

For the hypothesis concerning the appearance of *Lepidopus candatus* set forth in my paper, I do of course not claim anything more than the merit of a *possibility*; and I will be very well satisfied if I have thereby induced any one to take up the subject and discover the secret, whether his discovery prove my hypothesis to be correct or false.

THE INSECTS OF THE MACLAY-COAST, NEW GUINEA.

BY WILLIAM MACLEAY, F.L.S., &c.

During a nearly three years residence at Astrolabe Bay on the North Coast of New Guinea, about 10 years ago, Baron Maclay picked up, as occasion offered, a few insects, which he placed in spirits, where they have remained undisturbed and unexamined until the present time. The collection is of the scantiest nature, the number of species of all Orders of the Insecta, not exceeding 50, and many of them I regret to find, from their lengthened immersion in spirits, in anything but a good state for examination.

It must not however, be supposed that the smallness of the collection in any way indicates poverty of the insect fauna in that portion of New Guinea, the reason is simply that the Baron at that time was so deeply interested in Anthropological investigations, that he scarcely noticed the other animals of the country, and only collected what actually came in his way. It is much to be regretted that he did not make better use of his opportunities in this respect, for the Maclay Coast—so named after the distinguished traveller himself—is about the only portion of the coast line which has never been visited by collectors.

Port Dorey, Triton Bay, and indeed many places on the West and North-west Coast, have been frequently visited by naturalists, and many species of the Invertebrata of these regions were described

long ago by M. M. Garnot and Lesson, Quoy, Gaimard, Boisdual and others, and in later times by Gestro, Wallace, Bates, Baly, &c. The Archipelago of large Islands, New Ireland, &c., lying on the North-East side of New Guinea, was visited by the Coquille, in 1823, and large collections were made at that time, and of late years it has been a favourite resort of numerous professional collectors. The South Coast also has become of late years pretty well known, from the Delta of the Fly on the West to the extreme South-east point of the Louisiade Archipelago, and the labours of D'Albertis, Goldie, and others have enabled us to form a tolerably accurate estimate of the Fauna of that portion of the Island. But the country in or near Astrolabe Bay, has never hitherto been submitted to even the most cursory search for its zoological productions.

I give, in the following list, under each species, all its known localities, as by this means the collection, small though it be, may throw some light on the subject of the geographical distribution of species.

Ordo. COLEOPTERA.

Family. CICINDELIDÆ.

1. CICINDELA D'URVILLEI. Dej.

Guer. Voy. Coq. Zool. Pl. I., fig. 2.

Hab.—Dorey ; Maclay Coast.

FAM. SCARABÆIDÆ.

2. LEPIDIOTA QUINQUELINEATA. nov. sp.

Oblong-oval, dark reddish brown, opaque. Head densely variolose-punctate, each puncture with a minute whitish scale; the clypeus slightly emarginate and considerably reflexed. Thorax nearly twice as broad as long, the anterior angles advanced, the sides widening towards the base, the base itself a little sinuate, and the whole coarsely and rather distantly punctate, each puncture with a short yellowish or whitish seta-looking scale.

Scutellum triangular, rounded behind, sparsely punctured. Elytra of the width of the thorax at the base, and nearly four times the length, widening a little towards the apex, the puncturation irregular and denser than on the thorax, and the scales rather longer. Each elytron has five longitudinal lines or costæ; the first close to the suture distinctly marked, the others at equal distances apart and scarcely costate, excepting the fifth, which is distinctly raised. The pygidium is triangular with rounded angles, and is densely variolose-punctate. The legs and entire under surface are of a nitid pitchy brown; the pro-meso and metasternum clothed in the middle with yellow pile. Fore tibiæ with three strong teeth towards the apex externally; the middle and hind tibiæ with three short nearly equidistant teeth on the outer margin. Long. 16 lin.

One specimen. Maclay Coast.

3. *LEPIDIOTA SCUTELLATA*. nov. sp.

Oblong-oval, brown, opaque, very densely minutely punctate, and densely clothed with minute silky grayish scales. Head rugosely marked in front on the clypeus, which is emarginate and reflexed. Thorax transverse, a little emarginate in front and sinuate behind, the anterior angles rather rounded, and the sides rounded in the middle and narrowed slightly towards the posterior angles. Scutellum rounded behind, its width at the base more than thrice its vertical length. Elytra about the width of the thorax and about three times the length, the callus on the hinder part very conspicuous.

