

NEW ANTS FROM WAIGEU ISLAND, NEW GUINEA, AND
THE SOLOMONS.BY HORACE DONISTHORPE, F.Z.S., F.R.E.S., ETC.,
Department of Entomology, British Museum (Natural History).**Pheidole (Pheidolacanthinus) bifurcus** n. sp.

♂. Reddish brown, thorax and gaster darker, mandibles chestnut red, antennae and legs brownish yellow, funiculus, articulations of joints of legs and tarsi lighter, masticatory border of mandibles, eyes and anterior border of head narrowly black. Body clothed with sparse moderately long outstanding yellow hairs. Head without mandibles as broad as long, subparallel, posterior angles rounded, posterior border deeply sinuate in middle; mandibles massive, very shining, masticatory border unarmed and with 4 punctures; clypeus notched in centre of anterior border, flat, smooth and shining with a small raised tubercle in middle; frontal area indistinct with a few small longitudinal striae at base; a deep smooth furrow extends from base of frontal area to the sinuation in posterior border of head dividing posterior portion of head into two lobes; there is also an indication of a curved transverse depression crossing from eye to eye similar to that in *singularis* Smith, but much less marked; the head is longitudinally striate; the striae break off towards base into faint network; scrobes shallow and broad at base, reaching considerably beyond eye, not striate longitudinally, faintly rugosely punctured with a transverse raised ridge or two; eyes small, but convex, situated at sides of head in front of the centre; antennae 12-jointed, moderate; scapes reaching about $\frac{2}{3}$ of length of head, 3-jointed club of funiculus large, long, last joint about as long as the two preceding taken together. Thorax shorter than head, smooth and shining except sides of epinotum which are obliquely striate; pronotum armed with two short sharp curved spines, projecting outwards and slightly downwards at apex; mesonotum with a small raised transverse ridge in centre; epinotum separated from mesonotum by a deep furrow, and armed with two short sharp divergent spines projecting upwards; petiole narrow with rather long peduncle, and narrow node rounded above; post-petiole transverse considerably broader than petiole, convex above and armed on each side with a short-pointed projection, or tooth. Gaster short oval, smooth and shining. Long. 4 mm.

This species is allied to *singularis* Smith, but differs in many important particulars. It is darker in colour, the transverse impression on head is much less evident, the lobes of the head are much more evenly rounded at sinuation in centre of posterior border, the striae or raised ridges on the head are considerably finer, not so close, and the interstices less deep. In *singularis* the posterior part of the head is much more rugose, the pronotum is longitudinally striate, and the post-petiole does not possess the projection at sides.

♀. *Head* oval, narrowed in front and behind, *posterior border* narrowly margined, and with sharp posterior angles; *mandibles*, long, curved, *masticatory border* armed with short fine teeth; *clypeus* smooth, shining, convex above, anterior border rounded; *frontal area* fairly distinct; *cheeks* longitudinally striate; *eyes* prominent, situated on sides of head before the middle; *antennae* long, *scape* extending beyond posterior border of head by about half its length. *Thorax* longer than head, slender, smooth and shining except at episternite of mesothorax and sides of epinotum, where it is closely covered with small raised tubercles. *Pronotum* with sides rounded not as broad as head, armed with two short projecting moderately divergent spines; *mesonotum* narrow with a short raised transverse ridge and a small tubercle on each side of the ridge; *suture* between mesonotum and epinotum deep, *epinotum* armed with two small divergent spines pointing slightly backwards and bifid at apex, the posterior fork being a little the longer; *petiole* narrow, *peduncle* long, *node* at apex small and rounded; *post-petiole* small, slightly narrowed in front, rounded above and at sides and broader than petiole. *Gaster* small smooth, shining, oval. *Long.* 2.5 mm.

Type in B.M. (N.H.). Described from six workers and one soldier taken by Miss L. E. Cheesman in Dutch New Guinea, Waigeu Island, Camp Nok, 2500 ft., April, 1938, nesting under bark. Tube 18.

***Pheidole (Pheidolacanthinus) medioflava* n. sp.**

♀. Head and gaster jet black, the rest of the body bright yellow; the antennae are inclined to be a little darker, and the teeth of the mandibles brownish; whole body smooth and very shining.

