

HYMENOPTERA.

FORMICIDÆ.

BY PETER CAMERON.

CAMPONOTUS, Mayr.

1. *Camponotus sylvaticus*, Oliv., Encycl. Méth., vi, p. 491.

Hab. Penipe to Riobamba (9000 feet). Several ♀ minor, Hacienda of Guachala (9217 feet). Seven examples.

The body is deep black; the mandibles piceous to ferruginous; antennæ dark red; the scape darker, and the legs pale reddish. There is very little hair on any part of the body, and the abdominal segments at their junction are white. The species is very generally distributed over the old world, as well as in America.

2. *C. atriceps*, Smith, Cat. of Hymen., vi, p. 44, No. 147.

Hab. Guayaquil (indoors). Numerous males.

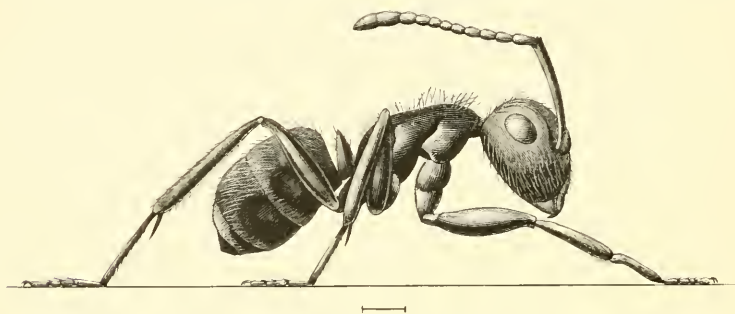
Some specimens have the thorax pallid rufo-testaceous, the head for the greater part black, the legs and antennæ coloured like the thorax, except that the scape is darker and the coxæ and trochanters paler; the abdomen at the base is dark testaceous, the apex fuscous. Other specimens have the body and legs fuscous or fuscous-black, or dark brown with the flagellum and tarsi pallid testaceous. Most of the specimens have the abdominal segments whitish at their junction. The texture of the body does not differ from that of the ♀ or ♂, but the pilosity is less, especially on the thorax, which may want it entirely. The wings are sometimes tinted with yellow or pale fuscous anteriorly; the nervures pallid testaceous, pale brown or whitish, and the stigma may be fuscous.

3. *C. Mayri*, sp. n.

Hab. Bodegas (level of sea). Two specimens.

Black, opaque; scape and first joint of flagellum pallid red; mandibles red, black at apex; apical tarsal joints and trochanters piceous. Mandibles with moderately large shallow punctures, with five teeth. Head minutely and closely punctured, the punctuation stronger below the antennæ. Thorax

closely punctured all over, stronger than on the head; base of abdomen closely and minutely punctured, the rest of it shagreened. Coxæ punctured. Scape of antennæ covered with a short, more or less erect, white pile; flagellum with a depressed almost microscopic pubescence. Head covered with a white, glistening, moderately long pile, longest on the face, and on the top are a few long, erect hairs. Mandibles marked with a few depressed hairs. Pro-meso- and metanotum covered sparsely with long, erect hairs, and with a sparse pubescence; the pubescence silvery white, the hairs fuscous, longest on metanotum. Pleuræ almost glabrous. Scale of abdomen with a few long, pale hairs. Base of abdomen almost without pubescence; the rest covered closely with a thick, depressed cinereous, intermixed with a



CAMPONOTUS MAYRI, CAMERON.
BODEGAS, LEVEL OF SEA.

few long, white, glistening hairs; the ventral surface covered sparsely with longish, scattered white hairs, which are longest at the base of abdomen. Edges of abdominal segments white. Legs with an erect white pile, thinner and longer on femora. Clypeus and front with an indistinct carina.

Length, 5-6 mm.

In the table given by Mayr in his paper on the ants of Colombia (Sitzb. d. K. Akad. d. Wissens., 1870), of the species of *Camponotus* from that region, the present species would come in at 19, "abdomen with a silky, shining, depressed pubescence," and may be distinguished from the species with this peculiarity, thus:—

The pubescence on head, thorax, and abdomen yellow. Antennæ and body mostly reddish *auricomus*, Rog.

The pubescence on head and thorax silvery white, on abdomen cinereous; antennæ and body black, except the flagellum. . . . *Mayri*, sp. n.

In size, punctuation, and structurally, it agrees closely with *C. crassus*,

Mayr, which has, however, only a sparse yellowish white pubescence on the abdomen, and the flagellum is red.

ECTATOMMA, Smith.