Under surface dark piceous, the abdominal segments densely clothed with scales, and the mouth pro- and mesosternum with red hair. Fore tibiæ strongly tridentate, the other tibiæ slight, and minutely armed; the posterior thighs narrow at the base, swelling and rounded towards the apex. Long. 18 lin.

One specimen, Maclay Coast.

4. *DIPELICUS NASUTUS*. Bates.

Pro. Zool. Soc., 1877, p. 153, pl. XXIV., fig. 4.

Hab.—Duke of York Island; Maclay Coast.

5. SCAPANES POLITUS. nov. sp.

This is a very distinct species, but from its general resemblance I have no doubt it has been frequently taken for *S. australis*.

Boisduval describes *S. australis* from Port Dorey, and I have specimens of it in my Museum from Aru, New Ireland, Duke of York Island, and the Solomon Islands. The species I now name I have from the Maclay Coast, the East side of the Gulf of Papua, and the South Eastern extremity of New Guinea. The size and general appearance of the two species are much the same, but the difference in sculpture is very remarkable throughout, but especially on the elytra. In *S. australis* the elytra are covered with large variolose looking punctures, with a few distinct semi-costate longitudinal lines; in *S. politus* they are smooth and nitid, the puncturation such as it is being minute and thin.

Several specimens, male and female.

6. LOMAPTERA ADELPHA. Thoms.

Archiv. Ent. 1., p. 428, tab. 16, fig. 3.

Hab.—Aru Islands; Fly River; Maclay Coast.

FAM. BUPRESTIDÆ.

7. CYPHOGASTRA MNISZECKII. Deyr.

Ann. Belg., 1864, p. 40.

Hab.—Amboina; Maclay Coast.

FAM. EUCNEMIDÆ.

8. ARISUS ATRIPENNIS. nov. sp.

Elongate, parallel-sided. Antennæ and palpi as in *A. Wicardi* Casteln, and of a light pitchy-red. Head and thorax red, densely punctate, and thickly covered with short velvety pubescence; there are two small round depressions on the head between the eyes: the thorax is a little longer than the width, very convex above, and with the posterior angles acute. Scutellum small, square, and of an opake reddish hue. Elytra of the width of the thorax and about

three times the length, black, punctate-striate, (10 striæ on each elytron) and densely and finely punctate on the interstices. Body beneath and legs light red, with a very short golden pile. The fourth joint of the tarsi is bilobed.

Long. 6 lin. One specimen.

It is with considerable doubt that I place this handsome species in Bonvouloir's genus *Arisus*, it should probably form a new genus. The species is undoubtedly new.

FAM. MALACODERMIDÆ.

METRIORHYNCHUS PAPUENSIS. nov. sp.

Sooty black, with the base of the elytra, margins of the thorax, the meso and metasternum and the base of the thighs yellow. The cavities on the thorax are deep but not very distinctly defined. The elytra are punctate in ten striæ, towards the base the alternate interstices are elevated.

Length, $3\frac{1}{2}$ lines.

10. LUCIOLA RUFICOLLIS. Guer.

Voy. Coq. Ent., p. 75.

Hab.—Dorey ; Maclay Coast.

FAM. CURCULIONIDÆ.

11. EUPHOLUS AZUREUS. nov. sp.

Of a uniform azure blue, subopaque, under a lens showing an extremely fine puncturation. The antennæ have the joints from the second to the eighth clothed with whitish hair, the club is brown. The thorax has two raised smooth black lines extending diagonally outwards from the apex on each sides of the median sulcus to about the middle. The scutellum is very small and round. The elytra are broader than the thorax at the base, slightly widened behind and pointed at the apex. There are nine rows of large deep punctures on each elytron ; these are regular but not in striæ ; the suture, the scutellar region, a scapular and subapical callus, a short raised vitta on each side of the scutellum, and a raised narrow fascia a little behind the middle and not

reaching the suture are black. The knee joints are black, the tarsi reddish beneath, and the abdominal segments are lightly clothed with hair.

Long., 15 lin. One specimen.

