury, Ins.* ii. pl. 38. f. 7, 8 ♂.

Hab. Waigiou ; Celebes ; Bachian ; Ceram ; Borneo ; India.

4. *Polyrhachis marginatus*, *Smith, Proc. Linn. Soc.* iii. 139. 3.

Hab. Waigiou ; Bachian ; Philippines ; India.

5. *Polyrhachis Diaphantus*, *Smith, Proc. Linn. Soc.* vi. 40. 14.

Hab. Ceram ; Celebes.

6. *Polyrhachis scutellatus*, *Smith, Proc. Linn. Soc.* iii. 140. 7.

Hab. Ceram ; Aru.

7. *Polyrhachis rugifrons*, *Proc. Linn. Soc.* v. 70. 3.

Hab. Ceram ; Celebes.

8. *Polyrhachis dives*, *Smith, Proc. Linn. Soc.* ii. 64. 19.

Hab. Ceram ; Malacca ; Bachian.

9. *Polyrhachis rufofemoratus*, *Smith, Proc. Linn. Soc.* iii. 142. 14.

Hab. Ceram ; Aru ; Waigiou.

10. *Polyrhachis Busiris*, *Smith, Proc. Linn. Soc.* v. 98. 7.

Hab. Ceram ; Bouru ; Waigiou ; Celebes ; Bachian.

11. *Polyrhachis sericatus*, Guér. *Voy. Coq. Zool.* ii. 203; *Atlas Ins.* pl. 8. f. 2, 2 a, b, c, d, ♀.

Hab. Martabello; Waigiou; Aru; New Hebrides; Mysol.

12. *Polyrhachis Valerus*, Smith, *Proc. Linn. Soc.* vi. 40. 12.

Hab. Waigiou; Celebes (Tondano).

13. *Polyrhachis serratus*, Smith, *Proc. Linn. Soc.* iii. 140. 6.

Hab. Waigiou; Aru.

14. *Polyrhachis Orsyllus*, Smith, *Proc. Linn. Soc.* vi. 39. 8.

Hab. Ceram; Celebes (Tondano).

15. *Polyrhachis sculpturatus*, Smith, *Proc. Linn. Soc.* v. 70. 4.

Hab. Timor; Celebes.

16. *Polyrhachis Acasta*, Smith, *Proc. Linn. Soc.* v. 100. 14.

Hab. Bouru; Bachian.

17. **POLYRHACHIS DOLOMEDES.** *P. niger*, capite thoraceque subopacis; abdomine nitido; thorace inermi; pedibus ferrugineis; abdominis squamula spinis duabus acutis armata.

Female. Length $3\frac{1}{4}$ lines. Black, the front very prominent; the ridges under which the antennæ are inserted much elevated; the extreme base and apex of the scape, the apex of the five basal joints of the flagellum, and the following ones entirely ferruginous; the mandibles ferruginous. Thorax oblong-ovate; the metathorax truncate behind; the lateral angles of the verge of the truncation acute, or subdentate; the legs obscure ferruginous, their articulations pale. Abdomen globose, shining and slightly sericeous; the node of the peduncle armed above with two short, stout, acute spines.

Worker. Length $2\frac{1}{2}$ lines. Altogether more shining and smoother than the female; the front very prominent; the antennæ and legs pale ferruginous; the base of the abdomen obscurely ferruginous; the thorax compressed; the meso- and metathorax flattened above.

Hab. Ceram.

Mr. Wallace says, "Nest on a leaf, small, oval, and of papery texture."

18. **POLYRHACHIS TROPHIMUS.** *P. niger*, capite thoraceque longitudinaliter striatis; metathorace petiolique squamula bispinosis; pedibus obscure ferrugineis.

Worker. Length 2 lines. Black; the head shining and finely striated longitudinally. Thorax flattened above and longitudinally striated, slightly shining; the suture between the meso- and metathorax strongly impressed; the metathorax with two slightly elevated acute spines, those on the peduncle are longer, stouter, and curve to the shape of the sides of the abdomen; the legs dark ferruginous. Abdomen globose, smooth, and shining.

Hab. Ceram.

19. **POLYRHACHIS ALPHEUS.** *P. niger*, capite thoraceque minute

verrucatis; thorace spinis duabus minutis antice armato; abdominis squamula supra bispinosa; pedibus ferrugineis.

Worker. Length 3 lines. Black; head and thorax minutely and finely rugose; the head very prominent in front; the mandibles and antennæ ferruginous, the scape more or less fuscous above. Thorax above and at the sides flat, the anterior angles with a short acute tooth; the legs ferruginous, the anterior coxæ black. The abdomen globular, smooth, and shining, with the base castaneous; the node of the peduncle armed with two long, acute, curved spines, which incline slightly towards the abdomen.

Hab. Waigiou.

20. *POLYRHACHIS BUBASTES.* *P. niger*, capite rugoso; thorace spinis duabus acutis antice et postice armato; squama bispinosa; pedibus obscure ferrugineis.

Female. Length $5\frac{1}{2}$ lines. Black, thinly sprinkled with erect hairs; the abdomen covered with ashy, silky pubescence; the legs dark ferruginous. The head very coarsely rugose, much narrowed behind the eyes, with the posterior lateral angles produced and forming curved flattened processes or spines. The thorax elongate, widest in the middle, rugose, but much more finely so than the head; the spines in front short, curved, stout, and acute; the posterior pair are of the same form; the legs obscurely ferruginous; the scale of the abdomen incrassate, rugose, and armed with two short acute spines behind.

Worker. This sex only differs in the form of the thorax, which is oblong, the sides straight and gradually narrowed slightly posteriorly; the sculpture on the thorax stronger than in the female.

Hab. Waigiou.

This species closely resembles the *P. sexspinosus*, but differs too much to be regarded as a variety of that species; the form of the head is very different, being more narrowed behind the eyes, the sides being straight; the short, thick, curved spines on the thorax also distinguish it from *P. sexspinosus*.

21. *POLYRHACHIS PAROMALUS.* *P. niger*, lævis nitidusque, thorace spinis duabus acutis postice armato; pedibus obscure ferrugineis; squama spinis duabus acutis curvatis.

Worker. Length 3 lines. Jet-black, smooth and shining; the mandibles ferruginous; the extreme base and apex of the antennæ rufopiceous; the head much narrowed behind the eyes, which are round and prominent; the front of the head very convex. Thorax: on each side in front a minute tooth or tubercle; armed posteriorly with two long, bent, acute spines, directed backwards; the metathorax oblique; the legs long and obscurely ferruginous. Abdomen: the node of the peduncle with two long, bent, acute spines directed backwards above the base of the abdomen; the latter smooth, shining, and globose.

Hab. Ceram.

Mr. Wallace, in a note, says, "Nest on a tree, consisting of two small cells of soft papery matter, about one inch in diameter; each with one opening."

22. POLYRHACHIS XIPHIAS. *P. niger*, lævis nitidusque, metathorace petiolique squamula bispinosis.

Female. Length $4\frac{1}{4}$ lines. Black; the head subquadrate, the front very convex, smooth and shining; the flagellum pale ferruginous, with two or three of the basal joints fuscous above. Thorax ovate; the metathorax truncate, and armed with two short acute spines; the legs obscure ferruginous, with the articulations palest, the trochanters very pale; wings opaque, the nervures rufo-testaceous, the stigma fuscous. Abdomen globose, smooth and shining; the peduncle with two short acute spines, directed backwards, and slightly curved.

Hab. Waigiou.

23. POLYRHACHIS EURYALUS. *P. niger*, lævis, nitidus, thorace inermi; petioli squamula quadrispinosa.

Worker. Length $2\frac{1}{2}$ lines. Black, smooth and shining; the thorax rounded above, not spined; the outline, when viewed laterally, semi-circular; the legs obscure ferruginous. Abdomen globose; the node of the peduncle with four spines, the two inner ones shorter than the lateral pair, but all short and acute.

Hab. Mysol.

24. POLYRHACHIS DOLOMEDES. *P. niger*, thorace supra deplanato; abdominis squama spinis duabus curvatis armata; abdomine nitido; pedibus obscure ferrugineis; flagello flavo-testaceo.

Worker. Length 3 lines. Black; the head and thorax subopaque; the abdomen smooth and shining; the flagellum testaceous yellow, or pale ferruginous; the legs dark ferruginous. The thorax flattened above, the anterior angle acute, or produced into short acute teeth; the metathorax unarmed; the front of the head very prominent. The abdomen globose; the node of the peduncle with two long acute spines, which are divergent and curve backwards to the shape of the base of the abdomen.

Hab. Waigiou.

This species may very probably prove to be the worker of *Polyrhachis Xiphias*.

25. POLYRHACHIS SPARAXES. *P. niger*, capite thoraceque subopacis; thorace inermi; abdominis squamula trispinosa; alis subhyalinis, nervuris pallide testaceis.

Female. Length 3 lines. Black; the head and thorax finely rugose and subopaque; the abdomen globose and shining; the extreme apex of the flagellum pale rufo-testaceous; the angles of the prothorax acute; the wings yellow, with the nervures pale testaceous; the node of the peduncle with three acute spines, erect, and of equal length; the abdomen slightly sericeous.

Hab. Mysol.

This is very distinct from *P. trispinosus*, which is much larger and has the anterior angles of the thorax rounded; the spines on the node of the peduncle are shorter, and the central one shorter than the others.

26. *POLYRHACHIS NIGRICEPS*. *P. ferrugineus*, nitidus, capite nigro; thorace spinis duabus acutis antice et postice armato.

Worker. Length 4 lines. Smooth, shining, and impunctate; the head oblong, the eyes prominent and placed backwards; the mandibles stout, obscurely ferruginous, and quadridentate at the apex; the ridges on the front, at the sides of which the antennæ are inserted, much elevated, and with a less elevated ridge between them; the antennæ ferruginous. Thorax elongate as in *P. sexspinosus*, with two acute teeth in front diverging outwards, and two suberect ones behind; the legs elongate, paler than the thorax. Abdomen paler than the head and thorax, the node of the peduncle incrassate, somewhat wedge-shaped above.

Hab. Waigiou.

27. *POLYRHACHIS PAXILLUS*. *P. niger*; thorace supra deplanato, metathorace et pedunculo spinis duabus longis acutis armatis; pedibus ferrugineis.

Worker. Length $3\frac{1}{2}$ lines. Black; the head and thorax finely shagreened; the mandibles ferruginous, but obscure, finely striated; the flagellum fusco-ferruginous; the extreme base of the scape bright ferruginous. Thorax oblong, narrowed behind, flattened above and at the sides, the lateral margins raised, particularly those of the prothorax in front; the metathorax has two long, slightly bent, acute spines directed backwards over the node of the peduncle, which has also two acute spines directed backwards; the legs ferruginous. Abdomen globose, smooth and shining, with a fine silky fulvous pile which changes colour in different lights.

Hab. Martabello.

Gen. *ECOPHYLLA*, *Smith*.

1. *Ecophylla smaragdina*, *Smith, Proc. Linn. Soc.* v. 102. 1. (*Formica smaragdina*, *Fabr. Syst. Piez.* p. 397. 4.)

Hab. Mysol; Timor; Waigiou; Gilolo; Bachian; Dory; Aru; Borneo; Philippines; Java; India.

Fam. *PONERIDÆ*, *Smith*.

Gen. *PONERA*, *Latr.*

1. *Ponera parallela*, *Smith, Proc. Linn. Soc.* iii. 143. 3.