Head round, posterior angles rounded, posterior border almost straight, very narrowly margined; *mandibles* with two small sharp teeth at apex, a shorter blunter one before middle, otherwise indefinitely dentate; *clypeus* narrow, transverse, convex, anterior border rounded; *frontal area* large but ill defined; *frontal carinae* long, pointed at apex, slightly sinuate anteriorly, and divergent at base; *antennae* moderate, *scape* extending very little beyond posterior border of head, *funiculus* with 1st joint longer than broad, broader than the following joints before the club, equal in length to the three following united; joints 3-7 transverse, 2 and 8 as long as broad, *club* very slightly longer than the rest of the funiculus, last joint not quite as long as the two preceding taken together; *eyes* prominent, situated a little before centre of sides of head. *Thorax* armed with four rather long curved divergent spines, those on the *pronotum* projecting forwards and outwards, those of the *epinotum* shorter and projecting backwards and slightly downwards; *suture* between *mesonotum* and epinotum indistinct; *petiole* narrow terminating in a raised round node; *post-petiole* slightly transverse, rounded, scarcely broader and not as high as node of petiole; *gaster* oblong. *Long.* 3 mm.

Type in B.M. (N.H.). Described from twelve workers taken by Miss Cheesman in Dutch New Guinea, Waigeu Island, Camp Nok, 2500 ft. Tube 21. In a nest inside of a log with very small entrance.

This species comes nearest to *P. flavothoracica* Viehmeyer, but is slightly larger, the head is rounder, the spines are considerably longer, and the gaster larger; the joints of the antennae slightly different, etc.

***Pheidole (Pheidolacanthinus) quadrispinosa* Smith.**

Journ. Proc. Linn. Soc. Lond., Zool., 8: 72, pl. iv, fig. 6 (1864), ♀ = P. (P.) armata Smith, *l.c.*, p. 75, pl. iv, fig. 8 (1864), ♂. Donisthorpe, *Ann. Mag. Nat. Hist., Zool. (s. 2), 1: 144 (1938).*

Type locality, Salwaty, New Guinea.

♀. Dark brown; antennae, tarsi, and articulations of legs brownish yellow, mandibles red, all borders black; whole body covered with scattered yellow outstanding hairs.

Head broadest just before base, slightly narrowed anteriorly, *posterior border* straight when seen from above, *posterior angles* broadly rounded; *mandibles* massive, shining, with some small scattered punctures and four larger ones along the masticatory border, armed with two strong teeth at apex and a small bluntly pointed one before base; *clypeus* emarginate in middle of anterior border, flat and smooth anteriorly, with a narrow carina in centre and some longitudinal striae at base; *frontal area* not distinctly defined, rest of head including cheeks and sides strongly longitudinally striate; *antennal carinae* long, sharp, raised, divergent; *scrobes* deep; *ocelli* small, rather flat; *antennae* fairly long, 12-jointed, *scape* extending towards posterior border over about $\frac{3}{4}$ of head; 3-jointed *club* of *funiculus* large and well marked, last joint about equal to the two preceding taken together. *Thorax* massive, *pronotum* narrow, transverse, armed with two sharp, strong divergent spines, projecting outwards; *mesonotum* broad, flat, transverse, rounded at sides, above and below, strongly longitudinally striate; *suture* between mesonotum and metanotum fine but distinct; *metanotum* narrow, transverse, rather broadly longitudinally striate; *scutellum* transverse, somewhat convex, separated from metanotum by a row of deep oblong punctures finely longitudinally striate and punctate; *epinotum* armed with a pair of strong curved sharp spines pointing backwards, space between strongly transversely striate; *petiole* with not long peduncle, concave and transversely striate anteriorly, *node* narrow above with a raised tubercle on each side at apex, posterior surface flat, rather rugose; *post petiole* transverse considerably broader than petiole, rounded above, longitudinally striate and bluntly pointed on each side; *gaster* large oblong oval, truncate at base, rounded at sides, *first segment* long, finely circularly striate, other *segments* smooth and shining. *Long.* 7 mm.

♀ type in B.M. (N.H.). Described from a single dealated female, the queen mother of the colony, taken by Miss L. E.

Cheesman in Dutch New Guinea, Waigeu Island, Camp Nok, 2500 ft., May, 1938, in a nest in old beetle burrows under bark of a tree, with soldiers, workers, and males.

♂. Black to brownish black, legs and antennae lighter, mandibles dirty yellow, shining, whole body clothed with fine yellow outstanding hairs.