12. RHINOSCAPHA MACLAYI. nov. sp.

Black, nitid; head densely punctured in front, lightly behind, covered with a thin ashen pubescence and furnished with a number of strong hairs about the mouth. The extremity of the snout as broad as the head. Thorax scarcely longer than broad, broader at the base than the apex, and also broader than the head, very regularly marked, and with a depression on the anterior part of the median line. A broad depressed space on the side and under surface of the apex of the thorax is densely covered with reddish golden scales, and on each side from the middle to the base there is a broad vitta of the same. The elytra are convex, broader than the thorax, with a prominent humeral callus, and pointed at the apex; on each elytron are nine rows of large oblong punctures, the intervals scarcely raised; the extreme apex is mucronate. A sutural vitta including the scutellum, a broadish fascia behind the shoulder and not reaching the suture, and a narrower rather curved fascia behind the middle and extending to the suture, are densely clothed with golden scales. The metasternum is similarly clothed. The legs are sparingly punctured, each puncture with a short seta.

Length, 14 lines.

Four specimens of this fine species among such a limited collection would lead to the conclusion that it is a common insect on the Maclay coast, and yet among the many species described by various authors I can find nothing like it.

13. CELEUTHETES BICRISTATUS. Montr.

Faune del 'Isle Woodlark, p. 49. Lacord. Gen. Col. VI., p. 150. (Note.)

I believe this insect to be the *Otiorhynchus bicristatus* of Montrouzier. The scape of the antennæ is fine at its insertion, but

immediately becomes broad, flat, and slightly arcuated, and is much longer than the head ; the elytra are very retuse behind, and prolonged backwards on each side into prominent hair clad protuberances.

Hab.—Woodlark Island ; New Guinea.

14. PSOMELES PLAGIATUS. Blanch.

Voy. Pole Sud, IV., p. 229 tab. 15 fig. 18.

Hab.—New Guinea.

15. LIXUS DUPONTI. Schn.

Gen. Curc., VII., p. 478. No. 174.

Syn. L. farinosus, Bois., Voy. Astrol. II., 1835, p. 406.

Hab.—New Guinea.

16. MECOPUS BISPINOSUS. Weber.

Schn. Gen. Curc. III., p. 556.

Pasc. Ann. Nat. Hist., 1871, pl. 15, fig. 11.

Hab.—Sumatra ; Java ; Borneo ; New Guinea ; Maclay Coast.

17. RHYNCOPHORUS VELUTINUS. Fairm.

Journ. Mus. Godeff., 1878, p. 33. *Syn. R. Kaupii*. Schauf.

Hab.—Mioko ; Maclay Coast.

FAM. BRENTHIDÆ.

18. ECTOCEMUS PTERYGORHINUS. Gestro.

Ann. del. Mus. Civico di Stor. Nat. Gen. VII., 1876.

Hab.—Cape York, Aust. ; Maclay Coast.

FAM. ANTHRIBIDÆ,

19. NESSIARA DIPLONATA. Fairm.

Ann. Soc. Ent. Belgique, tom. 27, p. 45.

Hab.—Wooklark Island ; Maclay Coast.

FAM. CERAMBYCIDÆ.

20. BATOCERA WALLACEI. Thomson.

Arch. Ent. 1 p. 447, t. 18 fig. 1. Pasc. Ent. Soc. (3), III., p. 267.

Hab.—Aru ; Key ; Mataballo ; New Guinea.

21. MONOHAMUS VARIOLARIS. Pasc.

Trans. Ent. Soc., (3.) Vol. III., p. 295.

Hab.—Dorey ; Mysol ; New Guinea.

22. DIHAMUS RARUS. Thomson.

Arch. Ent. I., p. 445. Pasc. Ent. Soc., (3.) III., p. 291.

Hab.—Aru ; New Guinea.

23. AGELASTA OBSCURA. nov. sp.

This species must I think be undescribed, but it is so denuded by long immersion in spirits of the variegated scaly clothing so usual in the genus that it is difficult to speak with certainty.

The whole insect is of a dull chocolate brown colour, the occiput has a distinct median impression, that of the thorax only shows on the posterior half. The elytra are strongly punctured in about fifteen very irregular rows, the intervals for the most part flat, but three of those in the middle of each elytron are slightly raised and broader. One specimen (a female). Length, 7 lines.