Hab. Waigiou; Aru; Celebes; Mysol.

2. *Ponera læviceps*, *Smith, Proc. Linn. Soc.* ii. 69. 13.

Hab. Waigiou; Celebes; Bachian; Borneo.

3. *Ponera cuprea*, *Smith, Proc. Linn. Soc.* v. 104. 6.

Hab. Ceram; Dory.

4. *PONERA PURPUREA*. *P. purpureo-cærulea*; capite, thorace abdominisque basi profunde striatis; abdominis nodo incrassato, supra spinis duabus parvis armato.

Worker. Length 4 lines. Purple-blue, the antennæ and legs fusco-ferruginous; the second and following segments of the abdomen black, with the margins of the segments rufo-piceous. The head evenly, strongly, and longitudinally striated; the striation on the prothorax is strong, transverse, and curved; that on the thorax behind is also transverse and runs obliquely forwards at the sides; the striæ on the peduncle run round it, being circular; on the first segment of the abdomen, in the centre of its apical margin, is a minute curved stria in the form of a horse-shoe, round which passes a second, and so on, each successive stria being an enlarged form of the preceding; the second and following segments with a silky texture.

Hab. Gilolo.

5. *PONERA TORTUOLOSA*. *P. æneo-nigra*; capite, thorace abdominisque basi striatis; nodo spinis duabus acutis armato. (*Operaria*.)—*P. nitida*, nigra; capite longitudinaliter striato; thorace profunde punctato. (*Fœmina*.)

Worker. Length 5 lines. Obscurely nigro-æneous, covered with a short yellowish downy pile, and sprinkled with longer cinereous hair; the head strongly striated, the striæ radiating as it were from the middle of the face and running obliquely to the sides of the head; down the cheeks the striæ are longitudinal; the mandibles obscure rufo-piceous. Thorax: the striæ on the prothorax are transverse and curved, behind which they are oblique, running from the middle forwards down the sides; the peduncle is incrassate, rounded in front and truncate behind, the striæ running round, above armed with two acute spines. The first node of the abdomen has a curved striation much more delicate than that on the thorax; the following segments not striated, with their apical margins rufo-piceous; the legs dark fusco-ferruginous.

Female. The same size as the worker, shining, the head longitudinally striated, the thorax with large scattered punctures; the abdomen impunctate, with the margins of the segments rufo-piceous; wings slightly fuscous, the nervures black, with a dark fuscous cloud in the marginal cell; the tibiæ and tarsi ferruginous as well as the mandibles and antennæ.

Hab. Ceram; Bouru.

The sexes were identified by Mr. Wallace.

Gen. AMBLYOPONE, *Erichs.*

1. *Amblyopone castaneus*, *Smith, Proc. Linn. Soc.* v. 105. 1.

Hab. Ceram; Bachian.

Gen. ECTATOMMA, *Smith*.

- 1.
- Ectatomma rugosa*
- ,
- Smith, Proc. Linn. Soc.*
- iv. 143. 1.

Hab. Ceram; Aru.Gen. ODONTOMACHUS, *Latr.*

- 1.
- Odontomachus simillimus*
- ,
- Smith, Cat. Form.*
- p. 80. 11;
- Proc. Linn. Soc.*
- iv. 144. 1.

Hab. Waigiou; Ceram; Aru; Ceylon; Goram.

- 2.
- Odontomachus tyrannicus*
- ,
- Smith, Proc. Linn. Soc.*
- vi. 44. 3.

Hab. Waigiou; Aru; Mysol; Celebes.

- 3.
- Odontomachus malignus*
- ,
- Smith, Proc. Linn. Soc.*
- iii. 144. 3.

Hab. Ceram; Aru; Mysol.

- 4.
- Odontomachus nigriceps*
- ,
- Smith, Proc. Linn. Soc.*
- v. 103. 3.

Hab. Mysol; New Guinea (Dory).

5. ODONTOMACHUS CEPHALOTES.
- O. ferrugineus*
- , capite abdomineque longitudinaliter striatis; thorace oblongo, transversim striato.

Worker. Length $5\frac{1}{4}$ lines. Ferruginous; the head and abdomen, or sometimes the entire insect, more or less fuscous, the antennæ and legs pale ferruginous; the mandibles tridentate at the apex, the inner and outer teeth, particularly the former, blunt at their apex; their inner margin without teeth; the head large, oblong-quadrate, finely striated longitudinally, and having a glossy silky appearance. The thorax and node of the abdomen finely striated transversely. The abdomen striated transversely at the base, the striæ curving at the sides and then running in a longitudinal direction to the apex.

Hab. Ceram.

6. ODONTOMACHUS ACICULATUS.
- O. fusco-ferrugineus*
- ; capite supra longitudinaliter striato, thorace abdomineque transversim striatis.

Worker. Length $5\frac{1}{2}$ lines. Blackish brown, with the antennæ, legs, and mandibles ferruginous; the head posteriorly and the node of the peduncle reddish brown; the mandibles tridentate at the apex, their inner margin serrated. The face longitudinally striated; the sides of the head behind the eyes obliquely striated, the striation much finer than that on the face. Thorax: the prothorax with a circular striation, behind which it is transverse. The node of the peduncle transversely striated, terminating above in one acute spine; the abdomen transversely and finely aciculate.

Hab. Mysol.Gen. PODOMYRMA, *Smith*.

- 1.
- Podomyrma basalis*
- ,
- Smith, Proc. Linn. Soc.*
- iii. 147. 4.

Hab. Mysol; Bouru; Amboyna; Aru; Dory.

The specimens from Mysol consist of a worker and a female: the latter

differs from the former in having the thorax oblong-ovate, with a few striæ down the middle, leaving the sides smooth; the striæ do not extend beyond the scutellum, the metathorax being smooth and shining; the first node of the peduncle is oblong, slightly curving downwards, and not toothed either above or beneath; the second node is globose and longitudinally striated. Abdomen oblong-ovate, pale ferruginous or rather clay-coloured; the apical margin of the first segment with a broad black band, which is toothed in the middle; the second segment has a narrower band.

2. *PODOMYRMA LÆVISSIMA*. *P. nigro-ferruginea*; thorace abdomineque lævissimis lucidisque; capite delicatule punctato; femoribus medio valde incrassatis, basi tenuissimis.

Worker. Length $2\frac{3}{4}$ lines. Dark castaneous, nearly black, with the mandibles, abdomen at the base, and the legs in parts obscure ferruginous, the mandibles palest; the head oblong-quadrate, with the angles rounded, delicately striated between the antennæ, and very finely punctured behind their insertion. Thorax deeply strangulated in the middle, the anterior angles produced and acute.

Hab. Mysol.

3. *PODOMYRMA RUFICEPS*. *P. fusco-ferruginea*; capite rubro; capite thoraceque longitudinaliter striatim rugulosis; femoribus medio valde incrassatis, basi tenuissimis; pedibus abdomineque lævissimis lucidisque.

Worker. Length 4 lines. Head ferruginous, the antennæ and teeth of the mandibles black; the thorax, abdomen, and legs dark fusco-ferruginous; the head, thorax, and nodes of the petiole coarsely and longitudinally rugose, on the disk of the thorax running into irregular coarse striæ; on each side of the thorax in front is a stout blunt spine; the metathorax has two short teeth or spines, and the first node of the abdomen has a tooth in the middle above, and another at the base beneath. The abdomen is oblong-ovate, and pointed at the apex; the legs smooth and shining, with the femora much swollen in the middle; the antennæ, thorax, abdomen, and legs thinly sprinkled with erect pale hairs.

Hab. Mysol.

Gen. *PSEUDOMYRMA*, Guér.

1. *Pseudomyrma læviceps*, *Smith, Proc. Linn. Soc.* iii. 145. 1.

Hab. Ceram; Dory; Aru; Waigiou.

2. *PSEUDOMYRMA CARBONARIA*. *P. aterrima*, lævis, nitida; antennis, mandibulis, tibiis tarsisque rufo-testaceis.

Worker. Length 2 lines. Jet-black, smooth and shining; the eyes large, oblong-ovate, occupying a considerable portion of the sides of the head; the antennæ and mandibles rufo-testaceous. Thorax oblong, widest in front, the divisions strongly impressed; the tibiæ and

tarsi rufo-testaceous. Abdomen oblong-ovate, the petiole of the first node short; the second node wider than the first, subglobose.

Female. Resembles the worker, but with the head longer, the sides more parallel, and having three ocelli on the vertex; the legs are rather darker; in other respects both sexes are alike.

Hab. Bouru.

Gen. MYRMICA, *Latr.*

1. *Myrmica poneroides*, *Smith, Proc. Linn. Soc. v. 107. 2.*

Hab. Ceram; Bouru; Bachian.

2. MYRMICA INCERTA. *M. nigra*, capite ferrugineo; capite thoraceque longitudinaliter striatis; metathorace bispinoso.

Female. Length $2\frac{3}{4}$ lines. Head ferruginous; the thorax and abdomen black, the former obscurely ferruginous on the disk; the legs rufo-fuscous, with the anterior tibiæ and all the tarsi palest; the flagellum pale ferruginous. The head heart-shaped, and, as well as the thorax, longitudinally striated; the thorax short and rounded, posteriorly armed with two short acute spines. Abdomen rounded, truncate at the base, and covered with a fine silky pubescence; the first node of the abdomen small and compressed, the second transverse and more than twice the width of the first.

Hab. Mysol.

This species is probably not a true *Myrmica*; it has exactly the appearance of a small *Ecodoma*; it may be a female of *Crematogaster*.

3. MYRMICA MÆSTA. *M. fusco-nigra*, nitida; mandibulis, antennis pedibusque rufo-ferrugineis; metathorace mutico.

Worker. Length 2 lines. Blackish brown, shining; the anterior margin of the head, the mandibles and antennæ rufo-ferruginous; the head finely striated longitudinally. Thorax delicately striated and with scattered punctures; the legs rufo-ferruginous. Abdomen smooth and shining, the nodes globose.

Hab. Martabello.

4. MYRMICA UMBRIPENNIS. *M. rufo-ferruginea*, nitida; capite thoraceque sparse punctatis, alis nigro-fuscis.

Female. Length $2\frac{1}{2}$ lines. Bright rufo-ferruginous, smooth and shining; the head with a few fine, distant punctures. Thorax short, ovate, and with a few strong, distant punctures; the wings dark brown; the metathorax subdentate. Abdomen ovate, the nodes of the peduncle subovate, smooth and shining.

Hab. Mysol.

Fam. ATTIDÆ, *Smith.*

Gen. SOLENOPSIS, *Westw.*

1. *Solenopsis cephalotes*, *Smith, Proc. Linn. Soc. v. 113. 1.*

Hab. Ceram; Aru; Celebes.

2. *Solenopsis laboriosa*, *Smith, Proc. Linn. Soc.* vi. 48. 2.

Hab. Waigiou ; Celebes (Tondano).

3. *SOLENOPSIS CALIDA*. *S. fusco-ferruginea* ; capite oblongo-ovato, longitudinaliter striato, postice transverse striato ; abdomine oblongo, nitido ; pedibus ferrugineis.

Female. Length 7 lines. Dark brown, with the anterior margin of the face and the antennæ ferruginous ; the head longitudinally striated before the ocelli, behind which it has a curved rugose striation ; the mandibles obscure ferruginous, smooth, with a few oblong punctures at their inner margin, and having two teeth at their apex. Thorax ovate, shining, with five distant punctures ; the sutures ferruginous, as well as the apex of the metathorax ; the legs bright pale ferruginous ; the lateral angles of the superior surface of the metathorax subdentate. Abdomen oblong-ovate, the apical margins of the segments broadly obscure ferruginous ; the nodes of the abdomen thickened, transverse, rounded above.