Head with eyes broader than long, covered with not very close fine raised ridges, interstices rugose; *posterior border* rounded; *posterior angles* projecting; *mandibles* weak, masticatory border armed with small fine teeth; *clypeus* with *frontal area* forming a triangle margined on each side, anterior border rounded, disc convex with a few fine raised ridges; *eyes* large, oval, prominent; *ocelli* moderate, situated on top of back of head; *antennae* 13-jointed, first joint of *funiculus* globular, second as broad as long, the rest longer than broad. *Thorax* narrowed in front and behind; *pronotum* narrow, transverse; *mesonotum* convex, prominent, rounded at sides, bluntly pointed anteriorly, almost straight posteriorly and finely margined, longitudinally striate with a narrow smooth space in centre; *mayrian furrows* absent; *parapsidal furrows* short and shallow, but distinct; *praescutellum* narrow, widely longitudinally striate; *scutellum* transverse, convex, smooth and shining on disc; *epinotum* transverse, finely striate, *declivity* abrupt; a projecting tubercle is present on each side of the *dorsal surface* just before declivity; *petiole* narrow, *peduncle* moderate; *node* narrow above, posterior surface flat; *post-petiole* broader than petiole, transverse, rounded at sides, finely longitudinally striate; *gaster* long oval, truncate at base, smooth and shining; *cerci* present; *stipes* large. *Long.* 4.3-5 mm. *Wings* dusky, iridescent, fringed with short fine brown hairs; *veins* and *pterostigma* dirty yellow; one *discoidal*, two *cubital*, and closed *radial cell* present.

♂ type in B.M. (N.H.). Described from a number of males taken by Miss L. E. Cheesman in Dutch New Guinea, Waigeu Island, Camp Nok, 2500 ft., May, 1938, in two colonies of this species.

***Crematogaster (Orthocrema) major* n. sp.**

♀. Lighter or darker brownish yellow, gaster darker, eyes and teeth of mandibles black, shining, clothed with longer and shorter scattered yellowish white outstanding hairs, and short decumbent yellow hairs.

Head about as long as broad, sides evenly rounded, *posterior angles* round, *posterior border* finely and widely sinuate, whole head covered with very small, shallow, scattered punctures; *mandibles* curved, longitudinally striate and with a few small scattered punctures, armed with four sharp teeth, the apical one being considerably the longest; *clypeus* large, triangular, very shining and convex in centre, with a few faint longitudinal striae at sides; *frontal area* narrow, not distinctly defined, with very fine longitudinal striae; *frontal furrow* faint ending in a deeper broader furrow on vertex of head; *cheeks*,

base of *frontal carinae* and margins of *antennal foveae* covered with fine longitudinal striae; *antennae* 11-jointed, *club* 2-jointed, *scape* not extending beyond posterior border of head. *Thorax* convex and round anteriorly, narrowed abruptly to epinotum; *pronotum* with small raised tubercles anteriorly, smooth and shining at base; *mesonotum* about as long as broad, rounded at sides, not very convex, very smooth and shining, anterior margin pointed, which ends in a faint furrow extending into the pronotum and dividing the disc into two lobes; *epinotum* armed with two sharp, moderately long, curved spines, a little divergent and pointing slightly downwards; strong longitudinal striae extend along dorsal surface to base of spines; space between mesonotum and epinotum deep and broad, *declivity* abrupt, slightly longer than the dorsal surface, with faint transverse striae at sides. *Petiole* somewhat elongate, sinuate at apex then widened to beyond centre, where it is as broad as post-petiole, then narrowed to base, smooth and shining, slightly concave on dorsal surface anteriorly, with a transverse suture before base; *post-petiole* a little broader than long, slightly rugose and longitudinally striate, no longitudinal sillon present; *gaster* cordiform, microscopically punctured and with very small raised tubercles. *Long.* 5-5.5 mm.

Type in B.M. (N.H.). Described from six specimens taken by Miss L. E. Cheesman in Dutch New Guinea, Cyclops Mts., Sabron, 930 ft., June, 1936. Tube 195. The ants were nesting in the soil, and had constructed a carton shed over coccids on ferns. This is the largest species of *Orthocrema* in these regions.

Crematogaster (Orthocrema) major flavior n. subsp.

♀. Lighter or darker yellow; gaster brownish yellow, mostly smooth and shining. Closely related to the typical form but smaller and lighter in colour. The *scape* extends as far as the posterior border of head; the *frontal furrow* is shorter, fainter, and does not terminate in a deeper furrow. The *pronotum* is smooth and shining. The sculpture of the *gaster* is similar, but less pronounced. *Long.* 4.5 mm.

