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Polyergus rufescens, *Mayr. Form. Austr.* 112. 1; *Ungar. Ameis.* p. 15. 1.

Nyl. Form. Fr. et d'Algér. 74. 1.

Hab. France; Switzerland; Germany; Austria.

This is the species whose interesting habits are detailed by Huber, and which is so well known as the Slave-making Ant. Like the *F. sanguinea*, it plunders the nests of various species, its communities being principally formed of the captives which it enslaves. It has not yet been found in this country, and appears to be rare even in the north of France; but in the south and also in Switzerland it does not appear to be uncommon.

Genus 5. POLYRHACHIS.

Formica, pt., *Fabr. Syst. Ent.* 394 (1775).

Maxillary palpi 6-jointed, elongate; labial palpi 4-jointed; mandibles stout, their inner edge denticulate. Ocelli obsolete in the workers. Thorax more or less armed with spines or hooks; scale of the peduncle incrassate, usually spinose, having two, three, or four spines. Wings with one marginal and two sub-marginal cells, the discoidal cells obsolete. Abdomen sub-globose.

We are indebted to Mr. T. C. Jerdon for the first account of the habits of this genus of Ants; speaking of the *F. nidificans*, he says: "This Ant makes a small nest about half an inch, or rather more, in diameter, of some papyraceous material, which it fixes on a leaf. I have opened two, each of which contained one female and eight or ten workers. It is very rare, and I have only seen it in Malabar." Since the publication of these remarks, a nest of one of the species has been received from Malacca; it was discovered by Mr. Wallace, and exactly agrees with Mr. Jerdon's description. Pl. IV. figs. 10, 11.

Species of India, the Eastern Archipelago, China, and Philippine Islands. Sp. 1-44.

1. POLYRHACHIS BIHAMATA. Pl. IV. fig. 19. B.M.

Formica bihamata, *Drury, Ins.* ii. pl. 38. f. 7, 8 ♂.

Fabr. Syst. Ent. 394. 21; *Ent. Syst.* ii. 361. 49; *Syst. Piez.* 411. 66.

Sulz. Gesch. Ins. t. 27. f. 19.

Oliv. Encycl. Méth. vi. 499.

Latr. Hist. Nat. Fourm. 127.

Polyrhachis bihamatus, *Smith, Proc. Linn. Soc.* ii. 59.

Hab. India; Sumatra; Borneo.

The specimens received from Borneo are much smaller and of

8. POLYRHACHIS LACTEIPENNIS. Pl. IV. fig. 40. B.M.

Female. Length $3\frac{1}{2}$ lines.—Opake-black, the wings milky-white. The clypeus emarginate in front, with a smooth shining line down the centre; a similar line runs upwards from the base of the clypeus, not quite extending to the anterior stemma. Thorax ovate, with the lateral angles of the prothorax acute; the metathorax armed at the lateral angles with a short stout acute tooth; the wings milky-white, the nervures pale testaceous, the stigma pale brown. Abdomen subglobose; the scale of the peduncle incrassate, subquadrate, with a long curved stout acute tooth at each superior lateral angle, the centre of the margin between the spines emarginate.

Hab. Northern India.

9. POLYRHACHIS PILIVENTRIS. Pl. IV. fig. 24. B.M.

Female. Length $3\frac{1}{4}$ lines.—Black: the head and thorax subrugose; abdomen smooth, shining, and covered with a fine cinereous pile. The mandibles triangular, with four or five sharp teeth on the inner edge which are rufo-piceous; the anterior margin of the clypeus rounded. Thorax oblong-ovate, the metathorax truncate; wings fulvo-hyaline, the nervures rufo-testaceous; the apical joints of the tarsi rufo-testaceous. The scale of the abdomen incrassate, subquadrate, with a stout spine at each of the superior angles, curving slightly inwards. Abdomen subglobose.

Hab. Singapore. (Coll. A. Wallace.)

10. POLYRHACHIS DIVES. Pl. IV. figs. 32, 33. B.M.

Worker. Length $2\frac{1}{2}$ lines.—Black: clothed with pale golden pubescence; the thorax with two short curved spines in front, and two of about the same length on the metathorax; the sides of the thorax nearly parallel, very slightly widest in front; the scale of the abdomen compressed, square anteriorly, and furnished with two long spines curved backwards. The pubescence on the head and thorax obscurely golden; the legs without spines or pubescence, the calcaria pale testaceous.