Hab. Ceram.

Gen. *PHEIDOLE*, *Westw.*

1. *Pheidole megacephala*, *Smith, Proc. Linn. Soc.* v. 112. 5.

Hab. Timor ; Tondano ; Bachian.

2. *PHEIDOLE SINGULARIS*. *P. rufo-ferruginea* ; capite maximo, striato et punctato, postice emarginato ; thorace quadrispinoso.

Worker. Length 2 lines. Rufo-ferruginous ; the head very large, more than four times the size of the abdomen, longitudinally striated, with the sides and posterior portion strongly punctured, the posterior margin deeply emarginate ; a curved transverse depression crossing from eye to eye, the curve being backwards ; the mandibles very stout, smooth, and without teeth on their inner margin. Thorax armed in front with a stout acute spine on each side ; the metathorax has also two spines, which are much smaller, nearly upright, and acute. Abdomen small, ovate, and fuscous towards the apex.

Hab. Mysol.

3. *PHEIDOLE MORDAX*. *P. rufo-ferruginea* ; capite maximo, longitudinaliter striato ; metathoracis spinis acutis, minutissimis ; abdomine apice fusco.

Worker. Length 2 lines. Rufo-ferruginous ; the head very large, at least four times the size of the abdomen, longitudinally striated, deeply emarginate behind. The thorax smooth and shining in front, and with two minute, erect, acute spines on the metathorax ; the legs long, slender, and paler than the body. Abdomen small and ovate, ferruginous at the base and fuscous at the apex ; the first node of the peduncle small and compressed, the second subglobose and transverse.

Hab. Mysol.

4. *PHEIDOLE PENETRALIS*. *P. rufo-ferruginea*; capite maximo, in medio sulcato et longitudinaliter striato; metathorace bispinoso; abdomine apice fusco.

Worker. Length 2 lines. Rufo-ferruginous; the head very large, longitudinally deeply striated, the striæ scarcely extending to the posterior margin, which is roughened and deeply emarginate in the middle; the mandibles incrassate, smooth and shining. Thorax very narrow, strangled in the middle, smooth and shining anteriorly, and armed with two small acute spines on the metathorax; the abdomen fuscous, with the base ferruginous.

Hab. Mysol.

Subfam. CRYPTOCERIDÆ, *Smith*.

Gen. ECHINOPLA, *Smith*.

1. *Echinopla striata*, *Smith*, *Proc. Linn. Soc.* ii. 80. 3.

Hab. Ceram; Celebes; Malacca.

2. *ECHINOPLA NITIDA*. *E. nigra*; capite, thorace et abdomine lævibus, nitidis; pedunculo transverso; antennarum pedumque apicibus ferrugineis.

Worker. Length 2 lines. Jet-black, smooth and shining; the apex of the antennæ rufo-testaceous; the head rounded in front and transverse behind; eyes round and very prominent. The thorax oblong-quadrate, scarcely as wide as the head, rather widest behind; the apical joints of the tarsi ferruginous. Abdomen subglobose; the node of the peduncle transverse, each lateral extremity armed with three teeth, two of which are at the upper margin of the extremity, the third and the largest being at the lower margin.

Hab. Ceram.

3. *ECHINOPLA DECEPTOR*. *E. nigra*, capite thoraceque longitudinaliter striatis; abdomine nigro-cæruleo, squama in utroque latere spina horizontali; tarsis apicalibus pallide testaceis.

Female. Length 4 lines. Black, with the abdomen obscurely blue. The head a little wider than the thorax and longitudinally striated. Thorax oblong, longitudinally striated, the sides parallel to the base of the scutellum, then obliquely narrowed to the base of the metathorax, the sides of which are rounded and expanded beyond the width of the prothorax; the metathorax is also rounded behind; the claw-joint of the tarsi testaceous; the legs and also the body thinly sprinkled with pale hairs; wings wanting. Abdomen globose and pubescent, the scale of the peduncle transverse, its superior margin slightly curved, and with a number of minute denticulations, terminating on each side in an acute point or spine.

Hab. Bouru.

Gen. CATAULACUS, *Smith*.

1. *Cataulacus setosus*, *Smith, Proc. Linn. Soc.* v. 114. 1.

Hab. Mysol; Waigiou; Bachian.

The specimen from Mysol is a female: this sex differs in having a single ocellus on the vertex; it is very minute, and situated in a pit; the head is rather smaller, and the eyes also are smaller; the thorax is only subdentate behind; the abdomen is oblong-ovate, and emarginate at the base.

Fam. MUTILLIDÆ, *Leach*.Gen. MUTILLA, *Linn*.

1. *Mutilla Ianthea*, *Smith, Proc. Linn. Soc.* v. 115. 3.

Hab. Ceram; Amboyna; Bachian.

2. *Mutilla anthylla*, *Smith, Proc. Linn. Soc.* v. 115. 4.

Hab. Ceram; Gilolo; Bachian.

3. *Mutilla nigra*, *Smith, Proc. Linn. Soc.* iii. 151. 4.

Hab. Ceram; Aru.

4. *Mutilla suspiciosa*, *Smith, Proc. Linn. Soc.* ii. 84. 5.

Hab. Bouru; Makassar; Amboyna; Bachian; Borneo.

5. *MUTILLA MIRABILIS*. *M. cupreo-viridi tincta*; scapo pedibusque ferrugineis; alis fuscis, basi hyalinis.

Male. Length 5 lines. Entirely bright copper-coloured, with tints of green in different lights; the head and thorax strongly punctured, the abdomen more finely and distantly so; the mandibles, palpi, scape, two basal joints of the flagellum, and the legs ferruginous, the rest of the antennæ black; the head, thorax, legs, and two basal segments of the abdomen thinly covered with erect, long, pale pubescence, that on the rest of the abdomen black; the wings brown, with their base subhyaline.

Hab. Waigiou.

6. *MUTILLA DAMIA*. *M. capite abdomineque nigris*; thorace rubro; alis fuscis, basi hyalinis; abdomine fascia albo-pubescente decorato.

Male. Length $3\frac{1}{2}$ –4 lines. Head, abdomen, legs, and antennæ black; thorax red, thinly sprinkled with long pale hair; the apical margin of the second segment of the abdomen with a fascia of long snow-white hair; the margin of the basal segment is also thinly fringed with the same. The head and thorax strongly punctured; the abdomen with more distant strong punctures; the pubescence on the third, fourth, fifth, and sixth segments black, that on the apical one white; the wings fuscous, with their base subhyaline.

Hab. Ceram.

7. *MUTILLA THERA*. *M. capite abdomineque nigris*; thorace rubro; abdominis segmento secundo fascia albo-pubescente ornato.

Female. Length 4 lines. Head, antennæ, legs, and abdomen black, finely shagreened and subopaque; thinly sprinkled with black hairs; the legs sprinkled with glittering white hairs. The thorax red, rugose, and clothed with decumbent red hair; its anterior and posterior margins transverse; the sides rounded, but slightly narrowed behind. The apical margin of the second segment of the abdomen with a narrow band of white pubescence, produced and widened in the middle of the band; the fifth segment fringed with glittering pale pubescence; the sixth longitudinally striated, with the base ferruginous.

Hab. Ceram.

8. *MUTILLA FAUSTA.* *M.* capite thoraceque nigro-cæruleis; abdomine nigro, fascia argenteo-pubescente decorato.

Female. Length $2\frac{3}{4}$ lines. Head and thorax blue-black, and closely punctured; the palpi elongate and pale rufo-testaceous; the mandibles, apex of the scape, the tibiæ and tarsi ferruginous; the tibiæ dusky outside; the head wider than the thorax, and transverse-quadrate above. The basal segment of the abdomen yellowish above; the second segment with its apical margin pale testaceous and clothed with silvery-white hair, the band produced in the middle into a bilobed shape; the apical segment rufo-testaceous, smooth and shining; the insect thinly sprinkled with erect pale pubescence.

Hab. Mysol.

Gen. *TIPHIA*, *Fabr.*

1. *TIPHIA INTRUDENS.* *T.* nitida, atra, punctata, sparse griseo-pubescent; femoribus quatuor posticis compressis; linea intermedia metathoracis ad lineam transversam excurrente.

Female. Length $3\frac{1}{2}$ –5 lines. Black and shining; the head with strong but rather distant punctures; the mandibles ferruginous. Thorax: the pro- and mesothorax strongly punctured, the posterior margin of the former smooth and shining; the metathorax smooth, the superior surface with three elevated longitudinal lines, all extending to the verge of the truncation,—the lines nearly parallel, very slightly converging towards the apex; the anterior wings fusco-hyaline; the tegulæ smooth and shining, with their posterior margins rufo-piceous; the tips of the femora rufo-piceous. Abdomen delicately punctured; the apical segment rugose, with the tip ferruginous; the legs, the sides and apex of the abdomen with glittering pale hairs.

The *male* differs in having the marginal cell closed and the stigma large and black.

Hab. Mysol.

Fam. *THYNNIDÆ*, *Erichs.*

Gen. *THYNNUS*, *Fabr.*

1. *THYNNUS LUGUBRIS.* *T.* niger, delicatule punctulatus; alis fusco-nigris.

Male. Length 9 lines. Black, closely and finely punctured; the clypeus with its anterior margin truncate; longitudinally and irregularly striated, the striæ interspersed with strong punctures; the orbits of the eyes narrowly bordered with yellow, the border interrupted above. The disk of the thorax more strongly punctured than the other portion; the anterior margin of the prothorax fringed with dark pubescence; the wings dark fuscous, palest at their apical margins. Abdomen shining, more delicately and more distantly punctured than the head and thorax; the apical segment longitudinally striated above; the sixth segment has a short acute spine on each side beneath; the seventh is terminated by a tridentate mucro, and has also on each side a small, flattened, projecting process; the abdomen is much more strongly punctured beneath than above.

Hab. Ceram.

2. *THYNNUS INSULARIS.* *T. ferrugineus*, capite thoraceque rude punctatis.

Female. Length 3 lines. Ferruginous; the head quadrate, strongly punctured, more or less fuscous, the eyes situated at the anterior angles; the antennæ and mandibles pale ferruginous. Thorax coarsely punctured, the metathorax obliquely rounded; the legs spinose. Abdomen oblong, strongly punctured, the segments darkest at the base; the body thinly sprinkled with pale, erect pubescence.

Hab. Mysol.

3. *THYNNUS PLACIDUS.* *T. niger*, nitidus, punctulatus; abdomine lævi, delicatule et sparse punctulato; alis anticis fusco-nigris, purpureo-iridescentibus, posticis subhyalinis.

Male. Length $8\frac{1}{2}$ lines. Black and shining; the head and thorax finely and closely punctured, the abdomen delicately and distantly so. The anterior margin of the clypeus truncate; the outer orbits of the eyes narrowly bordered with yellow; there is also an abbreviated line on their inner orbits. The wings with a slight purple iridescence; the anterior pair dark fuscous, with their apical margins paler; the posterior pair subhyaline. Abdomen shining black, with a fine chalybeous iridescence, delicately and not very closely punctured, beneath strongly punctured.

Hab. Waigiou.