Type in B.M. (N.H.). Described from seven specimens taken by Miss L. E. Cheesman in Dutch New Guinea, Cyclops Mts., Sabron, 930 ft., June, 1936. Tube 194. Taken from a populous colony nesting in the soil.

var. **nigro-media** n. var.

♀. This variety agrees with the typical form in size, structure, sculpture, and hairiness, but the mesonotum, epinotum and spines, post-petiole, and femora and tibiae are brown to blackish brown; the gaster also is considerably darker.

Type in B.M. (N.H.). Described from six workers taken by Miss L. E. Cheesman in Dutch New Guinea, Cyclops Mts., Sabron, 1200 ft., June, 1936, in hut. Tube 200.

C. (O.) major and its forms belong to the *irritabilis* Smith group. Emery in the *Genera Insectorum* points out that Mann had recently erected a new subgenus *Rhachiocrema* for this group. This, however, is not the case. He created this new subgenus for the reception of one species of the group, *C. paradoxa* Emery, and a new species *C. (R.) wheeleri*, which he described as the type. Mann writes as follows (*Bull. Mus. Comp. Zool.*, 63 : 318, fig. 21, 1919) :

“*Crematogaster* subgenus *Rhachiocrema*, subgen. nov.

“In *Crematogaster paradoxa* Emery from New Guinea and the following new species the enormous development of the epinotal spines and the elongate pedunculate structure of the petiole and the elongate 12-jointed antennae with the 2-jointed funicular club are so different from other species in the genus that I separate them from *Crematogaster sens. strict.* as a new subgenus.” The *irritabilis* group have a somewhat elongate petiole, but the epinotal spines are moderate, as are also the antennae. Furthermore the antennae are 11-jointed (not 12), as is also that of *paradoxa*! Mann figures his *wheeleri* with 12-jointed antenna, but as far as I know it is the only *Crematogaster* in the world with 12-jointed antennae in the ♀ and ♂.

Paratrechina (Euprenolepis) manni n. sp.

♀. Head, thorax, pedicel, antennae and legs bright pale yellow, eyes and teeth of mandibles black, gaster deep violet black; smooth and shining; whole body except tarsi and funiculi set with scattered outstanding stiff black bristle-like hairs. Tarsi and funiculi clothed with very fine decumbent yellowish hairs.

Head a little longer than broad, slightly narrowed anteriorly; posterior angles rounded, posterior border slightly sinuate; *clypeus* large, transverse, convex, very slightly and widely sinuate at anterior border; *mandibles* long, narrow, curved, *masticatory border* armed with six short, sharp teeth, that at the apex, near the centre and on base being the longest, the two between apical and central teeth being the smallest; *antennae* long, *scape* extending beyond posterior border of head by about half its length, first joint of *funiculus* equal to 2nd and 3rd taken together, 2nd joint much the shortest, the rest elongate, last joint not equal to the two preceding taken together; *eyes* moderate, round oval, not very convex, with moderately coarse facets, situated above sides of head and a little before middle; *frontal area* transverse, not very clearly defined. *Thorax*: *pronotum* broader than long, convex, sides and anterior border rounded; *mesonotum* round, convex margins sharply defined; *metanotum* flat, in middle about a quarter the length of mesonotum, the *stigmata* slightly prominent; *epinotum* round, convex gradually rounded to the somewhat flat declivity, which is about as long as the dorsal surface; the epinotal *stigmata* are not as prominent as in *stigmaticus*

Mann; *node of petiole* narrow, rounded above, inclined forward; *gaster* short oval. *Long.* 2.5–2.8 mm.

Type in B.M. (N.H.) Described in honour of my friend Mr. W. M. Mann from three specimens taken by him at Malaita, Auki, Solomon Islands; *ex* Coll. Arnold.

There were three specimens of this species, and a small ♂ of *Camponotus (Colobopsis) loa* Mann, all on the same pin and labelled “*Iridomyrmex myrmecodiae* Emery, var.” Mann records that he took vars. of *myrmecodiae* in the Solomons with jet black gasters, and I have described the same from Japan Island, Dutch New Guinea, under the name of *nigriventris*. I personally think the close similarity of the three species is due to mimicry.

Emery in the *Genera Insectorum* lists *stigmaticus* Mann under *Patatrechina* subgenus *Nylanderia*; but it undoubtedly belongs to the subgenus *Euprenolepis*, as does *steeli* Forel, which Emery queries as such.

P. (E.) manni is a more robust species than *stigmaticus* Mann, the thorax being more convex, and the pronotum shorter, and of course the colour is very different.

