

OF CERAM, CELEBES, TERNATE, AND GILOLO.

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teeth at their apex; the head very large, longitudinally striated, and with a longitudinal channel behind the scape of the antennæ apparently for their reception; the eyes small, inserted forwards at the sides of the head. The metathorax, with two minute spines; the legs pale rufo-testaceous. Abdomen fuscous, smooth and shining.

Worker minor. Length 1 line. Rufo-testaceous, the antennæ, thorax, and legs pale testaceous; the head of the ordinary size; entirely smooth and shining.

Hab. Menado.

Gen. PHEIDOLE, *Westw.*

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

Mr. Wallace has sent a series of workers of this species collected from the nest. These contain, as it were, three modifications of the enormously large-headed individuals; all of these have heads similar in form, subquadrate, longitudinally striated anteriorly, and transversely so behind; these I should call varieties of the *worker major*; the *worker minor* has the head subovate in form, smooth, polished and shining; not striated behind, and very faintly so anteriorly. The links which would unite these two distinct forms of the working ants are wanting. I am therefore still of opinion that societies of ants generally possess two distinct sets of workers whose functions are totally different; this is known to be the case in slave-making communities, and also in the remarkable genus *Eciton*, of which only the workers are known.

2. *Pheidole plagiaria* (*Smith, Proc. Linn. Soc. Supp.* v. 112. 3).

Hab. Celebes; Bachian.

The specimens from Celebes are of a darker hue than those received from Bachian; this is the ant which Mr. Wallace saw carrying off white ants to its formicarium.

Gen. TYPHLATA, *Smith.*

1. *Typhlatta læviceps*, *Smith, Proc. Linn. Soc.* ii. 79. 1.

This remarkable genus of ants, the workers of which are destitute of eyes, is in my opinion closely allied to the genus *Eciton*, one or two species of which are also blind; the present species is very like the *Eciton pachycerus* of my Catalogue of Formicidæ, which is also blind. That species was collected by General Hardwick, and formed part of his collection, which he presented to the British Museum; I have little doubt it was captured in India, although South America (?) is given as its probable habitat. This genus differs from *Eciton* in having only two joints to the labral palpi; the maxillary palpi I have not succeeded in extracting.

Fam. CRYPTOCERIDÆ, *Smith.*

Gen. CATAULACUS.

1. *CATAULACUS FLAGITIOSUS.* *C. niger*; capite striato, angulis posticis
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Pp. 49-50 published in Mar. 1862. Also to D. D. ...
(v. de Bolton 1865) and Kapper (1865).

spinosis; thorace spinis duabus acutis elongatis armato; abdomine cordato.

Worker. Length $2\frac{1}{2}$ lines. Opaque-black; the head and thorax above, with a coarse irregular striation, intermixed with a rough granulation, the margins of the head crenulated, the posterior angles acute and slightly produced. Thorax armed posteriorly with two stout diverging spines. Abdomen oblong-cordate, finely and irregularly striated; sprinkled with distant short white erect setæ; the nodes of the peduncle rugose.

Hab. Celebes (Tondano).

Gen. ECHINOPLA, *Smith.*

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

Hab. Celebes; Malacca.

2. *Echinopla pallipes*, *Smith, Proc. Linn. Soc. ii. 80. 2.*

Hab. Celebes; Borneo.

3. *ECHINOPLA DUBITATA.* *E. nigra*; capite thoraceque rugosis; abdomine ovato lævi nitido; squama in utroque latere spina horizontali; femoribus pallide testaceis.

Worker. Length 2 lines. Black, and thinly covered with erect black hairs; the head and thorax rather finely rugose; the antennæ pubescent, with the extreme tip pale testaceous; the eyes round and very prominent. The anterior margin of the prothorax arched with a short acute spine at the lateral angles; the thorax is deeply constricted in the middle, the metathorax rounded behind; the roughness of the thorax gives its margins a crenulated appearance; the coxæ, trochanters, and base of the femora pale rufo-testaceous; the claw-joint of the tarsi rufo-testaceous. Abdomen globose, shining, and very finely punctured.