4. *THYNNUS PULLATUS.* *T. niger*, nitidus, capite thoraceque punctatis, alis fusco-hyalinis. (*Mas.*)—*T. niger*, thorace antice coarcte punctato, abdomine utrinque maculis tribus flavis. (*Fæm.*)

Male. Length 9 lines. Black, the head and thorax closely punctured, slightly shining; a narrow abbreviated line on the inner orbits of the eyes and a similar line behind them yellow; a minute yellow spot at the base of the mandibles; the pubescence on the head, on the sides of the thorax and beneath, cinereous; the wings subhyaline, tinged

with brown. Abdomen conical, gradually tapering from the base to the apex, smooth, shining, and delicately punctured.

Female. Length $6\frac{1}{2}$ lines. Black, pubescent; the mandibles in the middle and the scape of the antennæ at the apex ferruginous; the vertex with a deep depression on each side above, with a raised central carina between them. The thorax above closely and deeply punctured; the metathorax smooth and obliquely truncate; the legs obscurely ferruginous, and thickly set with rigid hairs and spines of a pale testaceous colour. Abdomen: the first segment thickly fringed with pale pubescence at the base; the second transversely striated, the following segments smooth and shining; the first and second segments with a small yellow spot on each side; the third segment has a transverse yellow stripe; beneath, the segments are punctured, except the apical one, which is longitudinally striated.

Hab. Bouru.

Gen. *ÆLURUS*, *Klug.*

1. *ÆLURUS COMATUS*. *Æ. niger*, capite thoraceque rude punctatis; abdomine lævi, nitido; capitis margine postico pube cinerea vestito; alis hyalinis.

Male. Length 5 lines. Black; the head and thorax closely and strongly punctured, and thinly sprinkled with cinereous pubescence; head transverse, rather wider than the thorax, the posterior margin with a long fringe of cinereous pubescence; the face before the insertion of the antennæ with a silvery-white pubescence. The wings hyaline and iridescent, the nervures fuscous. The abdomen petiolated, smooth and shining, terminating in a trifid mucro.

Hab. Waigiou.

This is the first species that has been captured away from the Australian continent, with the exception of two species from Brazil.

Gen. *SCLERODERMA*, *Latr.*

1. *SCLERODERMA MODESTA*. *S. capite*, thorace pedibusque pallide testaceis; abdomine rufo-piceo cingulato.

Female. Length 2 lines. The head, antennæ, thorax, and legs pale honey-yellow; the tips of the mandibles ferruginous; the sutures of the thorax and the articulations of the legs with ferruginous stains; the exterior margin of the intermediate tibiæ serrated. The basal margins of the segments of the abdomen broadly rufo-piceous; the abdomen elongate and lanceolate.

Hab. Mysol.

Gen. *SCOLIA*, *Fabr.*

DIV. 1. *Two submarginal cells and one recurrent nervure.*

1. *Scolia insularis*, *Smith*, *Proc. Linn. Soc.* iv. 153. 4.

Hab. Ceram; Bouru; Key Island.

2. *Scolia fulgidipennis*, *Smith, Proc. Linn. Soc.* iv. 152. 3.

Hab. Waigiou; Aru; Bachian; Martabello.

3. *Scolia nitida*, *Smith, Proc. Linn. Soc.* iv. 152. 2.

Hab. Waigiou; Bouru; Timor; Aru; Amboyna; Dory; Martabello.

4. *Scolia captiva*, *Smith, Proc. Linn. Soc.* vi. 22. 1.

Hab. Waigiou; Gilolo; Martabello.

5. *SCOLIA DUBIA*. *S. nigra*, nitida, punctatissima; alis fuscis, violaceo-micantibus; abdomine cæruleo-iridescente.

Male. Length $7\frac{1}{2}$ lines. Black and shining; the head and thorax closely and strongly punctured; the mandibles obscurely rufo-piceous; the wings dark brown, with a bright violet iridescence, changeable in different lights, occasionally showing tints of blue; the metathorax roughly punctured; the legs thickly set with rigid black hairs. The abdomen glossy, more finely punctured than the head and thorax, the basal segment most strongly so; adorned with a beautiful blue iridescence, in some lights reflecting faint tints of violet; the apical segment triangular, punctured, with its posterior margin narrowly pale testaceous.

Hab. Ceram.

6. *SCOLIA LARRADIFORMIS*. *S. nigra*, nitida, sparse punctata; abdomine alisque violaceo-micantibus.

Female. Length $5\frac{1}{2}$ lines. Black, smooth and shining, finely and sparingly punctured, particularly on the head and thorax above; the metathorax truncate, and having a few strong punctures at the verge of the truncation, the latter smooth and opaque; the head as wide as the thorax and subquadrate, with the angles rounded, convex in front; the ocelli minute; the wings dark brown, with a beautiful violet iridescence; the legs pubescent, with the spurs on the tibiæ simple. Abdomen subpetiolate, shining, with a slight blue and violet iridescence; the basal segment with a few strongish punctures, the apical segment roughly punctured.

Hab. Waigiou.

7. *SCOLIA MORATA*. *S. nigra*, hirta, punctata; thoracis dorso lævi; alis nigro-violaceis, abdomine nigro-chalybæo.

Male. Length $4\frac{1}{2}$ – $5\frac{1}{2}$ lines. Black, and thinly covered with black pubescence; the head and thorax above very finely and sparingly punctured; wings obscure brown, with a beautiful violet iridescence, tinged in some lights with coppery lustre; the third discoidal cell small, its apical recurrent nervure uniting with the basal one as in *S. dimidiata*. The abdomen smooth, shining, and finely punctured, with a beautiful chalybeous iridescence.

Hab. Mysol.

DIV. 2. *The anterior wings with two submarginal cells and two recurrent nervures.*

8. *Scolia aurulenta*, *Smith, Cat. Hym. Ins.* pt. 3. 102. 80.

Hab. Mysol; Bouru; Bachian; Silhet; Celebes; Philippine Islands.

9. *Scolia aureicollis*, *St. Farg. Hym.* iii. 499. 6.

Hab. Mysol; Ternate; Bachian; Philippines; Celebes; Silhet.

10. *Scolia fimbriata*, *Burm. Abh. Nat. Ges. Halle*, i. 25. 6.

Hab. Waigiou; Java.

11. *Scolia agilis*, *Smith, Proc. Linn. Soc.* iv. 10. 6.

Hab. Waigiou; Celebes.

DIV. 3. *The anterior wings with three submarginal cells and two recurrent nervures.*

12. *Scolia dimidiata*, *Guér. Voy. Coq. Zool.* ii. pt. 2. 247.

Hab. Ceram; Bouru; Gilolo; Celebes; Bachian; Amboyna; Senegal.

Fam. POMPILIDÆ, *Leach.*

Gen. POMPILUS, *Fabr.*

1. *Pompilus bicolor*, *Fabr. Syst. Piez.* p. 198. 56.

Hab. Ceram; Australia.

The single example from Ceram is a male; it differs from the Australian specimens in having not only the apical half of the second segment of the abdomen black, but the third and fourth segments also; in other respects they are identical.

2. *Pompilus depredator*, *Smith, Proc. Linn. Soc.* v. 119. 3.

Hab. Bachian.

3. POMPILUS JUCUNDUS. *P. ater*, capite thoraceque pube cinerea tectis; alis hyalinis, fasciis duabus fuscis; prothoracis margine postico flavo.

Female. Length $5\frac{1}{2}$ lines. Black; the head and thorax with a thin cinereous pile; the scape yellow in front; the flagellum fulvous beneath; the anterior margin of the clypeus and tips of the mandibles rufo-piceous; the palpi pale testaceous. The posterior margin of the prothorax yellow; the wings hyaline, the anterior pair with a narrow fuscous fascia crossing the base of the first and second discoidal cells, and a second fascia as wide as the second and third submarginal cells; the tips of the wings milky white; the extreme apex of the coxæ yellow; the tips of the femora, the tibiæ and tarsi ferruginous beneath. Abdomen shining, its apex rufo-piceous.

Hab. Mysol.

4. POMPILUS VIGILANS. *P. ater*, guttis maculisque variegatus; alis hyalinis, apice fuscis; tibiis posticis basi flavis.

Female. Length 5 lines. Black; the orbits of the eyes, interrupted above, and the anterior margin of the clypeus yellow, the yellow

margin of the clypeus notched in the middle; the mandibles ferruginous, their base black. The posterior margin of the prothorax yellow; the wings hyaline, with their apex fuscous; the posterior tibiæ yellow at their base above, and entirely ferruginous beneath. Abdomen shining, with an obscure chalybeous reflexion; the basal margin of the third and fifth segments with a narrow yellow band.

Male. Closely resembles the female, but wants the yellow margin to the clypeus; the mandibles are yellow.

Hab. Waigiou.

Gen. PRIOCNEMIS, *Schiödt.*

1. *Priocnemis pulcherrimus*, *Smith, Proc. Linn. Soc.* iii. 156. 1.

Hab. Mysol; Aru.

2. *Priocnemis flavipennis*, *Smith, Proc. Linn. Soc.* iv. 79. 1.

Hab. Ceram; Celebes (Makassar).

3. *Priocnemis fervidus*, *Smith, Proc. Linn. Soc.* iii. 156. 2.

Hab. Mysol; Dory; Ceram; Aru.

4. PRIOCNEMIS ADUSTUS. *P. ferrugineus*; alis flavo-hyalinis, fusco fasciatis.

Male. Length $6\frac{1}{2}$ lines. Ferruginous; the head and antennæ paler than the body; the thorax and head opaque; the clypeus smooth and shining, with its anterior margin transverse and entire. The thorax has a fine, thin, short, downy pubescence; the metathorax slightly striated transversely at the apex; the wings yellow hyaline, with a broad fuscous fascia crossing near the apex of the anterior wings; the legs elongate, paler than the thorax. Abdomen shining, of a somewhat clavate form, and thinly covered with downy pubescence.

Hab. Mysol.

Gen. AGENIA, *Schiödt.*

1. *Agenia blanda*, *Guér. Voy. Coq. Zool.* pt. 2. ii. 260.

Hab. Ceram; Celebes; Key Island; Borneo; India; Singapore; Malacca.

2. *Agenia Amalthea*, *Smith, Proc. Linn. Soc.* iii. 155. 6.

Hab. Waigiou; Aru.

3. AGENIA EUDORA. *A. capite*, metathorace abdomineque nigris; thorace pedibusque sanguineis; alis anticis fascia transversa fusca.

Female. Length $4\frac{1}{2}$ lines. Head black; the clypeus, palpi, mandibles, and antennæ ferruginous. Thorax black, with the pro- and mesothorax blood-red above; the metathorax rounded behind, transversely striated, and covered with silvery pubescence; the legs pale red, with the claw-joints of the tarsi fuscous; the spurs at the apex of the tibiæ fuscous; the wings hyaline, the nervures ferruginous; the anterior pair with a broad fuscous fascia beyond the stigma; the tips of the wings milk-white. Abdomen petiolated, black, and thinly covered

with fine, pale, downy pile; the apical margin of the two basal segments narrowly rufo-piceous; the apex rufo-testaceous.

Hab. Mysol.

4. *AGENIA NUMERIA*. *A. nigra*, pilis sericeis cinereis vestita; antennis subtus ferrugineis; abdomine petiolato; alis hyalinis, bifasciatis.

Female. Length 4 lines. Black, and thinly covered with a silky ashy-grey pile; the palpi pale ferruginous; the mandibles rufo-testaceous at their apex; the flagellum of the antennæ ferruginous beneath. The posterior margin of the prothorax rounded; the metathorax rounded posteriorly, opaque, and finely and transversely rugose; the wings hyaline, with a narrow fuscous fascia at the apex of the externo-medial cell, and a much broader one crossing and enclosing the second and third submarginal cells; the tips of the wings fuscous.