4. *Ectatomma quadridens*, Fab., Ent. Syst., ii, p. 362 = *brunneum*, Smith, Cat. of Hymen., vi, p. 103, No. 2.

Hab. Guayaquil. Five examples.

PACHYCONDYLA, Smith.

5. *Pachycondyla villosa*, Fab., Syst. Piez., p. 409, = *pedunculata*, Sm., Cat. of Hymen., vi, p. 96.

Hab. Bodegas (level of sea). One example.

6. *P. harpur*, Fab., Syst. Piez., p. 401 = *Montezumia*, Sm., Cat. of Hymen., vi, p. 108.

Hab. Pacific slopes (1-2000 feet). Two examples.

7. *P. carbonaria* (*Ponera carbonaria*, Smith, Cat. of Hymen. Form., p. 97 ?).

Hab. Ibarra (7300 feet). Many examples from the garden of Señor Teodoro Gomez de la Torre.

I am not quite certain if the specimens collected by Mr. Whymper are identical with *Ponera carbonaria*, Sm., from Quito. Smith describes his species as "jet-black," while the present species is bluish black, the bluish tinge being very conspicuous, and is present even in the legs, although not so strongly as on the body. The mandibles are deep black, very finely striated; along the inner edge is a row of large punctures, and it bears also some long, reddish hairs, the outer edge having somewhat shorter pale hairs. In *carbonaria*, Smith, the mandibles are said to be "obscurely ferruginous." The antennæ are black, the apical joints obscurely punctured. The eyes are situated opposite the base of the frontal laminae, which are finely punctured. The frontal suture is deep; it originates about the centre of the frontal laminae, and anteriorly curves round the triangular frontal area, which is not defined from the clypeus. The frontal laminae are curved, narrower at base than at apex, and from behind the antennæ project into a tubercle-like dilatation. The antennal and clypeal foveæ are united. Clypeus incised at the apex. The front of the head is finely longitudinally striated. Smith describes the pubescence on his *carbonaria* as "yellowish"; in the present species it is whitish, ferruginous on the metathorax behind, and on the tibiae and tarsi.

Length, 11-12 mm.

HOLCOPONERA, gen. nov.

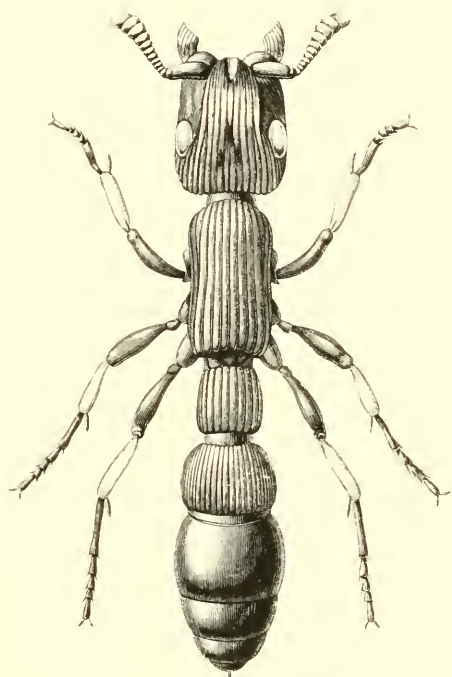
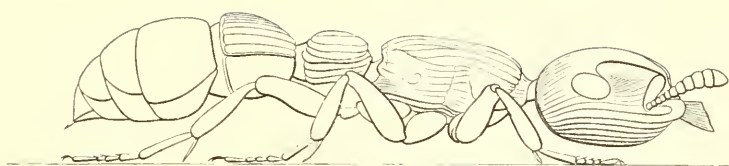
Head quadrangular, longer than broad. Eyes oval, small, situated a little behind the middle of the head. Ocelli present. Antennæ 12-jointed. First joint of flagellum globose, longer than second. Mandibles triangular, without lateral teeth, apical tooth scarcely separated from the inner edge. Clypeus incised broadly at the apex, concave, not separated from the rest of head. Frontal laminae dilated, extending backwards to the middle of the eyes, rounded in front, converging towards the eyes behind; laterally forming a receptacle into which the entire scape can be retracted. Frontal fovea large, deep, oval behind, open in front, extending into the frontal area which is not defined from the clypeus. Meso- and metanotum without a suture. Petiole longer than broad, contracted somewhat at the sides, concave above, separated from the 1st abdominal segment by a belt-like constriction; carinated beneath in the middle, a blunt tooth at the base. A belt-like constriction between the 1st and 2d abdominal segments. Claws simple, dilated at the base. Head, thorax, petiole and 1st abdominal segment deeply longitudinally sulcated.