Hab. Singapore.

11. POLYRHACHIS FLAVICORNIS.

Female. Length 3 lines.—Black: the head and thorax subopake; the abdomen shining and slightly fuscous. The flagellum, except the basal joint, reddish-yellow; the scape rufo-piceous. Thorax ovate; the legs rufo-piceous, the femora pale reddish-

yellow; wings subhyaline, nervures pale testaceous, stigma brown. Abdomen: the scale of the peduncle quadrate, armed with two short acute curved spines.

Worker. Length 2 lines.—Very like the female, but with the antennæ and legs of a deeper tint. The thorax with the sides flattened, the disk slightly convex, divided by two distinct sutures. The abdomen and scale as in the female.

Hab. Singapore. (Coll. W. W. Saunders, Esq.)

12. POLYRHACHIS HECTOR.

Worker. Length 4 lines.—Opake-black; delicately shagreened: the thorax armed with two long acute divergent spines in front, and two slightly divergent ones on the metathorax; the legs without spines or pubescence, the calcaria black; the disk of the thorax convex. Abdomen with an obscure ferruginous tinge; the scale of the petiole quadrate, with two long divergent spines above which curve backwards.

Hab. Singapore. (Coll. W. W. Saunders, Esq.)

13. POLYRHACHIS MODESTUS.

Female. Length 3 lines.—Black: the thorax ovate; the metathorax with two short blunt spines; the scale of the peduncle quadrate, armed above at the lateral angles with an acute spine which curves backwards. The head and thorax very delicately rugose; the flagellum rufo-piceous at the apex beneath; the wings flavo-hyaline, the nervures pale testaceous; the apical joints of the tarsi obscurely ferruginous. The abdomen globose, smooth and shining.

Hab. Singapore. (Coll. W. W. Saunders, Esq.)

14. POLYRHACHIS CHALYBEUS.

B.M.

Worker. Length 4 lines.—Black: the metathorax, legs and abdomen steel-blue; the head delicately rugulose; eyes ovate, lateral, placed high on the head; the antennæ inserted opposite the lower orbit of the eyes, each at the side of an elevated bent carina, the clypeus emarginate anteriorly, the mandibles large and stout, their apex denticulate. Thorax elongate, delicately transversely rugulose, with two stout acute spines in front, diverging outwards, and two shorter erect parallel ones on the metathorax; the femora and tibiæ compressed. Abdomen smooth and shining, the peduncle armed with two long stout diverging spines which are bent backwards.

Hab. Singapore. Malacca.

39. *MYRMICA RUGIFRONS*.

Female. Length 3 lines.—Pale reddish-yellow; the first segment of the abdomen, except its extreme base, fuscous. Head elongate-quadrate, the anterior and posterior angles rounded; the eyes, ocelli, and inner margin of the mandibles, black, the latter denticulate; the head rugose, with a number of longitudinal fine carinæ, the hinder margin of the vertex emarginate. Thorax elongate-ovate, longitudinally rugose above, the prothorax transversely so, the metathorax concavely truncate at the apex, a short spine on each side at the verge of the truncation; the legs rather paler than the body; wings hyaline and iridescent, the nervures pale testaceous. Abdomen ovate, smooth and shining; the first node petiolated at the base, the second globose.

Hab. India (Penang). (Coll. East India House.)

40. *MYRMICA BIDENTATA*.

Worker. Length $1\frac{1}{2}$ line.—Pale rufous; the abdomen rufopiceous, with base and apex pale. Head oblong, very smooth and shining; the eyes small, placed rather forward at the sides of the head; the clypeus produced, concave above, the lateral angles with a stout acute tooth; the mandibles stout, and having three acute teeth at their apex. Thorax oblong, with a deep strangulation between the meso- and metathorax, the metathorax with a minute tubercle on each side, not toothed; the first node of the peduncle clavate, the second globose.

Hab. Calcutta. (Coll. East India House.)

This species is readily distinguished by its bidentate clypeus.

41. *MYRMICA PELLUCIDA*.

B.M.

Worker. Length $1\frac{1}{2}$ line.—Head and thorax dark fusco-testaceous, antennæ and legs much paler, nearly white; the thorax with its divisions distinctly marked, that between the meso- and metathorax most strongly impressed, the metathorax without spines. Abdomen of a clear, pale, semi-transparent colour.

Hab. Singapore. (Coll. A. R. Wallace.)