Hab. Celebes (Tondano).

Fam. MUTILLIDÆ, *Leach.*

Gen. MUTILLA.

1. *Mutilla Merops*, *Smith, Supp. Journ. Proc. Linn. Soc. v. 115. 2.*

Hab. Gilolo; Bachian.

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

Hab. Gilolo; Bachian.

3. *Mutilla Ianthæa*, *Smith, Proc. Linn. Soc. Supp. v. 115. 3.*

Hab. Amboyna; Bachian.

Gen. METHOCA, *Latr.*

1. *METHOCA THORACICA.* *M. rufo-ferruginea*; capite abdominisque fasciis tribus nigris.

Female. Length 4 lines. Rufo-ferruginous; the head black, the abdomen with three black fasciæ, very smooth and shining; the mandibles, clypeus, and antennæ ferruginous. (Pl. I. fig. 5. ♀.)

Hab. Celebes (Tondano).

This very beautiful insect may probably be a very large, highly coloured form of *M. insularis*, described in a previous paper; but not having any intermediate in size, I have thought it advisable to describe it as a distinct species.

Fam. THYNNIDÆ, *Erich.*

Gen. THYNNUS.

1. THYNNUS ATRATUS. *T. niger*, punctulatus; alis anticis fusco-nigris, apice hyalinis, posticis hyalinis, basi late fusco-nigris.

Female. Length 12 lines. Black and closely punctured; the head and thorax slightly shining, the thorax very shining, and not so strongly and closely punctured as the thorax; the anterior margin of the clypeus widely and slightly emarginate. The wings very dark brown, shining, and with their apical margins, and the posterior margin of the hind wings hyaline; the legs black with short cinereous pubescence within.

Hab. Gilolo.

This fine species of *Thynnus* is of the same form, and about the same size, as Guérin's *T. Shuckardi*; it is the second species that has to my knowledge been captured in the Eastern Archipelago; the first species was described in the paper descriptive of the insects of Bachian, &c., published in the supplement to the fifth volume of the 'Proceedings.'

2. THYNNUS (AGRIOMYIA) VAGANS. *T. niger*, capite thoraceque flavo variegatus, abdominis segmentis maculis duabus flavis; alis subhyalinis.

Male. Length $6\frac{1}{2}$ lines. Black, the head and thorax subopaque, the abdomen shining; the mandibles, clypeus and a V-shaped mark above yellow; the base of the clypeus and an anchor-shaped mark in the middle black. Thorax, the collar, posterior margin of the prothorax, a spot on the tegulæ, two beneath the wings, a minute one on the mesothorax, three on the scutellum, and one on each side of the metathorax yellow; the anterior tibiæ and the intermediate pair in front ferruginous; the wings subhyaline, the nervures black. The abdomen has an oblong yellow spot at the sides of all the segments except the two apical ones.

Female. Length 4 lines. Apterous; black, the head small, transverse in front, much narrowed behind, with a deep longitudinal sulcation on each side close to the margin of the eyes. The thorax narrow and oblong. Abdomen oblong-ovate, very large, with four deep transverse grooves on the second segment. (Pl. I. fig. 1 ♂, 2 ♀.)

Hab. Gilolo.

2. *AGATHIS STRIATA*. *A. flavo-rufa*, antennis nigris, abdomine nitido, longitudinaliter striato; alis flavo-hyalinis, dimidio apicali fusco. *Female*. Length 7 lines. Reddish yellow; the head triangular; the face pale; the antennæ black, with the scape yellow; the basal joints of the flagellum obscurely fulvous beneath; thorax smooth and shining; the basal half of the wings yellow hyaline, the apical half dark brown, with a minute hyaline spot below the stigma in the middle of the wing. Abdomen: the three basal segments and the base of the fourth evenly striated longitudinally.

Hab. Gilolo.

Gen. *CENOCÆLIUS*, *Haliday*.

1. *Cenocælius cephalotes*, *Smith, Proc. Linn. Soc. v. 65. 1.*

Hab. Gilolo; Celebes.