The most remarkable peculiarities of this genus are the great development of the frontal laminae, which are greatly dilated, and the deeply sulcated head, thorax and base of abdomen. There are only 9 or 10 of these furrows on the mesonotum, and 7 on the petiole above. Otherwise its affinities appear to be with *Pachycondyla*, but that differs from it in the toothed mandibles, in the form of the thorax, etc. In Mayr's table of genera (Verh. z. b. Wien, 1862, p. 713) it comes in between 9 and 10.

8. *Holcoponera Whymperi*, sp. n.

Hab. Guayaquil (indoors). A single specimen.

Black: mandibles and more or less of clypeus, base and 2d joint of antennæ, picuous; apical joint of antennæ fulvous; tibiae (except at base and apex) white; four apical joints of tarsi and extreme apex of abdomen ferruginous. Mandibles shining, longitudinally striated, the biting edge smooth. Frontal fovea finely striated; head in front of eyes striated; scape finely striated; flagellum becoming gradually thicker towards the apex, sparsely covered with a depressed pubescence, last joint conical at apex, double the length of preceding. Thorax compressed laterally, the middle contracted. Above the 1st pair of legs is a fine semi-perpendicular suture; above the 2d a wider, more oblique and curved one; behind the first of these sutures the pleurae are longitudinally striated. The metanotum behind is smooth, aciculated, with a slight slope, united to the petiole in the middle;



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HOLCOPONERA WHYMPER, CAMERON.

TAKEN INDOORS AT GUAYAQUIL.

above there is a distinct margin separating the posterior aciculated portion from the anterior sulcated region. In front of the petiole, close to its junction with the metathorax, is a blunt tubercle, behind this the petiole is finely striated laterally. Directly in front of the metathorax it is aciculated, above there is a distinct margin. The sides of the petiole are slightly compressed. Separating the petiole from the abdomen is a broad (comparatively) belt-like constriction, smooth, shining, very finely transversely striated. A similar constriction is between the 1st and 2d segments; it is contracted a little at the side, expanding again on the ventral surface. The lower half of the sides of the 1st segment is smooth, shining, impunctate, as are also the remaining abdominal segments; these bear above some short, glistening hairs; beneath some longer pale hairs. Legs stout, smooth shining. For Figure see the accompanying Plate.

Length, 8 mm.

ODONTOMACHUS, Latr.

9. *Odontomachus hornatodes*, Lin., Syst. Nat., ii, p. 965.

Hab. Guayaquil. Two examples.

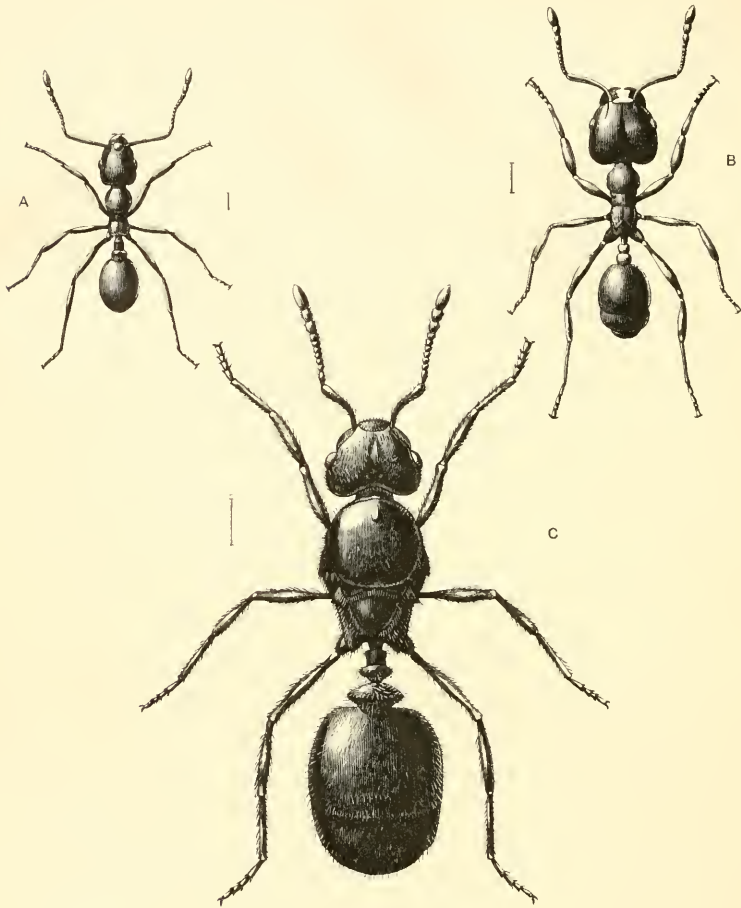
PHEIDOLE, Westw.