“House-Ant, very active, but not destructive.”—*Wallace*.

42. *MYRMICA FRAGILIS*.

B.M.

Worker. Length $1\frac{1}{2}$ line.—Pale flavo-testaceous, smooth and shining. Head oblong-quadrate, eyes very small, placed forward on the sides of the head; antennæ clavate, the club

3-jointed; the thorax with a deep strangulation between the meso- and metathorax, the latter without spines; the abdomen fuscous at its apex.

Hab. Singapore. (Coll. W. W. Saunders, Esq.)

“House-Ant, very destructive.”—*Wallace*.

43. *MYRMICA BASALIS*.

B.M.

Worker. Length $1\frac{1}{8}$ line.—Pale testaceous, with the club of the antennæ and the abdomen, except its base, dark fuscous, and very smooth and shining; the head ovate, slightly emarginate behind; eyes small, placed forward on the sides of the head; the metathorax obliquely truncate, smooth and without spines. Abdomen ovate, truncate at the base.

Hab. Ceylon.

44. *MYRMICA CONTIGUA*.

B.M.

Female. Length 2 lines.—Pale ferruginous: head and thorax opaque, the abdomen black and shining, with the first segment and base of the second pale ferruginous; the eyes black. Thorax oblong-ovate, with a central abbreviated carina in front; a dark stain runs from the origin of the wings, passing beneath the post-scutellum; the metathorax unarmed, obliquely truncated, the truncation concave; the apical margins of the second and following segments of the abdomen testaceous.

Hab. Ceylon.

This is probably the female of *M. basalis*, but as they were not received together, it is uncertain.

45. *MYRMICA GLYCIPHILA*.

B.M.

Worker. Length $1\frac{1}{4}$ line.—Testaceous, with the abdomen, except its base, fuscous; the head and thorax subopaque, the abdomen shining; the flagellum 11-jointed, clavate; the thorax narrowed posteriorly, divided a little beyond the middle by a distinct suture, the metathorax not spined; the first node of the peduncle conical, elevated above the second, which is nearly globose; the abdomen truncate at the base and having a few long pale hairs at the apex.

Hab. Ceylon.

46. *MYRMICA AGILIS*.

Worker. Length 1 line.—Head and thorax pale ferruginous; abdomen black, with the base pale, very smooth and shining;

the flagellum clavate, the club 3-jointed, the basal joint of the flagellum as long as the three following; the metathorax with two minute spines. Abdomen ovate, the first node of the peduncle elongate, the second subglobose.

Hab. Malacca. (Coll. W. W. Saunders, Esq.)

47. MYRMICA TRACHYLISSA.

B.M.

Female. Length 3 lines.—Ferruginous: the head and thorax coarsely rugose, longitudinally grooved, the grooves with deep, large punctures; the head very large, larger than the thorax, the latter nearly globose; the verge of the truncation of the metathorax widely emarginate, the lateral angles produced, forming acute teeth. Abdomen very smooth and shining, the nodes of the peduncle smooth, shining and subglobose.

Hab. Borneo. (Coll. A. R. Wallace.)

48. MYRMICA LONGIPES.

Worker. Length $2\frac{1}{2}$ lines.—Dark brown: head much wider than the thorax, narrowed behind the eyes and prolonged into a short neck; antennæ longer than the body and very slender; the scape and also the flagellum slightly thickened towards their apex. Head much wider than the thorax, the mandibles rufo-testaceous. Thorax: the prothorax elongate, prolonged into a neck, the meso- and metathorax divided by a deep stragulation, the metathorax with two minute upright spines. Abdomen ovate; the peduncle elongate, formed of two nodes, the first smaller than the second and less elevated, both having a short footstalk.

Hab. Borneo; Singapore. (Coll. W. W. Saunders, Esq.)

Species of Syria, Madeira, Cape of Good Hope, Port Natal, and Australia.—Sp. 49-55.

49. MYRMICA VENUSTA.

B.M.

Worker. Length $1\frac{1}{2}$ line.—Head, antennæ, thorax, legs, and petiole of the abdomen, ferruginous; abdomen black, smooth and shining. Head oblong, very slightly emarginate behind; eyes and tips of the mandibles black. Thorax slightly narrowed behind, the division distinctly marked between the meso- and metathorax, the latter not spined. Abdomen ovate, truncated at the base.

Hab. Syria.

the apical margins of the segments rufo-piceous, the nodes of the peduncle globose and punctured.

