

of the species now under consideration. They compare the genus with *Actæon*, which, according to them, the shells of *Bullina* greatly resemble. Their figures show the spire more or less raised; and they mention that the species are from Japan, Ceylon, and Australia. Woodward, in his 'Manual,' gives *Bullina* of Férussac as a synonym of *Aplustrum*, Schumacher, which was founded on the well-known *Bulla aplustre* of Linné. *Bullina* of Risso (1826) is the same as *Cylichna* of Lovén, and ought to take precedence of the latter name; its type was *Bulla cylindracea* of Pennant. I have two more undescribed species of *Cryptaxis* from the 'Porcupine' Expedition.

EXPLANATION OF PLATE XLIV.

Fig. 1. *Cocculina spinigera*, p. 393.

1 a. Prickles or spines, magnified.

1 b. Lateral teeth of odontophore, magnified.

1 c. Uncini of same, magnified.

2. *Cocculina corrugata*, p. 394.

2 a. Sculpture, magnified.

3. *Odostomia electa*, p. 394.

4. *Trophon carinatus*, p. 395.

5. *Fusus sabini*, p. 395.

6. ——— *delicatus*, p. 396.

6 a. Apex, magnified.

6 b. Ovi-capsule, magnified.

7, 7 a. *Fusus hirsutus*, p. 396.

8, 8 a. ——— *concinus*, p. 396.

9. *Defrancia formosa*, p. 397.

9 a. Sutural fissure, magnified.

9 b. Sculpture of apex, magnified.

10. *Pleurotoma exigua*, p. 398.

11, 11 a. *Cryptaxis crebripunctatus*, p. 398.

11 b. Apex, magnified.

11 c. Sculpture, magnified.

2. Descriptions of some new Species of Beetles of the Family Galerucidæ. By MARTIN JACOBY.

[Received June 2, 1883.]

(Plate XLV.)

OIDES, Weber.

1. OIDES APICALIS, sp. nov. (Plate XLV. fig. 1.)

Ovate-oblong, flavous; head and thorax impunctate; elytra finely punctured, dark violaceous blue, the lateral and the posterior parts of the sutural margin flavous.

Length 4-4½ lines.

Hab. Sumatra.

Head rather swollen, with a deep transverse groove between the eyes, above which a small but deep fovea is placed; clypeus transverse, swollen. Antennæ less than half the length of the body, entirely flavous, the third joint double the length of the second,

fourth joint the longest. Thorax narrowly transverse, of equal width, the anterior and posterior margins parallel, the sides rounded near the base, slightly constricted in front of the anterior angles, the latter rather acute but not produced; surface shining, impunctate, flavous, with a few very obsolete depressions when seen in certain lights. Scutellum oblong, its apex rounded, flavous, impunctate. Elytra not wider at the base than the thorax, dilated gradually towards the middle, with a rather obsolete depression below the shoulders, the entire surface covered with fine punctures, rather closely placed; of an obscure dark violaceous blue, the lateral margins, apex, and the last third of the suture flavous, at the latter place this colour extends upwards in a pointed shape. Underside and legs flavous.

This species, of which two specimens are contained in my collection, is easily distinguished from *O. limbata*, Blanch., by the colour of the posterior part of the suture and by that of the antennæ. The elytra are also less closely and strongly punctured in the present insect.

There is a curious structural difference to be found in many species of the present genus, in regard to the elytral epipleuræ, which in most of the smaller species are broad and concave at the base, but disappear gradually towards the latter half of the elytra; in many large-sized species, however, as in *O. 10-punctata*, Billb., *O. 12-maculata*, Clark, &c., the elytra might almost be called simple, as the inner margin of their epipleuræ is put so far back near the sides of the body that it can be seen only when the insect is held in a certain position. This character may perhaps be of some use in a future monograph of the many and closely allied species.

2. *OIDES AFFINIS*, sp. nov. (Plate XLV. fig. 4.)

Broadly ovate, obscure fulvous; terminal joints of the antennæ, abdomen, tarsi, and a longitudinal broad band at each elytron black. Length 3-4½ lines.