Fam. *TENTHREDINIDÆ*, *Leach*.

Gen. *CLADOMACRA*, *Smith*.

1. *Cladomacra macropus*, *Smith, Ann. & Mag. Nat. Hist. 1860, vi. 257.*

Hab. Celebes (Tondano).

ERRATA.

Several changes in the numbering of the objects that illustrate this paper having been made since the first sheet was printed, the following corrections of the references must be attended to. The numbers refer to figures of the scale of the abdomen of the different species.

Figs. 6 and 7, *Polyrhachis Orsyllus*.

Fig. 21, *P. Hippomanes*.

Figs. 12 and 12a, *P. Diaphantus*.

Fig. 23, *P. Lycidas*.

Figs. 15 and 20, *P. Mutilia*.

Fig. 24, *P. Eurytus*.

Fig. 16, *P. exasperatus*.

Fig. 25, *P. Numeria*.

On the Cranial Characters of the Snake-Rat, new to the British Fauna. By S. JAMES A. SALTER, M.B., F.L.S., F.G.S.

[Read April 7th, 1859.]

THE Society will doubtless recollect that last year* I exhibited at one of our meetings two living rats, one of which I believed to be new to the British Fauna—at least, new so far as that till then it had been unrecognized and undescribed as distinct. The other was a specimen of the old English Black Rat (*Mus rattus*); and this was shown, not on its own account, but for contrast and comparison. And I selected the Black Rat for this comparison because it so much more closely resembles the new one than does the

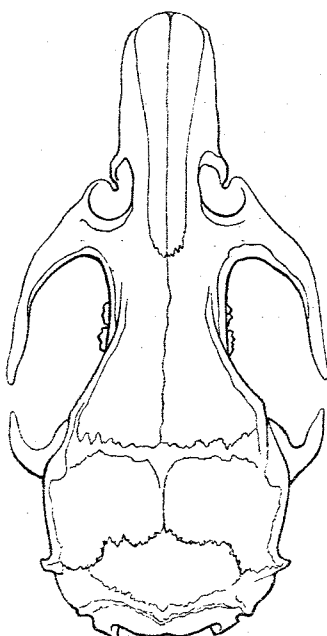
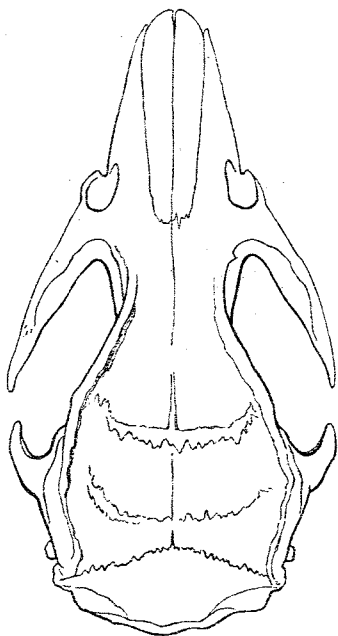
* May 6th, 1858.

Brown Rat (*Mus decumanus*), which is quite different. If therefore the new rat is a mere variety of either of the two species which have been long known as members of the British mammalian fauna, and which have always been considered specifically distinct, it must be deemed a variety of *Mus rattus*; but I claim for it distinctive characters separating it from that rat, quite as marked as those which distinguish the Brown from the old English Black Rat. Indeed *Mus decumanus* more nearly resembles *Mus rattus* than does the new rat. It was suggested to me, at the time I exhibited the living specimens, that an appeal must be made to the cranial characters of each, before the distinctness and the degree of distinctness between the two could be established. The result of this investigation I now give to the Society.

On the table are the skulls of the identical rats that were formerly exhibited—two adult males; and I have also some enlarged outline drawings (from which the accompanying woodcuts were taken) showing the salient peculiarities of each cranium. The

Fig. 1.

Fig. 2.



Top view of Cranium of Snake-Rat.
Enlarged two diameters.

Top view of Cranium of *Mus rattus*.
Enlarged two diameters.