24. PITHOMICTUS IRRORATUS. nov. sp.

Form rather elongate, the length being five times the width. The head is deeply impressed between the antennæ which are not far apart. They are longer than the body and ciliated beneath ; the first joint strong and cylindrical, the third slight but much longer, the fourth little longer than the first. The thorax is longer than broad and almost cylindrical, with a short acute spine on each side behind the middle. The scutellum is nearly square. The elytra are a little wider than the thorax, and over three times the length, and are narrowed a little towards the apex, which is truncate

and acutely bidentate. Each elytron is strongly punctate-striate, the intervals costate except towards the sides. The legs are rather short, the thighs all subclavate, the anterior tarsi very dilated. The colour is a uniform chocolate brown becoming redder on the legs and antennæ, ornamented with a short white pubescence, disposed in four vittæ on the thorax, and on the elytra in round spots in the lines of the striæ. Long. $3\frac{1}{2}$ lin.

This species should properly form a new genus.

25. *ARSYSIA SPILONOTA*. Gestro.

Ann. Mus. Civ. Genoa VIII., 1876, p. 521.

Hab.—Island Jobi ; Maclay Coast.

26. *TMESISTERNUS TRIVITTATUS*. Guer.

Voy. Coq. Ent., pp. 130 t. 7, fig. 12 ; Blanch. Voy. Pole. Sud. IV., pp. 284 t. 16, fig. 15 ; Pasc. Trans. Ent. Soc. (3) III., p. 464 ; Gestro. Mon. Tmes., p. 16.

Hab.—Aru, Dorey ; Maclay Coast.

27. *OLENOCAMPTUS BILOBUS*. Fab.

Pasc. Ent. Soc. (3), Vol. III., p. 316.

Syn.—*O. serratus* Chevr. Mag. Zool., 1835.

Hab.—From India to New Guinea.

28. *GLENEA PICTA*. Fab.

Pasc. Ent. Soc. (3), Vol. III., p. 373, pl. XVII., fig. 6.

Hab.—The whole Indian Archipelago.

29. *PACHYDISSUS TERNATENSIS*. Fairm.

Pet. Nouv. Ent., 1879, No. 70 ; Ann. Soc. Ent. Belgique, tom. 27, p. 51.

Hab.—Duke of York Island, Ternate, Yule Island (New Guinea), and Maclay Coast.

30. CERESIUM PACHYMERUM. Pasc.

Diatomocephala pachymera. Pasc. Trans. Ent. Soc. (3), Vol. III., p. 542.

Hab.—Bouru, Ceram, Maclay Coast.

31. CLYTANTHUS LUXATA. Pasc.

Trans. Ent. Soc. (3), Vol. III., p. 602.

Hab.—Saylee, Maclay Coast.

32. PASCOEA IDÆ. White.

Cat. Longic. Brit. Mus., p. 341, pl. 8, fig. 5 ; Pasc. Trans. Ent. Soc. (3), Vol. 3, p. 486, pl. 19, fig. 6.

Hab.—Ceram, Amboyna, Maclay Coast.

FAM. CHRYSOMELIDÆ.

33. ASPIDOMORPHA SANCTÆ-CRUCIS. Fab.

Ent. Syst. IV., App., p. 446 ; Bohem. Mon. Cassid. II., pp. 287 to 6, fig. B.

Hab.—E. India, Maclay Coast.

34. RHYPARIDA ATRATA. nov. sp.

Head emarginate with deep median impression in front terminating behind in a transverse line across the middle of the head, the epistome, which is large, is densely punctured, the rest of the head very slightly ; the eyes are large and prominent. The thorax is transverse, not broader at the apex than the head including the eyes, but widening on the sides which are rounded, and becoming narrower towards the posterior angles which are acute ; the surface, except at the posterior angles, is covered with irregular punctures. The scutellum is smooth. The elytra are a little broader than the thorax at its widest part, and are striate punctate ; the two striae on each side of the scutellum are abbreviated, and the eighth from it takes its rise behind the humeral callus and divides near the middle into three distinct punctured striae. The colour is entirely of a subnitid black, with a piccous tinge on the head, antennae and legs.

Long. $2\frac{1}{2}$ lin.

35. OIDES LIMBATA. Blanch.

Adolium limbatum., Voy. Pole Sud. IV., p. 339, t. 19, fig. 12.

Hab.—New Guinea.

FAM. COCCINELLIDÆ.

36. EPILACHNA HÆMORRHOÆ. Boisd.

Voy. Astrol. Col., 1835, p. 599, t. 8, fig. 22. Muls. Spec. Trim. Col. p. 727.