Hab. Neilgherries, South India.

Head scarcely swollen, impunctate with the exception of a few punctures in front of the eyes, transversely grooved between the latter; the frontal tubercles very distinct and almost contiguous. Antennæ longer than half the length of the body in the male, the third joint a little longer than the second, fourth joint distinctly longer than the third; the four lower joints fulvous, the rest black. Thorax not more than twice as broad as long, the sides evenly rounded, surface rather convex, extremely minutely punctured. Scutellum trigonate. Elytra convex, widened at the middle, very distinctly and closely punctured, the interstices finely wrinkled; a broad black band extends from below the base to near the apex, without, however, touching any of the margins. Underside and legs obscure fulvous. Abdomen and tarsi black.

Collection Jacoby.

In colour this species resembles greatly *O. dorso-signatum*, Clark, from Australia.

3. *OIDES CLARKII*, sp. nov. (Plate XLV. fig. 3.)

Oblong-ovate, testaceous; antennæ piceous; elytra closely punctured, the suture and a longitudinal band, divided at the middle, from the base to the apex black.

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

Hab. New Guinea, Waigiu.

Head with a central impressed groove and a deep transverse depression between the eyes; labrum testaceous, punctured; apex of jaws black. Antennæ elongate, the third and fourth joints nearly of equal length. Thorax narrowly transverse, the anterior and posterior margins parallel, the sides slightly rounded; surface transversely depressed in front of the anterior margin, and with a round shallow fovea at each side, obsoletely and finely punctured. Scutellum obscure piceous. Elytra widened towards the middle, the sides slightly constricted below the base; the surface covered with fine but distinct punctures, testaceous; a narrow sutural and a broad lateral band from the base to the apex, both bands joined at the latter place, black; the lateral band is divided longitudinally in the middle by a narrow space of the ground-colour. Underside and legs testaceous; tibia and tarsi slightly darker.

Collected by Mr. Wallace.

Allied to *O. fryi* and *O. seminigrum*, Clark, but distinguished from both by the sutural band. In one specimen before me the lateral elytral band is entire and not divided at the middle, but in other respects the specimen agrees with the type.

4. *OIDES BIPLAGIATA*, sp. nov. (Plate XLV. fig. 2.)

Broadly ovate, flavous; thorax and elytra very finely punctured, the latter with a transverse band at the middle and a large oval spot at the apex black.

Length $4-4\frac{1}{2}$ lines.

Hab. New Guinea, Port Moresby.

Head convex, with a central longitudinal impressed line; space between the eyes deeply transversely grooved, limited in front by a thickened oblique ridge. Antennæ about half as long as the body, obscure fulvous, the fourth joint nearly double as long as the third. Thorax narrowly transverse, the sides slightly widened in front of the base, the posterior angles rounded; surface rather convex, with a few oblique obsolete depressions near the sides and the base, extremely finely punctured. Scutellum impunctate. Elytra widened towards the middle, with a distinct flattened margin, extremely closely and more distinctly punctured than the thorax, flavous; a transverse band at the middle (consisting of two spots united, of which the outer one is the smallest), and a large oval-shaped patch near the apex black. Underside and legs entirely flavous.

Collection Jacoby.

MEGALOGNATHA, Baly.

5. *MEGALOGNATHA CRUCIATA*, sp. nov. (Plate XLV. fig. 7.)

Elongate, convex, widened behind, fulvous; head, breast, legs,

and the antennæ black; elytra very finely and closely punctured, fulvous, the suture and a transverse band at the middle black.

Length 3 lines.

Head very sparingly and finely punctured, deeply transversely grooved between the eyes; frontal tubercles as well as the carina strongly raised. Antennæ half the length of the body (♀), filiform, black. Thorax square-shaped, the sides slightly rounded, posterior margin distinctly concave at the middle; surface somewhat convex, without any depressions, fulvous, finely granulose punctate. Scutellum piceous. Elytra widened from the base to the apex, very convex at their posterior half, and from there to the apex abruptly declined; surface closely and finely granulose-punctate, fulvous; a longitudinal band at the suture, gradually narrowed near the apex, and a transverse band below the middle, not quite extending to the lateral margin, black; from the shoulder to below the middle a single costa is seen at each elytron. Underside and legs black, finely covered with yellowish pubescence. Abdomen fulvous, the first segments more or less stained with black.