Hab. Mysol.

5. *AGENIA METELLA*. *A. nigra*, pilis sericeis argentato-albis vestita; antennis antice pedibusque antice ferrugineis; abdomine petiolato; alis hyalinis, nervuris nigris.

Female. Length $4\frac{3}{4}$ lines. Black, and thinly covered with a silvery-white silky pile, which is most dense on the clypeus and metathorax; the antennæ ferruginous beneath, more or less fuscous above, particularly at their base; the palpi fusco-ferruginous; the mandibles rufo-piceous at their apex. The posterior margin of the prothorax rounded; the metathorax transversely rugose; the tibiæ and femora at their apex ferruginous in front; the tarsi ferruginous, the apical joints more or less fuscous above; the wings hyaline, the nervures black. Abdomen petiolated; the apical margins of the segments narrowly rufo-piceous.

Hab. Mysol.

6. *AGENIA VESTA*. *A. nigra*, capite thoraceque pilis sericeis argentato-albis vestitis; abdomine nitido, subpetiolato; alis hyalinis, plaga fusca.

Female. Length $4\frac{1}{2}$ lines. Black; the flagellum obscurely fulvous towards the apex beneath; the head thinly covered with silvery silky pile, the face much more densely so. Thorax: the sides and the metathorax entirely covered with a dense silvery-white pubescent pile, the latter is less densely covered on the disk; the legs rufo-piceous beneath; wings hyaline, with a fuscous cloud occupying the marginal and two submarginal cells and the third discoidal cell; it also crosses the apex of the first and second discoidal cells. Abdomen smooth, shining black, and with a short petiole at its base; the apex rufo-piceous.

Hab. Mysol.

7. *AGENIA CLAVATA*. *A. atra*, capite thoraceque subopacis; abdomine clavato alis hyalinis, plaga minuta fusca.

Male. Length 6 lines. Black; the head and thorax subopaque; the face covered with silvery-white pubescence; the tips of the mandibles ferruginous. Thorax oblong-quadrate, the sides being parallel; the metathorax transversely striated; the wings hyaline, with a small brown macula near the base of the marginal cell extending into the second submarginal cell, faint, and not well defined. The abdomen clavate; the first segment forming a petiole, with its apex slightly dilated.

Hab. Waigiou.

Gen. MYGNIMIA, *Smith*.

1. *Mygnimia Aspasia*, *Smith, Proc. Linn. Soc.* iv. 157. 1.

Hab. Martabello; Aru.

2. *Mygnimia fervida*, *Smith, Proc. Linn. Soc.* v. 82. 1.

Hab. Mysol; Bouru; Celebes.

3. *Mygnimia iridipennis*, *Smith, Proc. Linn. Soc.* iv. 13. 1.

Hab. Timor; Celebes; Borneo.

4. MYGNIMIA INTREPIDA. *M. nigra*, capite thoraceque pube nigra vestitis; alis cæruleo violaceoque splendide micantibus.

Female. Length 13 lines. Black; the abdomen with obscure shades of blue in certain lights; the anterior margin of the clypeus widely emarginate; the pubescence on the head and thorax black; the metathorax with transverse ridges behind; wings black, with a splendid purple and violet iridescence, with tints of green in certain lights.

Hab. Timor.

5. MYGNIMIA OPULENTA. *M. ferruginea*, abdomine læte fusco; alis flavo-hyalinis, apice fuscis.

Male. Length $9\frac{1}{2}$ lines. Ferruginous; the anterior margin of the clypeus transverse; the flagellum slightly fuscous above. The posterior margin of the prothorax rounded; the mesothorax above with a longitudinal fuscous stripe on each side, and a spot in front in the middle; the metathorax transversely striated; the legs elongate, and the tibiæ and tarsi with scattered, short, fine spines; the wings yellowish, their apical margins bordered by a fuscous cloud. The abdomen fusco-ferruginous.

Hab. Mysol.

6. MYGNIMIA EXASPERATA. *M. ferruginea*, abdominis segmento secundo et tertio nigris; alis obscure fuscis, purpureo-iridescentibus.

Female. Length 9–10 lines. Ferruginous; the head and thorax opaque; the antennæ thick and convolute; the clypeus slightly emarginate anteriorly. The posterior margin of the prothorax curved; the mesothorax with two black spots anteriorly; the metathorax rounded behind and transversely striated; the tibiæ and tarsi strongly spinose; the wings fuscous, with a purple iridescence. Abdomen smooth and

shining, with the second and third segments and the posterior margin of the basal segment black; entirely ferruginous beneath.

Hab. Mysol.

7. *MYGNIMIA INTREPIDA*. *M.* capite thoraceque nigris, abdomine nigro-cæruleo; alis flavo-hyalinis, marginibus fuscis.

Female. Length 11-13 lines. Head and thorax opaque black, with a thin black pubescence; the clypeus very convex, its anterior margin rounded. The scutellum and postscutellum prominent, produced into rounded tubercles; the metathorax villose, not punctured or striated; the wings yellow hyaline, the base, the apical and posterior margins with a narrow dark fuscous border; the legs elongate, the tibiæ and tarsi furnished with short spines, most dense on the latter, particularly the anterior pair. Abdomen black, with an obscure blue tinge, covered with a short silky pubescence.

Hab. Ceram.

Gen. *MACROMERIS*, *St. Farg.*

1. *Macromeris violacea*, *St. Farg., Guér. Mag. Zool.* pl. 30. fig. 1 ♂.

Hab. Ceram; Bouru; Gilolo; Celebes; Aru; Borneo; Java; Malacca; Assam; New Guinea.

Gen. *SALIUS*, *Fabr.*

1. *Salius malignus*, *Smith, Proc. Linn. Soc.* iii. 157. 1.

Hab. Mysol; Aru.

Fam. *SPHEGIDÆ*, *Leach.*

Gen. *SPHEX*, *Fabr.*

1. *Sphex tyrannica*, *Smith, Proc. Linn. Soc.* v. 122. 5.

Hab. Mysol; Gilolo; Menado; Bachian; Kaisaa.

2. *Sphex diabolicus*, *Smith, Proc. Linn. Soc.* ii. 100.

Hab. Ceram; Amboyna; Bachian; Borneo.

3. *Sphex argentata*, *Dahlb. Hym. Europ.* i. 25. 1.

Hab. Ceram; Waigiou; Gilolo; Celebes; Aru; Bachian; Java; Bengal; Congo; Sierra Leone.

4. *Sphex formosa*, *Smith, Cat. Hym. Ins.* pt. iv. 254. 60.

Hab. Ceram; Waigiou; Bachian; Amboyna.

5. *Sphex sericea*, *Fabr. Syst. Piez.* p. 211. 19.

Hab. Waigiou; Ceram; Ternate; Timor; Bachian; Aru; Celebes; Malacca; Java; Borneo; Philippines.

6. *Sphex ferox*, *Smith, Proc. Linn. Soc.* vi. 55. 5.

Hab. Waigiou; Amboyna; Celebes.

Gen. AMMOPHILA, *Kirby*.

1. *Ammophila insolata*, *Smith, Proc. Linn. Soc.* iii. 14. 2.

Hab. Timor; Celebes.

Gen. PELOPÆUS, *Latr.*

1. *Pelopæus lætus*, *Smith, Cat. Hym. Ins.* pt. iv. 229. 13.

Hab. Ceram; Australia (Port Essington and Swan River).

2. *Pelopæus Bengalensis*, *Dahlb. Hym. Eur.* i. 433. 2.

Hab. Timor; Ternate; Celebes; Isle of France; Philippines; India; China.

3. *Pelopæus spirifex*, *Linn. Syst. Nat.* i. 942. 9.

Hab. Timor; Africa; Europe.

4. **PELOPÆUS MURARIUS.** *P. ater*; clypeo, flagello, pedibus abdomineque basi ferrugineis; alis hyalinis, apicibus maculis fuscis.

Female. Length 8 lines. Black; the scape, apex of the third joint of the antennæ, and the fourth joint, the palpi, mandibles, and clypeus ferruginous, the base of the latter black; the face covered with golden pubescence; the head and thorax thinly clothed with erect fulvous pubescence. Thorax: the legs ferruginous, with the coxæ and trochanters black; the wings hyaline, the nervures ferruginous, the tegulæ pale rufo-testaceous; the anterior wings with a fuscous spot at their apex; the metathorax transversely striated. Abdomen ferruginous, the petiole and the base of the third, fourth, and fifth segments black.

Hab. Ceram.

This species resembles the *P. fervens* from Sarawak, but is, I think, quite distinct; the petiole is shorter and thicker, and the thorax is opaque black, without red markings, besides other differences.

Fam. LARRIDÆ, *Leach*.Gen. LARRADA, *Smith*.

1. *Larrada modesta*, *Smith, Proc. Linn. Soc.* iii. 159. 1.

Hab. Waigiou; Aru.

2. *Larrada aurulenta*, *Fabr. Syst. Piez.* p. 228.

Hab. Bouru; Bachian; Celebes; Philippines; Java; Sumatra; India; China; Cape of Good Hope; Gambia.

3. **LARRADA FUNEREA.** *L. nigra*, clypeo argenteo piloso; alis subhyalinis; abdomine lævi et nitido.

Female. Length $3\frac{1}{2}$ lines. Black; the head and thorax subopaque; the tips of the mandibles rufo-piceous; the clypeus with silvery pubescence; the face with a deep central longitudinal impression above the antennæ, and one on each side equally deep. The metathorax truncate, margined at the sides and along the verge of the truncation by a raised line, the disk finely granulated and having a central longitudinal carina; the legs spinose, and frosted over as it were with silvery

pile; the wings subhyaline and iridescent. The abdomen shining and with a thin silky pile.

Hab. Waigiou.

4. *LARRADA SABULOSA*. *L. nigra*, facie metathoraceque aurato-pubescentibus, alis flavo-hyalinis.

Female. Length 8 lines. Black and slightly shining; a spot at the base of the mandibles and the face clothed with golden pubescence. A narrow border on the posterior margin of the prothorax, a line on each side of the mesothorax, and the metathorax above with rich golden pubescence; the tibiæ and tarsi strongly spined. Wings flavo-hyaline, the nervures ferruginous, the apical margins of the anterior pair fuscous. Abdomen smooth, with a silky gloss.

Hab. Ceram.

Gen. *PISON*, *Spin.*

1. *Pison nitidus*, *Smith*, *Proc. Linn. Soc.* iii. 160. 1.

Hab. Mysol; Aru; Key Island.

2. *PISON PALLIDIPALPIS*. *P. niger*, capite thoraceque punctatis; abdomine nitido, segmentorum marginibus argentatis.

Female. Length 5 lines. Black; the head and thorax closely and finely punctured; the clypeus, sides of the face, and inner orbits of the eyes, terminating in their sinus, with bright silvery pubescence; the tips of the mandibles rufo-piceous; the palpi pale testaceous; the cheeks silvery. Thorax: the sides and the legs with fine cinereous pubescence; the sides of the metathorax with longer silvery-white pubescence; a deep longitudinal channel runs down the middle from the base to the apex; the wings subhyaline, the nervures black, the tegulæ testaceous. Abdomen shining, closely and very delicately punctured; the apical margins of the segments with fasciæ of silvery pile, only observable in certain lights.