Hab.—Dorey, Maclay Coast.

37. EPILACHNA CONSPUTA. Muls.

Spec. Trim. Col., p. 763.

Hab.—New Guinea.

38. EPILACHNA. Sp. (?)

The specimen injured beyond recognition.

Ordo. ORTHOPTERA.

FAM. MANTIDÆ.

39. HIERODULA TIMORENSIS. De Haan.

Sauss. Melanges Orthopt. 4th fascicle, p. 38, fig 24. *Syn.* *Polyspilota timorensis* Sauss. Melanges Orthopt. 3rd fascicle, p. 87. fig. 3.

One fine specimen, possibly a new species, the thorax seems to be too long for *H. timorensis*.

FAM. PHASMATIDÆ.

40. CYPHOCRANIA MACLAYI. nov. sp.

There is only one specimen (a female) of this grand insect, which I name after its distinguished discoverer. It is 8 inches in length, and of a very robust form. The colour seems to have been reddish brown all over, darker on the mesothorax, and lighter on the legs.

Its occiput is convex with five lightly marked lines, the median somewhat costate. The prothorax is about 4 lines long, and 3 broad, very slightly wider at the base than at the apex, and divided by a transverse and longitudinal sulcus into four sections, the posterior ones largest; in the upper half of the thorax there are four tubercles, two close to the head, the others near the transverse sulcus; in the lower half there are also four tubercles placed two each side of the median line close to the base; there is also a deep transverse impression across the apex of the prothorax, and there seems to have been a good deal of yellow colouring over the whole of its upper surface. The mesothorax is about 12 lines long, as wide as the prothorax, of equal thickness throughout and armed with strong spines over its whole surface. Beneath both meso and metathorax are similarly armed. The tegmina are almost half the length of the wings and of oval form; there is an indistinct trace of a lightish coloured band across them behind the middle. The costal area of the wings is broad and of the same reddish-brown hue as the tegmina, the hyaline portion is barred with brown. The legs are all densely spinous. The abdomen is bulky and extends more than an inch beyond the extremity of the wings.

41. CYPHOCRANIA LOBICEPS. nov. sp.

This should perhaps be placed in a new genus. The specimen (a male) is over six inches in length and appears of a uniform brown colour, excepting on the head, which is yellowish. The form is more slender than in *C. Maclayi*. The head is elevated on the occiput into a bilobed rounded prominence; the face is rather inflexed like that of a *Blatta*; the pro-thorax is rather narrower than the head and about 3 lines in length; the meso-thorax is about 10 lines in length, smooth and cylindrical. The tegmina are about one-third the length of the wings, with an oblique yellow fascia extending from the upper margin near the base to the middle of the inferior margin. The wings are four-fifths of the length of the abdomen, and are of a uniform dingy brown. The legs are moderately spinose; the anterior tibiæ are singularly contorted and twisted

FAM. GRILLIDÆ.

42. PHYLLOPHORA SPECIOSA. Thunb.

Mem. tome. V., p. 186, tab. 3 ; Brulli. Hist. Nat. Ins. tome. IX., p. 142, pl. 13, fig. 2 ; Serville Hist. Nat. Orthopt., p. 592.

43. ANOSTOSTOMA. Sp. (?)

This insect is winged, otherwise very like *Anostostoma*.

Ordo. HEMIPTERA.

44. MEGYMENUM DENTATUM. Guer.

Voy. Coq., pl. 12, fig. 1. Boisd, Voy. Astrol., p. 632., pl. 11, fig. 11.

Hab.—Dorey, Maclay Coast.

45. LYGÆUS PACIFICUS. Boisd.

Faune del Oceanie, p. 630, pl. 11, fig. 20.

Hab.—Port Western, Maclay Coast.

46. EULYES. Sp. (?)

47. NEW GENUS.

48. GALGULA. Sp. (?)

Ordo. HYMENOPTERA

I am unable to name these, there in all six species, 2 of *Apidæ*, 1 of *Polistes*, 1 *Pelopæus*, 1 *Chrysis*, and a species of *Ant.*

Ordo. DIPTERA.

One specimen, an *Anthrax*, very much injured.

Ordo. HOMOPTERA.

One *Cicada* and one *Centrotus*. Species doubtful.