Hab. Africa, Transvaal.

A single female specimen is contained in my collection.

6. *MEGALOGNATHA UNIFASCIATA*, sp. nov. (Plate XLV. fig. 8.)

Black. Antennæ in the male triangularly widened at the seventh and eighth joints; in the female simple. Thorax and the elytra closely punctured; the latter flavous, with a broad transverse band below the middle.

Length $2\frac{1}{2}$ – $2\frac{3}{4}$ lines.

Head impunctate, the lower part projecting; labrum obscure testaceous. Antennæ half the length of the body, black; the terminal joints testaceous at their inner sides; the seventh and eighth joints flattened and with an angular projection within, rest of the terminal joints less flattened. Thorax square-shaped, the space below the anterior margin raised into a triangular-shaped elevation; rest of the surface finely punctured in the male, more strongly granulose-punctate in the female. Scutellum black. Elytra punctured as in the preceding species, testaceous or flavous, with a broad transverse black band below the middle, which does not quite extend to the lateral margin. Underside and legs black; abdomen fulvous.

Hab. Transvaal. Collection Jacoby.

Distinguished from *M. cavicollis*, Baly, by the shape and colour of its thorax.

7. *MEGALOGNATHA BIPUNCTATA*, sp. nov. (Plate XLV. fig. 9.)

Elongate, convex, subparallel, fulvous; antennæ, legs, and breast obscure piceous; thorax and elytra finely punctured, a spot at the middle of each elytron black.

Length 4 lines.

Head impunctate. Antennæ very closely approached in the male, the seventh and eighth joints in the same sex triangularly

widened and flattened, simple in the female; all the joints covered with fine pubescence. Thorax square-shaped, the sides rounded and widened towards the middle; surface with an obsolete fovea in front of the anterior and posterior margin, closely and finely punctured. Scutellum large, as broad as long, fulvous. Elytra nearly parallel, convex, their last third rather abruptly declined; surface punctured as in the preceding species, fulvous; each elytron with a round transverse black spot immediately below the middle. Underside and legs finely pubescent.

Hab. Nguru Mountains, East Central Africa. Collection Jacoby.

PACHYTOMA, Clark.

8. PACHYTOMA GIBBOSA, sp. nov. (Plate XLV. fig. 6.)

Elongate, widened posteriorly, piceous below; head, thorax, scutellum, and first three joints of the antennæ flavous; elytra ferruginous, very closely and finely punctured.

Length $7\frac{1}{2}$ –8 lines.

Hab. Old Calabar (*Rutherford*).

Head with a fovea between the eyes, scarcely visibly punctured. Antennæ short, robust, black, the three basal joints flavous. Thorax twice as broad as long, the sides rounded, the angles obtuse, surface extremely minutely punctured. Scutellum trigonate, its apex obtusely rounded. Elytra convex, widened at the middle, narrowed towards the base and apex, ferruginous, more distinctly but as closely punctured as the thorax. Underside and legs piceous; tibiæ distinctly channelled; claws bifid.

Two specimens in my collection.

In its general appearance and shape this species resembles greatly several insects of the genus *Oides*, from which the elytral epipleuræ extending to the posterior angle will at once distinguish it. Besides this character, all the others peculiar to the present genus are present. *P. gibbosa* seems to be the largest species at present described. In a short monograph of the genus by Dr. Karsch (Berlin. ent. Zeitsch. 1881) I find a species referred to under the name of *P. gigas*, Illig. This is probably a mistake, and refers to *P. gigantea*, Illig.

MESODONTA, Baly.

9. MESODONTA TRANSVERSO-FASCIATA, sp. nov. (Plate XLV. fig. 5.)

Elongate-ovate, widened behind; black below; basal joint of the antennæ, the thorax, and the scutellum obscure flavous; elytra granulose-punctate, green, subopaque, a transverse band behind the middle obscure flavous.