Hab. Ceram.

Fam. *CRABRONIDÆ*, *Leach.*

Gen. *TRYPOXYLON*, *Latr.*

1. *TRYPOXYLON PLACIDUM*. *T. nigrum*, clypeo argentato-pubescente; abdominis basi, mandibulis pedibusque ferrugineis; alis hyalinis, iridescentibus.

Female. Length $3\frac{3}{4}$ lines. Black; the face, inner orbits of the eyes, and the cheeks with silvery pubescence; the mandibles, tibiæ and tarsi ferruginous; the metathorax shining, the sides with a little silvery pubescence, the middle with a deep longitudinal furrow; the wings hyaline and iridescent, the nervures testaceous. Abdomen finely pubescent, with the three basal segments ferruginous, the third dusky above; beneath ferruginous, with the two apical segments slightly dusky.

Hab. Mysol.

2. *TRYPOXYLON GRACILLIMUM*. *T. nigrum*, clypeo argentato-pubescente; alis hyalinis, iridescentibus; tarsis rufo-testaceis.

Male. Length 7 lines. Black, and with a fine thin cinereous pubescence; the clypeus and inner orbits of the eyes with a dense silvery pubescence, the lower portions of the cheeks silvery; the palpi pale testaceous; the mandibles pale ferruginous. Thorax: the wings hyaline and beautifully iridescent, the nervures fuscous, the tegulæ testaceous; the meso- and metathorax finely punctured, the latter shining, with a dense silvery pubescence at the sides; in the centre a deep longitudinal impression, deepest in the middle; the articulations of the legs rufo-piceous; the tarsi rufo-testaceous. Abdomen: the petiole slender, longer than the three following segments; the margins of the apical segments narrowly rufo-piceous.

Hab. Mysol.

Gen. ARPACTOPHILUS.

HEAD large, subquadrate, wider than the thorax; eyes oval, distant, placed at the sides of the head; antennæ geniculated, scarcely longer than the head, inserted at the base of the clypeus, not approximated; the flagellum subfiliform, the first joint small, half the length of the following joints, which are cylindric and nearly of equal length; the scape short, slightly thickened towards the apex, and about the length of the five basal joints of the flagellum; the mandibles bidentate at their apex. THORAX ovate; the collar transverse; the scutellum transverse; [the metathorax with an enclosed space at its base; *the superior wings with one marginal cell, narrowing beyond the second submarginal and subacute at its apex; submarginal cells two, the first oblong, receiving at its apex the first recurrent nervure, the second angular, truncate at its apex; discoidal cells two;* legs moderately strong, simple. Abdomen subsessile, incurved at its extremity.

This genus is closely allied to *Diodontus*, from which it differs in the neururation of the anterior wings, in wanting the second recurrent nervure, and in the bidentate mandibles, but in general habit it bears a close resemblance to that genus.

1. ARPACTOPHILUS BICOLOR. *A. niger*, pedibus abdomineque ferrugineis, alis fuscis.

Female. Length $3\frac{3}{4}$ lines. Head and thorax black, and sculptured with a coarse deep longitudinal striation, the striæ in parts running into a very coarse punctation; on the front of the head, above the insertion of the antennæ, it is transverse; the metathorax with a semicircular space at its base, enclosed by a slightly elevated ridge; above the antennæ is a central elevated carina, which terminates before reaching the anterior ocellus; the antennæ, mandibles, and legs ferruginous, the coxæ, trochanters, and femora beneath black; the palpi pale testaceous. The wings fuscous, palest at their apical and posterior margins. Abdomen shining, ferruginous, smooth and impunctate. The *male* differs in having the scape white in front.

Hab. Mysol.

Gen. *PSEN*, *Latr.*

1. *PSEN PETIOLATUS*. *P.* capite thoraceque nigris, nitidis; abdomine pedibusque ferrugineis; alis hyalinis.

Female. Length 3 lines. Head and thorax smooth, shining, and impunctate; the antennæ, palpi, and mandibles ferruginous; the clypeus covered with silvery pubescence. Thorax: the tegulæ and legs pale ferruginous; the margin of the collar and sides of the thorax with glittering silvery-white pubescence; the mesothorax with two central impressed lines anteriorly and a slight scratch over the tegulæ; the wings hyaline and beautifully iridescent, the nervures testaceous. Abdomen: the petiole as long as the first segment and curved downwards; all the segments smooth, shining, and impunctate.

Hab. Mysol.

Fam. *PHILANTHIDÆ*.Gen. *CERCERIS*, *Latr.*

1. *CERCERIS IMMOLATOR*. *C.* nigra, facie, pedibus abdomineque flavo variegatis; alis hyalinis, apicibus fuscis.

Female. Length 4 lines. Black, and strongly punctured; the face, base of the mandibles, and the scape in front yellow; the flagellum fulvous beneath. Thorax: a spot on the tegulæ, the anterior and intermediate tibiæ and tarsi, and a spot at the base of the posterior tibiæ and tarsi yellow; the tips of the anterior and intermediate femora yellow, and their tibiæ with a black spot beneath; the wings subhyaline, with a fuscous spot at their apex. Abdomen: a transverse spot at the base of the second segment and a short line on each side of the second yellow; beneath, a minute yellow spot on each side of the third segment.

Hab. Waigiou.

Group I.—*SOLITARY WASPS*.Fam. *EUMENIDÆ*, *Westw.*Gen. *EUMENES*, *Latr.*

1. *Eumenes Urvillei*, *Sauss. Mon. Guépes Sol.* i. 59. 44.

Hab. Ceram; Gilolo; New Guinea.

2. *Eumenes arcuatus*, *Fabr. Syst. Piez.* p. 287. 11.

Hab. Mysol; Waigiou; Bachian; Dory; Key Island; Singapore; Siam.

3. *Eumenes Praslina*, *Guér. Voy. Coq. Zool.* ii. 267. pl. 9. fig. 7.

Hab. Ceram; Gilolo; Kaisaa; Port Praslin; Key Island; Amboyna.

4. *Eumenes agilis*, *Smith, Proc. Linn. Soc.* v. 127. 8.

Hab. Ceram; Amboyna.

5. *Eumenes tricolor*, *Smith, Proc. Linn. Soc.* v. 87. 5.

Hab. Ceram; Celebes; Bouru.

6. *Eumenes circinalis*, *Fabr. Syst. Piez.* p. 286. 4.

Hab. Bouru; Gilolo; Kaisaa; Celebes; Ceram; Sumatra; Java; India.

7. *EUMENES MEDIANUS*. *E. niger*, flavo variegatus; pedibus ferrugineis; alis fusco-hyalinis.

Male. Length $5\frac{3}{4}$ lines. Black; the head, thorax, and first segment of the abdomen strongly punctured; the clypeus and a halberd-shaped spot above white; a spot at the base of the mandibles and the scape in front yellow; the mandibles ferruginous, with four black teeth on their inner margin. Thorax: a line on the prothorax anteriorly, its posterior margin, two quadrate spots on the clypeus, two oblique lines on the metathorax, a triangular spot beneath the wings, and the tegulæ yellow; the wings fusco-hyaline, darkest towards their apex, and slightly iridescent; the legs ferruginous, the tarsi fuscous. The apex of the petiole yellow, the abdomen smooth and shining.

Hab. Ceram.

8. *EUMENES CONFORMIS*. *E. niger*, flavo variegatus; capite thoraceque dense punctatis; alis fusco-hyalinis.

Female. Length $5\frac{1}{2}$ lines. Black; the base of the clypeus, a kite-shaped spot above and an abbreviated line behind the eyes yellow; the mandibles ferruginous. Thorax: the prothorax in front, the tegulæ, a spot beneath the wings, and two spots on each side of the metathorax yellow; the tips of the coxæ and femora, the tibiæ and tarsi pale ferruginous, the posterior tarsi and apical joints of the intermediate pair fuscous; the wings fusco-hyaline, darkest towards their apex. Abdomen punctured; the apex of the petiole, a spot on each side, the apical margin of the second segment and an ovate spot on each side yellow.

Hab. Ceram.

9. *EUMENES VOLATILIS*. *E. niger*, flavo variegatus, capite thoraceque delicatule variegatis; alis subhyalinis; abdomine lævigato, nitido.

Female. Length 6 lines. Black and shining; the head and thorax delicately punctured; the clypeus, an oblong lancet-formed spot above, a spot in the sinus of the eyes and a line behind them yellow; the scape in front yellow, the flagellum orange beneath; an anchor-shaped black spot on the clypeus. The anterior margin of the thorax, a line on each side of the mesothorax in front curving inwards, the tegulæ and a spot beneath the wings, a spot on each side of the scutellum, a broad curved line on each side of the metathorax, the anterior legs and the intermediate tibiæ in front yellow; the claw-joint of the tarsi rufo-piceous; the wings slightly coloured and iridescent; a black spot in the middle of the tegulæ. Abdomen: the petiole as long as the thorax; the apical margins of the segments narrowly bordered with yellow; a minute yellow spot on each side of the second segment near its base.

Hab. Mysol.

10. EUMENES PULLATUS. *E. nigerrimus*, alis flavescentibus.

Female. Length 10 lines. Opaque black, the flagellum white beneath; the head and thorax covered with confluent punctures; the wings yellow, subhyaline; the petiole of the abdomen regularly widening from the base to the apex. Closely resembling species of the genus *Zethus*.

Hab. Ceram.

11. EUMENES PERPLEXUS. *E. aterrimus*; petiolo perlongo, medio et apice maculis duabus albis; alis fulvo-hyalinis.

Female. Length 12 lines. Jet-black, with the abdomen shining; the wings fulvo-hyaline; the petiole of the abdomen elongate, with two white spots in the middle and two at the apex.

Hab. Bouru.

Of the same size and form as *E. arcuatus*, and probably a black variety of that species.

12. EUMENES DILIGENS. *E. niger*, flavo variegatus; capite, thorace petioloque delicatule punctatis; abdomine nitido; alis anticis fusco-hyalinis, violaceo-iridescentibus.

Female. Length 7 lines. Black; the basal half of the clypeus, a battledore-shaped spot above, the inner margin of the eyes as high as their emargination, and an abbreviated narrow line behind them yellow; the clypeus emarginate in front. Thorax: the anterior margin of the prothorax, an oblique line on each side of the mesothorax, a broader one beneath the wings, the posterior margin of the tegulæ and a spot before and behind them, a line at the base and apex of the scutellum and a broad oblique one on each side of the metathorax yellow; a line on the outside of the anterior tibiæ and a spot on the intermediate and posterior coxæ yellow; wings brownish, with a violet and, in some lights, coppery iridescence. Abdomen: the petiole elongate, punctured, its apex with a narrow yellow margin; the following segment bordered with yellow.

Hab. Bouru.

Gen. RHYNCHIUM, *Spin.*1. Rhynchium hæmorrhoidale, *Fabr. Syst. Piez.* p. 259. 28.

Hab. Ceram; Gilolo; Bachian; Dory; Malacca; Singapore; India.

2. Rhynchium metallicum, *Sauss. Mon. Guêpes Sol.* i. 114. 21.

Hab. Ceram; Bachian; Sarawak; India.

3. Rhynchium parentissimum, *Sauss. Mon. Guêpes Sol.* p. 111. 14 (var. *R. hæmorrhoidale?*).

Hab. Timor; Celebes; Java; India.

Gen. ODYNERUS, *Latr.*1. Odynerus agilis, *Smith, Proc. Linn. Soc.* iii. 164. 2.