10. *Pheidole monticola*, sp. n.

Hab. Cayambe village (9320 feet), workers; Penipe to Riobamba (9000 feet), soldiers; the Panecillo, Quito (10,000 feet), females and workers. Numerous specimens.

Soldier. Blackish fuscous; the abdomen more or less obscured with testaceous, thorax with piceous; mandibles ferruginous; more or less of face below the antennæ and basal half of scape obscure ferruginous; apex of last joint of antennæ castaneous. Mandibles shining, inner edge black, acute, inner half with some minute punctures; covered with a pale pubescence longest on lower side; apex bidentate. Head covered with a depressed pile, shining, smooth, obscurely alutaceous in front; frontal laminae curved, dilated in middle; frontal fovea absent, area raised, a depression at its base; separated clearly from clypeus, which is obscurely punctured, covered with a pale, scattered, depressed pile. Pronotum almost shining, scarcely punctured; meso- and metanotum minutely punctured, semi-opaque; metathorax with two stout, slightly diverging spines; the space between these and behind smooth, shining, almost impunctate. Petiole half-shining, completely so at base, which is testaceous; first node depressed in centre of top; second double wide as long, aciculated, sides projecting, rounded. Abdomen half-shining, obscurely aciculated, the junction of segments pale; covered sparsely

with a moderately long, pale hair. Legs covered with a white, glistening, semi-depressed pubescence; the apex of coxæ and trochanters obscure ferru-



PHEIDOLE MONTICOLA, CAMERON.
CAYAMBE, RIOBAMBA, QUITO, 9-10,000 FEET.
A. WORKER. B. SOLDIER. C. FEMALE.

ginous; tibiae obscure ferruginous or piceous; tarsi testaceous. The thorax bears some depressed, pale hairs; the petiole has a longer pubescence.

Length, $5\frac{1}{2}$ mm.

Worker. Testaceous, obscured with fuscous or black. Head and mandibles smooth, shining, impunctate, front sometimes faintly aciculated; frontal laminae somewhat shorter than in soldier; sides of pleurae longitudinally striated and punctured. Posterior node of petiole not so much rounded and dilated at the sides, and not contracted posterior as in soldier; anterior not depressed in centre above. Abdomen aciculated at the base. Otherwise as in the soldier.

Length, $3\frac{1}{2}$ -4 mm.

Female. Black; mandibles and antennal tubercles ferruginous; knees, and 4 anterior tibiae piecous, tarsi testaceous; apex of last and basal joint of flagellum obscure ferruginous. Entire body densely covered with a greyish or fuscous hair. Head at top smooth, obscurely aciculated, and bearing a few punctures; front longitudinally rugose; smooth in the centre; clypeus shining. Mandibles black on inner border, shining, a few scattered punctures on inner side; apex bidentate; thorax half-shining, alutaceous, metanotum aciculated or punctured, sides finely punctured, a short, obscure keel on mesonotum in front. Between the metathoracic spines (which are triangular, acute at top, and diverging) transversely striated; metapleuræ below longitudinally striated; a carina on either side arising from the spines. Petiole with a distinct neck at base, in front of 1st node, which is obscurely transversely striated below, aciculate above, depressed in centre of top; 2nd node broader than long, bulging out in the centre; the griseous hair is especially thick on petiole. Abdomen densely pilose, alutaceous, segmental divisions white. Antennae and legs covered with a white, stiff hair.

Length, 7-8 mm.

The worker varies considerably in coloration from light testaceous to fuscous.

In the table of the American species of *Pheidole* given by Mayr (Verh. z. b. Wien, 1870, p. 981) the soldier comes in at 176, near *P. flavens*, Rogers, it having no frontal suture; the worker at p. 984, near *P. pusilla*. In the form of the head it approaches *Aphaenogaster*. I am indebted to Prof. Gustav Mayr of Vienna for his opinion on it.

PSEUDOMYRMA, Guér.

11. *Pseudomyrma gracilis*, Fab., Syst. Piez., p. 405.

Hab. Bodegas (level of sea); Pacific slopes (1-2000 feet). Two examples.

ATTA, Fab.

12. *Atta sexdens*, Lin., Syst. Nat., i, p. 964 = *sexdentata*, Latr., Hist. Nat. Fourm., p. 228.

Hab. Pacific slopes (1-8000 feet).