Length 6 lines.

Hab. West Africa (*Rutherford*).

Head rugose-punctate, black, lower part of face flavous. Antennæ about half the length of the body, the fifth to the ninth joints dilated and gradually shortened, the tenth trigonate, short, eleventh joint elongate. Thorax about twice as broad as long, the posterior margin slightly sinuate at each side, the latter narrowed from base

to apex; upper surface obsoletely three-foveolate, fulvous or flavous, closely rugose-punctate. Scutellum trigonate, closely punctured. Elytra much widened towards the apex, narrowly margined below the middle at the sides, very closely and finely granulose-punctate, of a bright green, but little shining, with a slightly sinuate transverse flavous band below the middle extending to either margin.

In my collection.

The present species forms the second one known from Africa, and seems allied to *M. limbata*, Baly, from which the flavous elytral band and want of the similarly coloured margins of the elytra separate it.

MERISTA, Chap.

10. MERISTA OBERTHÜRI. (Plate XLV. fig. 10.)

Oblong-ovate, widened behind, black; thorax impunctate; elytra very finely punctured, the extreme lateral margin, a narrow transverse band before, and two others behind the middle flavous; claws bifid, the inner division small.

Length $4\frac{1}{2}$ –5 lines.

Head impunctate, black. Thorax subquadrate, the anterior angles slightly produced and thickened; surface impressed with two transverse shallow grooves, of which the first is situated close to the anterior margin, the second near the middle, more deeply impressed and obliquely shaped at the sides; disk impunctate, with the exception of a few punctures along the anterior and posterior margins. Scutellum broad, impunctate. Elytra much wider at the base than the thorax, distinctly widened behind, very greatly in the female, entirely black, very finely punctured, the punctures now and then arranged in semi-regular rows; the extreme lateral margins, a very narrow transverse band before, two others more closely approached behind the middle, and the posterior part of the suture flavous.

Hab. Thibet (Tatsienlon Mount). Collection Oberthür and Jacoby.

The antennæ are more than two thirds the length of the body, and of the usual structure to be found in the present genus. Of the three bands at the elytra the middle one extends generally to the lateral margin, which is not the case with the other two. From all the described species, the present one, of which I have seen six specimens, sent to me by M. Oberthür for determination, is easily distinguished by its coloration.

PHYSONYCHIS, Chap.

11. PHYSONYCHIS NIGRICOLLIS, sp. nov. (Plate XLV. fig. 11.)

Elongate, subparallel, flavous below; base of the head and the thorax black; elytra metallic green or blue, closely rugose-punctate.

Length 4– $4\frac{1}{2}$ lines.

Head closely and distinctly punctured at the vertex, the latter black; frontal tubercles highly raised, elongate; the latter and lower

part of the face fulvous. Antennæ fulvous or piceous. Thorax transverse, narrowed from the base to the apex, the sides nearly straight and longitudinally flattened; surface very finely punctured at the disk, the latter black, the sides with a metallic green gloss. Scutellum black. Elytra rather convex, slightly but distinctly widened towards the apex, very closely punctured, the interstices finely rugose, of a metallic green or blue colour. Entire underside and the legs fulvous.

Hab. East Africa (coll. Jacoby); Zanzibar (coll. R. Oberthür).

Closely allied to *P. smaragdina*, Clark; but at once separated by the black colour of the thorax and of the scutellum. The elytra show no trace of longitudinal costæ as is sometimes seen in the allied species. The present insect is also larger, and the antennæ are more filiform. The specimens contained in my collection and in that of M. Oberthür are all females. I may further add that the thorax of *P. smaragdina* is much more strongly punctured, and that Clark gives the colour of the entire insect as metallic green or æneous, which is a mistake, the underside being of the same colour as that of the present insect.

SYSTEMA, Clark.

12. SYSTEMA DISCOIDALIS, sp. nov. (Plate XLV. fig. 12.)

Elongate, flavous; head and thorax impunctate; elytra extremely finely punctured, their posterior two thirds black, the latter not extending to the margins.

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

Hab. Ecuador.