Hab. Waigiou; Aru.

2. *Odynerus insularis*, *Smith, Proc. Linn. Soc.* iii. 21. 3.

Hab. Makassar.

3. *ODYNERUS FALLAX*. *O. niger*, capite thoraceque flavo variegatis, tarsis pallide flavis, alis hyalinis; abdomine petiolato, segmentorum marginibus flavo fasciatis.

Female. Length $4\frac{3}{4}$ lines. Black; the head and thorax punctured, the disk of the mesothorax strongly so; the clypeus, mandibles, a bifurcate spot above, the inner margin of the eyes as high as their emargination, and the scape in front yellow; the base and apex of the mandibles rufo-piceous; the head is covered with a fine cinereous down, especially the cheeks. The anterior and posterior margins of the prothorax, the tegulæ, a spot on each side of the scutellum and postscutellum, the sides of the metathorax, a spot beneath the wings, the anterior and intermediate tibiæ, the knees and the tarsi pale yellow; the claw-joint of the tarsi pale ferruginous; the wings hyaline and iridescent. Abdomen petiolated, of a brownish black; the margins of the segments bordered with yellow.

Hab. Mysol.

4. *ODYNERUS CONSPICUUS*. *O. flavo-ferrugineus*, capite thoraceque nigro maculatis; alis hyalinis, parvis superioris margine antico fusco.

Female. Length $3\frac{3}{4}$ lines. Yellowish red; the face, thorax at the sides and beneath yellow; the clypeus yellow, its anterior margin angular; the vertex black; the flagellum fuscous above. The mesothorax black, with a longitudinal broad black mark in the middle, which is pointed towards the prothorax; a narrow black line runs across the scutellum, postscutellum, and down the truncation of the metathorax; the wings hyaline, the anterior margin of the superior pair dark fuscous. Abdomen: the posterior margin of the basal segment constricted and yellow; the second segment has also a narrow yellow border.

Hab. Mysol.

5. *ODYNERUS SOBRINUS*. *O. ferrugineus*; capite, thorace abdomineque nigro variis; abdominis segmentis flavo fasciatis.

Female. Length $4\frac{1}{4}$ lines. Ferruginous; the clypeus and a spear-shaped mark above, the orbits of the eyes, the base of the mandibles, and the scape in front yellow; a transverse curved yellow line on the vertex, extending to the orbits of the eyes; the scape dusky above. Thorax: the scutellum and postscutellum yellow, bordered with black; two longitudinal yellow lines on the mesothorax, the space between them black; the sides and beneath black; a spot under the wings, and the coxæ yellow; the wings subhyaline, with the anterior margin of the superior pair narrowly fuscous. The posterior margins of the segments of the abdomen yellow; the basal segment with a minute spot in the middle, the second with a large triangular one at the base and a larger one at its apical margin black (the points of the angular

shapes uniting in the middle), the following segments black; beneath, the two basal segments red, the second with two ovate yellow spots.

Hab. Ceram.

6. *ODYNERUS LABORIOSUS*. *O. niger*; capite thoraceque distincte, abdomine delicatule punctatis; abdominis segmentis duobus basalibus flavo fasciatis.

Male. Length 4 lines. Black; head and thorax strongly and closely punctured; the clypeus, a triangular spot above it, a line on the inner margin of the eyes terminating in their sinus, and an abbreviated line behind them yellow; an interrupted line on the prothorax, the anterior tibiæ and tarsi, a line on the intermediate and posterior tibiæ yellow; the tarsi fulvous; the wings subhyaline, the anterior margin of the superior pair fuscous. Abdomen shining and delicately punctured, a yellow band on the posterior margins of the first and second segments.

Hab. Mysol.

Group II.—*SOCIAL WASPS*.

Fam. *VESPIDÆ*, *Steph.*

Gen. *ISCHNOGASTER*, *Sauss.*

1. *Ischnogaster iridipennis*, *Smith, Proc. Linn. Soc.* iii. 166. 1.

Hab. Mysol; Aru.

2. *ISCHNOGASTER UNICOLOR*. *I. niger*, pedibus obscure ferrugineis; alis iridescentibus, cellulis prima secundaque submarginalibus æqualibus, tertia brevior et ad cellulam marginalem angustata.

Male. Length 8 lines. Black; the abdomen shining; the clypeus produced, concave or spoon-shaped at the apex, the concavity smooth and shining; the twelfth joint of the antennæ and the basal half of the thirteenth pale testaceous. The posterior margin of the prothorax narrowly, but obscurely, rufo-piceous; the legs obscure rufo-fuscous, the anterior pair more or less rufo-testaceous; the wings fusco-hyaline and iridescent, the marginal cell clouded.

Var. The thorax at the sides and beneath ferruginous, with the legs paler.

Hab. Mysol; Waigiou.

Gen. *ICARIA*, *Sauss.*

1. *Icaria maculiventris*, *Sauss. Mon. Guêpes Soc.* p. 23. 1. (*Rhopalidia maculiventris*, *Guér. Voy. Coq. Zool.* ii. pt. 2. *Ins.* p. 267, pl. 9. f. 8.)

Hab. Mysol; New Guinea; Aru.

2. *Icaria nigra*, *Smith, Proc. Linn. Soc.* iii. 167. 2.

Hab. Mysol; Aru.

3. *Icaria impetuosa*, *Smith, Proc. Linn. Soc.* v. 131. 2.

Hab. Ceram; Bachian; Amboyna.

4. *Icaria ferruginea*, *Sauss. Mon. Guêpes Soc.* p. 38. 17.

Hab. Ceram; Celebes; India.

5. *ICARIA MOROSA*. *I. nigra*, opaca, pube sericea vestita; alis subhyalinis; abdominis segmentis primo et secundo margine flavo fasciatis.

Female. Length $4\frac{1}{2}$ lines. Black, opaque, and thinly covered with a silky cinereous pile; the base of the mandibles, a spot on each side of the clypeus and another on each side of the face, touching the eyes, yellow; the scape ferruginous at the outer side, and the flagellum obscurely testaceous beneath towards its apex; the head closely punctured. Thorax strongly and closely punctured; wings subhyaline, the nervures dark fuscous. Abdomen: the apical margins of the first and second segments bordered with yellow; the margin of the first strongly constricted; finely and closely punctured.

Hab. Waigiou.

6. *ICARIA IRRITATA*. *I. nigra*; clypeo antice angulato; abdominis segmentis flavo fasciatis.

Female. Length $4\frac{1}{4}$ lines. Black, punctured, and shining; very thinly covered with a fine cinereous pile, which is most dense on the cheeks and abdomen; a yellow spot at the base of the mandibles; the flagellum rufo-testaceous beneath towards the apex. The wings subhyaline, the anterior margin of the superior pair narrowly fuscous. Abdomen: the apical margin of the basal segment with a very narrow yellow fascia, all the following segments with broad fasciæ.

Hab. Mysol.

7. *ICARIA TORRIDA*. *I. capite thoraceque ferrugineis*, abdomine fusco.

Female. Length 4 lines. The head, thorax, legs, and petiole of the abdomen ferruginous; the clypeus produced into a sharp angle at its anterior margin; the wings subhyaline, with a fuscous cloud in the marginal cell. Abdomen: the second and following segments black; thinly covered with cinereous pile.

Hab. Ceram.

8. *ICARIA DECEPTOR*. *I. ferruginea*; thorace flavo maculato; abdominis segmento secundo flavo marginato; alis hyalinis.

Female. Length $5\frac{1}{4}$ lines. Ferruginous; a pale testaceous yellow spot in the middle of the clypeus, and a line of the same colour at the inner margin of the eyes; the scape yellow in front. The prothorax with the anterior margin yellow; the tegulæ, a spot beneath the wings, a spot on the coxæ, a mark beneath the anterior and intermediate femora, the scutellum, postscutellum, and a broad stripe on each side of the metathorax pale yellow; the wings hyaline, the anterior margin of the superior pair narrowly fuscous, and also a fuscous cloud in the marginal cell. The apical margins of the segments of the abdomen bordered with yellow, interrupted on the fourth and fifth segments.

Hab. Mysol.

Gen. *POLISTES*, *Latr.*

1. *Polistes tepidus*, *Fabr. Syst. Piez.* p. 271. 7.

Hab. Waigiou; Mysol; Aru; Key; Bachian; Solomon Island; New Guinea; Australia.

2. *Polistes diabolicus*, *Sauss. Mon. Guêpes Soc.* p. 68. 27, t. 6. f. 7.

Hab. Ceram; Aru; Timor; Java.

3. *Polistes elegans*, *Smith, Proc. Linn. Soc.* iii. 169. 5.

Hab. Mysol; Ceram; Aru; Key Island.

4. *Polistes nigrifrons*, *Smith, Proc. Linn. Soc.* iii. 168. 4.

Hab. Waigiou; Aru.

5. *Polistes Picteti*, *Sauss. Mon. Guêpes Soc.* iv. 22. 2.

Hab. Goram; Amboyna; Bouru; Celebes; Ceram; Australia.

6. *Polistes Smithii*, *Sauss. Mon. Guêpes Soc.* p. 60. 17.

Hab. Mysol; Africa.

7. *Polistes stigma*, *Fabr. Syst. Piez.* p. 261. 41.

Hab. Ceram; Celebes; India.

8. *Polistes fastidiosus*, *Sauss. Mon. Guêpes Soc.* p. 60. 18.

Hab. Mysol; Africa.

In the specimen from Mysol the yellow markings of the thorax are almost obsolete, but the metathorax is transversely striated, and in all important specific characters it agrees with specimens from Africa.

Gen. *POLYBIA*, *Sauss.*

1. *POLYBIA LIMATULA*. *P. nigra*, alis subhyalinis; abdomine ferrugineo, marginibus apicalibus flavis.

Female. Length 6 lines. Head, antennæ, thorax, and legs black; a pale spot at the base of the mandibles, and the antennæ and tarsi rufo-fulvous beneath; thinly covered with cinereous down; the wings subhyaline, the anterior pair slightly yellowish along the costa. The abdomen ferruginous, more or less dusky in different specimens, with a narrow yellow border to all the segments; the basal segment campanulate, not bordered beneath.

Hab. Mysol.

Gen. *VESPA*, *Linn.*

1. *Vespa affinis*, *Fabr. Syst. Piez.* p. 254. 2 (var. *V. cineta*?).

Hab. Ceram; Mysol; Gilolo; Bachian; Amboyna; Dory; Malacca; Java; India; China.

2. *V. Alduini*, *Sauss. Mon. Guêpes Soc.* p. 154. 38.

Hab. Ceram.

Note.—Specimens from Ceram have the head obscure red, and also more coarsely rugose, as is also the metathorax; still, as Saussure suggests, it may possibly be a variety of *V. cineta*.

3. *Vespa Philippinensis*, *Sauss. Mon. Guêpes Soc.* p. 148.

Hab. Bouru; Amboyna; Philippine Islands.

4. *VESPA UNICOLOR*. *V. nigra*, velutina; alis flavis, basi rufo-fuscis.

Female. Length 15 lines. Black; the clypeus coarsely rugose, the rest of the head rather finely punctured. The abdomen somewhat shining towards the base, the base of the second segment with a fine changeable cinereous pile; the wings yellowish hyaline, becoming of a reddish brown towards the base; the nervures black at the base of the wings and rufo-testaceous at their apex.

Hab. Bouru.

This species closely resembles *Vespa deusta* of St. Fargeau, but is a distinct species; in *V. deusta* the eyes extend to the base of the mandibles, which is not the case in the present species, and the clypeus and post-scutellum are black.