NOTES AND OBSERVATIONS.

DANAUS PLEXIPPUS IN NORTH DEVON.—On November 4 Mr. W. R. C. Matthews, writing from Putsborough, Georgeham, N. Devon, informed me that at 9 a.m. that day, during a rainy gale, a boy had brought him a living specimen of a butterfly which he believed to be the Black-veined Brown. “It was found on trampled ground in a puddle of water sitting with closed wings, and had been seen a few moments previously sitting on a clump of grass. A continuous S.W. gale had been blowing for some time.” It was in perfect condition. From the description sent me it seemed probable that the butterfly was *D. plexippus*, the Milkweed or Monarch butterfly, an opinion which was confirmed by Dr. F. R. Elliston Wright, F.R.E.S., of Braunton. As it was alive, I advised Mr. Matthews not to kill it. He succeeded in keeping it alive till November 24 when it died, having been quite lively till that date. It fed freely on flowers of bush *Veronica*. The insect is now in my possession. It is obviously a *plexippus* of the N. American race and is a female (lacking the black swelling on the second median nervure which distinguishes the male). It laid no eggs. Captain Dannreuther informs me that *plexippus* has not been seen in England since August 15, 1938, and that it has never previously been recorded here in November. It will be presented to the National Collection.—C. W. BRACKEN; B.A., F.R.E.S. (Migration Recorder for the S. West).

EUPHYDRYAS AURINIA AND STRYMON W-ALBUM IN WALES (*Entom.*, 73: 249, 253).—I found a small colony of *E. aurinia* about three miles

S.W. of Newtown, Montgomeryshire, on June 10, 1936. I failed to find it about the same date the following year, and have not been able to look for it since. I came across *S. w-album* in some numbers in one spot only on the Montgomeryshire-Shropshire border on August 6, 1937. They were enjoying ragwort blossom, and were not in cabinet condition—ragwort seems the favourite dish here, also in West Staffs; also, one insect only, on July 13, 1937, in mid-Montgomeryshire, in good condition.—(Rev.) E. S. LEWIS; Forton Rectory, Newport, Salop.

EUVANESSA POLYCHLOROS IN THE LONDON AREA.—Mr. Dudley Palmer tells me that early last September he watched for some time a Large Tortoiseshell fluttering about a trolley bus standard near his house at Thames Ditton. It appeared to be looking for a place to hibernate. A few weeks earlier he saw another behaving in a similar fashion near Molesey. I think these observations of this species near London worthy of record owing to its apparent scarcity in recent years.—G. C. M. DE WORMS; Salisbury, November, 1940.

A METHUSELAH NYMPHALIS IO.—In spite of the hard winter of 1939-40, hibernated *Nymphalis io* were very common last spring, and as in this area May was unusually warm, I had good opportunities for watching them in my garden. On a previous occasion I have drawn attention to the long life of the perfect *io*, and this year I watched the old age of one specimen which frequented a certain corner. Every few days it seemed to get more and more worn, until I saw it for the last time on June 1, just able to fly, but with half its wing area gone. Assuming that this particular insect emerged in July or August, 1939, on June 1 it had begun its tenth month at least of life as a perfect insect—not a bad record for our climate!—B. TULLOCH (Brig.-Gen.); Hill Court, Abergavenny, June 16, 1940.

KIMMINSIA BALTICA TJEDER: A NEW BRITISH RECORD.—In view of the fact that Killington in the Ray Society Monograph on British Neuroptera lists only five authenticated British specimens of *K. baltica*, it may be of interest to record that on August 2, 1939, I took a specimen of this species at light on sandhills at Studland, Dorset. It is of the form having only three branches of the radial sector vein in the fore wing (Killington, *British Neuroptera*, 1937, 2: 78).—H. L. G. STROYAN; Clare College, Cambridge.

A FURTHER NOTE ON PARASCOTIA FULIGINARIA IN SURREY.—In a note in the *Entomologist* for October, 1940, I recorded the capture of 7 male *P. fuliginaria* in a woodpile at West Byfleet. Subsequent assaults on the woodpile produced further examples, the final haul being 12 males in varying condition, one very fine large female at rest on a block of wood, and 2 pupae from which females, one crippled, emerged. Of these two, the second emerged on July 28, and as pupae from Sunningdale had emerged on June 28, the emergence would seem to cover a whole month. Incidentally, the first capture was made on July 6, not the 16th, as stated in the October