Head entirely impunctate; the frontal tubercles rather obsolete and divided by a very shallow groove; carina indistinct; lower part of face depressed. Jaws black at their apex. Antennæ half the length of the body, filiform, entirely pale fulvous; all the joints, with the exception of the short second one, of nearly equal length. Thorax nearly twice as broad as long, subquadrate, the sides obliquely shaped, forming a distinct angle before the middle; anterior and posterior angles rather rounded; surface with a rather deep transverse sinuate groove in front of the base, the sides of which are gradually lost near the lateral margins; disk impunctate. Scutellum broadly triangular. Elytra wider than the thorax, subdepressed, slightly widened towards the middle, with a shallow sutural depression below the base, very finely and closely punctured, flavous, with an oval-shaped black patch extending from below the base to the apex, but leaving all the margins of the ground-colour. Posterior femora moderately thickened; their tibiæ with a distinct spine.

A single specimen, collected by Mr. Buckley, contained in my collection.

From the typical species forming the genus *Systema*, which are known to me, the present one deviates somewhat by the rather deep thoracic groove, the peculiar coloration, and its size; in all other structural characters, including the closed anterior coxal cavities, it agrees with the rest.

NOTES.

Merista variabilis, Har. (Stett. ent. Zeit. 1880), is identical with *Haplosonyx trifasciatus*, Hope; the type contained in the British Museum agrees with v. Harold's description, that of Hope's being unrecognizable.

Merista rufipennis, Har., is synonymous with *Leptarthra dohrni*, Baly, the latter author having omitted to mention in his description the red colour of the elytra.

Nerissus griseo-scutellatus, Karsch (Berlin. ent. Zeitsch. 1882, December), is without doubt identical with *Cheiridea subrugosa*, Jacoby (P. Z. S. 1882, p. 55).

EXPLANATION OF PLATE XLV.

Fig. 1. *Oides apicalis*, p. 399.

2. — *biplagiata*, p. 401.

3. — *clarkii*, p. 401.

4. — *affinis*, p. 400.

5. *Mesodonta transverso-fasciata*,
p. 403.

6. *Pachytoma gibbosa*, p. 403.

Fig. 7. *Megalognatha cruciata*, p. 401.

8. — *unifasciata*, p. 402.

9. — *bipunctata*, p. 402.

10. *Merista oberthüri*, p. 404.

11. *Physonychis nigricollis*, p. 404.

12. *Systema discoidalis*, p. 405.

3. On the Madreporarian Genus *Phymastræa* of Milne-Edwards and Jules Haime, with a Description of a new Species. By Prof. P. MARTIN DUNCAN, F.R.S. (Communicated by Dr. SCLATER, F.R.S.)

[Received May 29, 1883.]

CONTENTS.—I. Introduction. II. The Generic Diagnoses of *Phymastræa* given in 1848 and 1857. III. The emended Diagnosis of the Genus. IV. Description of the Species hitherto known. V. Description of a new Species. VI. Remarks on the Structures of *Phymastræa irregularis*, Dunc. VII. The Affinities of the Genus with others of the Recent Coral-fauna. VIII. The Affinities with Extinct Genera.

I. Introduction.

The species of the genus *Phymastræa* are rare; hitherto only two have been described, and a third is now brought forward for the first time. The genus belongs to the subfamily Astræaceæ of the family Astræidæ, and all the species are recent forms. Their structures are very remarkable, and recall in some points those of fossil forms.

In fact the genus, which is remarkably well defined, is exceptional amongst the recent Astræidæ, has a very old-fashioned appearance, and would not have been out of place in an early Secondary coral-fauna.

The species were studied in the first instance by MM. Milne-Edwards and Jules Haime, and they included them in the genus *Phymastræa*, which was established for the purpose in 1848¹. Sub-

¹ Comptes Rendus de l'Académie des Sciences, t. xxvii. p. 494.



Jacoby, Martin. 1883. "Descriptions of some new Species of Beetles of the Family Galerucids." *Proceedings of the Zoological Society of London* 1883, 399–406. <https://doi.org/10.1111/j.1469-7998.1883.tb06658.x>.

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