Fam. ANDRENIDÆ, *Leach*.

Gen. PROSOPIS, *Fabr.*

1. *PROSOPIS APICATA*. *P. ferruginea*, vertice abdomineque nigris; alis hyalinis, dimidio apicali fusco.

Female. Length $3\frac{3}{4}$ lines. Ferruginous; head and abdomen shining; the vertex and mandibles black, the latter ferruginous at their tips; the clypeus and sides of the face pale flavo-testaceous; the antennæ fuscous, the scape and flagellum beneath obscurely rufo-testaceous; the wings with their basal half hyaline, the apical brown; the posterior pair clear and beautifully iridescent. Abdomen: the three basal segments ferruginous, the apical ones black.

Hab. Mysol.

2. *PROSOPIS LUSORIA*. *P. nigra*, capite thoraceque albo pictis; abdominis segmentis primo et secundo albo maculatis.

Female. Length 4 lines. Black; the head and thorax closely punctured; a line at the orbits of the eyes, interrupted above, and another running from the anterior stemma to the frontal margin of the clypeus, white; the scape ferruginous in front, the flagellum fulvous beneath. Thorax: the collar, tubercles, three spots in a line beneath the wings, two narrow longitudinal stripes on the disk of the mesothorax, a line over the tegulæ, and a spot on each side of the scutellum and postscutellum white; the triangular space at the base of the metathorax longitudinally striated. Abdomen closely and finely punctured; a narrow line or spot on each side of the two basal segments; the three apical segments thinly covered with cinereous pubescence.

Hab. Mysol.

3. *PROSOPIS IMPERIALIS*. *P. capite thoraceque viridi-cyaneis*, abdominis segmentis basalibus purpureo variegatis.

Female. Length $4\frac{1}{4}$ lines. Head, thorax, and legs bright green, the legs obscurely so; the face shining, with a reversed T-shaped mark on the clypeus, a minute spot between the antennæ, and a narrow line along the inner orbit of the eyes white. The wings slightly coloured, with the nervures black; the first and second segments of the abdomen with a purple lustre.

Hab. Dory.

By an oversight, this beautiful and unique insect was omitted in a former paper descriptive of the insects of Bachian, Dory, &c.

Gen. NOMIA, *Latr.*

1. *Nomia dentata*, *Smith, Proc. Linn. Soc.* iii. 133. 3.

Hab. Mysol; Waigiou; Aru.

2. *Nomia concinna*, *Smith, Proc. Linn. Soc.* v. 91. 1.

Hab. Ceram; Makassar.

3. *Nomia iridescens*, *Smith, Proc. Linn. Soc.* ii. 43. 2.

Hab. Bouru; Malacca; India.

4. *NOMIA BIDENTATA.* *N. nigra et punctata*, clypeo pallide testaceo; scutello bidentato; abdomine nitido; alis hyalinis.

Male. Length $4\frac{1}{2}$ lines. Black; the clypeus, labrum, and mandibles pale testaceous, also a testaceous spot above the clypeus; the antennæ obscurely fulvous beneath. Thorax: the scutellum emarginate behind, and having an acute short spine at the lateral posterior angles; the wings hyaline and iridescent, with the nervures blackish; the legs obscure rufo-piceous. The abdomen smooth, shining, and finely punctured.

Hab. Mysol.

5. *NOMIA FLOREA.* *N. nigra*, capite thoraceque subopacis; abdomine nitido, basi rufo-ferrugineo; alis hyalinis.

Male. Length $4\frac{1}{4}$ lines. Black; the clypeus, labrum, and mandibles pale testaceous, the latter ferruginous at their tips; the scape testaceous, and slightly ferruginous above. Thorax: the wings hyaline and iridescent, the nervures rufo-testaceous; the coxæ dark brown; the legs pale rufo-testaceous, the posterior tibiæ rufo-fuscous above. The abdomen pale rufo-testaceous beneath; above shining black, with the base rufo-ferruginous.

Hab. Mysol.

6. *NOMIA METALLICA.* *N. viridi-ænea*, punctata; facie pube brevi cinerea tecta; femoribus posticis flocco pallido, tibiis externe fusco-pubescentibus; alis hyalinis.

Female. Length $4\frac{1}{4}$ lines. Dark metallic green, with bright tints of green in certain lights; the clypeus black, smooth and shining at

the apex; the tips of the mandibles rufo-piceous; the flagellum fulvous beneath; the face with a thin griseous pubescence. Thorax closely punctured; the posterior margin of the scutellum and the sides of the thorax fringed with pale pubescence; the wings hyaline, with their apical margins clouded, the nervures black; the legs with a short black pubescence. Abdomen shining and finely punctured.

Hab. Waigiou.

7. *NOMIA SIMILLIMA*. *N. nigra*, facie thoraceque cinereo-pubescentibus; thorace pallide ferrugineo; abdominis segmentorum marginibus apicalibus fulvo-testaceo late fasciatis.

Female. Length 4 lines. Black; the apical margin of the clypeus, the labrum and mandibles pale rufo-testaceous, the tips of the mandibles ferruginous; the face covered with cinereous pubescence. Thorax covered above with cinereous pubescence, in recent specimens probably tinged with yellow; the tegulæ pale rufo-testaceous, the wings hyaline and iridescent, the nervures obscure ferruginous; the legs pale ferruginous. Abdomen closely punctured, the apical margins of the segments broadly testaceous.

Hab. Ceram.

This species resembles *N. uncta* from Key Island, but it is quite distinct; its large pale tegulæ would alone distinguish it; its head is much narrower and its clypeus much more produced.

Fam. DASYGASTRÆ, *Leach*.

Gen. MEGACHILE, *Latr*.

1. *Megachile Alecto*, *Smith, Proc. Linn. Soc.* v. 134. 4.

Hab. Mysol; Dory; Gilolo.

2. *Megachile Lachesis*, *Smith, Proc. Linn. Soc.* v. 133. 2.

Hab. Mysol; Bachian; Amboyna; Ceram; Bouru.

3. *Megachile placida*, *Smith, Proc. Linn. Soc.* vi. 60. 5.

Hab. Mysol; Gilolo.

4. *Megachile scabrosa*, *Smith, Proc. Linn. Soc.* iii. 134. 2.

Hab. Bouru; Aru.

5. *Megachile fulvifrons*, *Smith, Proc. Linn. Soc.* iii. 6. 2.

Hab. Timor; Celebes.

6. *MEGACHILE FUNERARIA*. *M. aterrima*, pube nigra vestita; thorace transversim rugoso et longitudinaliter sulcato; abdomine obscure violaceo-micante; alis hyalinis, apicibus marginalibus fuscis.

Female. Length $9\frac{1}{2}$ lines. Jet-black; the pubescence on the head black; the vertex smooth and shining, the cheeks and clypeus rugose, the latter subcarinate in the centre; the mandibles smooth, with a

few scattered punctures, and armed with two teeth at their apex, a third tooth being slightly developed. Thorax: the upper surface transversely rugose and with four longitudinal impressed lines; the sides and beneath with a dense black pubescence; the wings smoky hyaline, with the nervures black; the tibiæ rugose on the outside and set with rigid hairs, the tarsi thickly pubescent. Abdomen shining, with a changeable purple and violet iridescence, sparingly and finely punctured; beneath thickly clothed with black pubescence.

Hab. Bouru.

Gen. CÆLIOXYS, *Latr.*

1. *Coelioxys intrudens*, *Smith, Proc. Linn. Soc. v. 132. 1.*

Hab. Bouru; Bachian.

Gen. NOMADA, *Fabr.*

1. *NOMADA INSULARIS*. *N. atra*; antennis, pedibus abdomineque ferrugineis; alis hyalinis, iridescentibus.

Female. Length 2 lines. Head and thorax strongly and closely punctured; the antennæ, clypeus, inner orbits of the eyes, labrum and mandibles ferruginous. Thorax: the scutellum, postscutellum, tegulæ, a large patch beneath the wings, and the legs ferruginous; the wings hyaline and iridescent, the nervures testaceous. Abdomen ferruginous, the base, and the apical margins of the second and third segments rufo-piceous.

Hab. Ceram.

2. *NOMADA CONSPICUA*. *N. atra*, clypei margine anguste flavo; antennis subtus pedibusque anticis et intermediis ferrugineis; abdominis segmentis duobus albo maculatis.

Male. Length $2\frac{1}{2}$ lines. Black; the anterior margin of the clypeus, the labrum and mandibles yellow; the antennæ ferruginous beneath. Thorax: the scutellum with two obscure ferruginous spots, the anterior and intermediate legs, the posterior femora beneath, and the tibiæ at their apex, as well as the tarsi, ferruginous; the wings hyaline, their apical margins clouded. Abdomen gradually widened from the base to the middle of the second segment, and from thence rounded to the apex, being somewhat pearshaped; an ovate white macula at the lateral margin of the second segment, and a short white line a little beyond it; beneath rufo-testaceous.

Hab. Timor.

Gen. CROCISA, *Jur.*

1. *Crocisa nitidula*, *Fabr. Syst. Piez. p. 386. 2.*

Hab. Mysol; Waigiou; Gilolo; Ternate; Aru Islands; Amboyna; Menado; Australia; Ceram; Timor.

Gen. XYLOCOPA, *Latr.*

1. *Xylocopa perforator*, *Smith, Proc. Linn. Soc.* vi. 61. 4.

Hab. Timor; Ternate.

2. *Xylocopa æstuans*, *Linn. Syst. Nat.* i. 961. 53.

Hab. Timor; Celebes; Java; Singapore; India.

3. *Xylocopa unicolor*, *Smith, Proc. Linn. Soc.* v. 135. 2.

Hab. Bouru; Amboyna.

4. XYLOCOPA PROVIDA. *X. nigra*, pube nigra vestita; thorace postice pube flava decorato; alis nigro-fuscis. (*Fæmina*.)—Flava, tibiis posticis intus nigro hirtis; alis fusco-hyalinis, apicibus nigro minute et regulariter crebre punctatis. (*Mas*.)

Female. Length $8\frac{1}{2}$ lines. Black, and clothed with black pubescence; the face with a thin griseous pubescence; the flagellum, except the two basal segments, fulvous beneath. The thorax clothed with bright yellow pubescence; behind the wings light brown.

Male. Length 10 lines. Clothed with pale fulvous-yellow pubescence; antennæ as in the female. The anterior legs elongate, the tarsi with a long fringe of pubescence outside; the posterior legs curved inwards; clothed outside with yellow, and inside with black pubescence; the wings subhyaline, with a fine cupreous iridescence.

Hab. Mysol; Waigiou.

Gen. ANTHOPHORA, *Latr.*

1. *Anthophora zonata*, *Linn. Syst. Nat.* i. 955. 19.

Hab. Mysol; Waigiou; Gilolo; Bachian; Celebes; Dory; Borneo; Java; India; Hong Kong; Shanghai; Philippine Islands; Ceram.

2. *Anthophora elegans*, *Smith, Proc. Linn. Soc.* iii. 135. 2.

Hab. Ceram; Amboyna; Key Island.

Subfam. SOCIALES.

Gen. APIS, *Linn.*

1. *Apis dorsata*, *Fabr. Syst. Piez.* p. 370.

Hab. Timor; India; Malacca; Borneo.

2. *Apis socialis*, *Latr. Voy. Humb. & Bonpl.*

Hab. Timor; Ternate; Java; Malabar.



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