Hab. Borneo (Sarawak). (Coll. A. R. Wallace.)

13. ATTA CINGULATA.

Worker major. Length $1\frac{3}{4}$ line.—Ferruginous. Head very large, thrice the width of the thorax; the antennæ pale ferruginous; eyes very small, placed a little before the middle, at the sides of the head. Thorax much swollen in front, much narrowed behind, with two short acute spines on the metathorax; legs pale rufo-testaceous. Abdomen ovate, the base truncated; a fuscous ring round the middle; the nodes of the peduncle globose.

Hab. Borneo (Sarawak). (Coll. A. R. Wallace.)

14. ATTA NODIFER.

B.M.

Worker minor. Length $1\frac{1}{4}$ line.—Rufo-testaceous, and entirely smooth and shining: the mandibles, antennæ, articulations of the legs and the tarsi, pale testaceous; the thorax, nodes and base of the abdomen rather paler than the head; the thorax narrowed behind, and deeply strangulated between the meso- and metathorax, the latter having two minute acute spines; the antennæ and legs pubescent, and a few longer hairs thinly scattered over the head, thorax and abdomen; the first node of the petiole small and subconical, the second as wide as the metathorax, and globose.

Hab. North China.

Species of Africa, Australia, and New Zealand.—Sp. 15–21.

15. ATTA TESTACEO-PILOSA. Pl. IX. figs. 25, 26.

Myrmica testaceo-pilosa, Lucas, *Explo. Sc. de l'Algér.* iii. 300.

Nyl. Form. Fr. et d'Alger. 86. 12.

Aphenogaster similis, Mayr. *Form. Austr.* 194. 1.

Hab. Algeria; Sicily; Austria; Dalmatia; Sardinia.

16. ATTA SCALPTURATA.

Myrmica scalpturata, *Nyl. Form. Fr. et d'Algér.* 83. 8.

Hab. Algeria. (Coll. Dr. Sichel.)

17. ATTA HOSTILIS.

B.M.

Worker. Length $1\frac{1}{2}$ line.—Ferruginous, with the abdomen fuscous, or sometimes black; the thorax, legs and antennæ paler

4. *MERANOPLUS MUCRONATUS*.

B.M.

Worker. Length 2-2½ lines.—Head, thorax and legs ferruginous, the abdomen black; the thorax quadrate, each angle produced into a long acute spine; the head, thorax, and nodes of the peduncle coarsely rugose; the head narrowed before the eyes, and widely emarginate in front; the eyes prominent, behind them the margins of the head are widened, and again narrowed to the lateral angles, which are rounded; the head and thorax with a few scattered long reddish hairs. The hinder margin of the thorax with two short blunt spines in the middle, outside of each is a very minute tooth or spine; the metathorax smooth, shining, and concavely truncate; in the middle of the lateral margins of the truncation is a long slender acute spine; the legs and abdomen sprinkled with very long ferruginous hairs.

Hab. Malacca (Mount Ophir).

On a ticket attached to specimens of this species, Mr. Wallace writes, "House-Ant," but we have no further information.

5. *MERANOPLUS CASTANEUS*.

Female. Length 3½ lines.—Chestnut-red: head and thorax longitudinally subrugose; the metathorax with two small teeth or spines; the second node of the peduncle with a minute spine posteriorly; the flagellum obscurely ferruginous; the teeth and eyes black; the metathorax truncate, the centre of the truncation finely striated longitudinally; the legs with scattered pale hairs; the base of the femora obscurely ferruginous. Abdomen ovate, finely punctured, and sprinkled with long pale hairs; the nodes of the peduncle rugose; the first, viewed laterally, wedge-shaped, and produced into an angular tooth or process at its base; the second subquadrate; both are sprinkled with long erect hairs.

Hab. Borneo (Sarawak). (Coll. W. W. Saunders, Esq.)

6. *MERANOPLUS GEACILIS*.

B.M.

Worker. Length 2¼ lines.—Black: head convex, subopaque, and finely punctured; eyes large, prominent, placed forwards on the sides of the head, the posterior angles rounded; the clypeus concave, or depressed in the middle, its anterior margin widely but slightly emarginate. Thorax longitudinally rugose, intermixed with deep punctures, elongate and narrowed to the base of the mesothorax; the anterior margin of the prothorax arched, with the lateral angles subacute; the posterior lateral angles of