

and costa deeper yellowish buff. Hind wings semivitreous cream-colour, ternal area and fringes buff. ♀ differs in both fore and hind wings being semivitreous cream-colour, terminal fringes only being buff, in the abdomen having broad black transverse bands, and in being much larger.

Fore wings, ♂ 18 mm., ♀ 24 mm. Expanse, ♂ 41 mm., ♀ 54 mm.

Hab. 7 ♂♂, 5 ♀♀, Sédhiou, Sénégal, May to Oct. 1917 (*H. Castell*); 3 ♂♂, Bingerville, Ivory Coast, Sept. 1915 (*G. Melou*); 1 ♂, Zomba, Nyasa, July-Aug. 1925 (*H. Barlow*).

XXII.—*Descriptions of Three new Species of Formicidæ, and a Synonymical Note.* By HORACE DONISTHORPE, F.Z.S., F.E.S., &c.

PONERINÆ.

Pachycondyla (Ectomyrmex) striolata, sp. n.

♀.—Black, mandibles, antennæ, edges of lobes of frontal carinæ, legs, posterior borders of segments of gaster, fifth segment, and sting red. Body clothed with short scattered hairs, which are longer and closer on the gaster. *Head* strongly and somewhat deeply longitudinally striate, the striæ of the rather flat surface of the head and of the cheeks meeting behind the temples; *mandibles* shining, faintly longitudinally striate, with scattered punctures, and a row of punctures along the terminal borders; *clypeus* narrow, rounded at apex, slightly striate; *frontal furrow* deeper posteriorly; *antennæ* thickened towards apex, the penultimate joints transverse, last joint about as long as the two preceding taken together. *Thorax* strongly striate, circularly on pronotum, longitudinally on dorsum and sides, and transversely on the declivity of the *epinotum*. *Node* of *petiole* smooth on upper surface, transversely striate on anterior surface, and more faintly so on posterior surface. *Gaster* smooth and shining, but under a high power very finely, closely, and shallowly studded with very small punctures. *Legs* covered with close decumbent pubescence. *Long.* 7.3 mm.

[Feb. 1933]

new Species of Formicidæ.

195

Described from two specimens taken by S. W. Chatterjee in fungus at Dehra Dun, March 4th, 1922.

Type in Coll. Brit. Mus.

MYRMICINÆ.

Ocymyrmex carpenteri, sp. n.

♂.—Rufo-piceous, head, antennæ, tarsi, spurs, and articulations of the legs with the body more reddish, gaster black. Body clothed with scattered longer and shorter bristles, legs with longer and closer semidecumbent bristles. The mandibles furnished beneath with long curved hairs extending downwards and backwards; a bunch of three or four long curved hairs at the base of the mentum, extending forwards.

Head broad, transverse, truncate in front, rounded at sides and base, longitudinally striate along the front between the frontal carinæ and along the cheeks, the striæ, which are deep and close, continuing transversely around the temples and occiput, hair-bearing punctures occur at intervals in the striæ; *mandibles* deeply and strongly longitudinally striate, with hair-bearing punctures inserted in the striæ, with five teeth, the apical one long and pointed, the anti-penultimate longer than the rest; *clypeus* convex, extending over the mouth, rather broadly and deeply excised in the centre of anterior border, with faint somewhat widely separated longitudinal ridges, a row of large round hair-bearing punctures on anterior border, and a few scattered ones on disc; *frontal area* small, triangular, shining, with small ridges arranged along the posterior borders; *frontal carinæ* strong, with raised lobes divergent behind; *front* with a small shallow puncture in centre, and a deeper one a little behind it; *antennal foveæ* large and deep; *eyes* large, somewhat oval and projecting, placed rather far back on the head; *antennæ* long, *scape* extending a little beyond the occiput, *funiculus* with all the joints longer than broad, 1st joint as long as the 2nd and 3rd together. *Thorax* contracted in middle, the sutures rather less faintly indicated at the sides than usual in *Ocymyrmex*, strongly transversely striate throughout, except the sides of the *epinotum*, which are longitudinally striate, hair-bearing punctures are inserted in the striæ. *Petiole* long, the *peduncle* long, and slender towards base,

transversely striate, with small hair-bearing punctures in the striæ, the base of the peduncle less strongly striate than the apex, the latter more so than the node, the interstices of the striæ of the *node* are somewhat coriaceous; *post-petiole* a little broader towards the apex than the node of petiole, very finely coriaceous, with small scattered hair-bearing punctures; *gaster* with first segment slightly subpedunculate, the whole gaster smooth and shining, but under a high power very finely coriaceous, with small scattered hair-bearing punctures, the first segment marked with a few faint transverse furrows. *Legs* long. *Long.* 11 mm.

Type in Coll. Brit. Mus.

Described from a worker taken by Dr. G. D. Hale Carpenter in South Africa, Bechuanaland, Ngamiland, Nov. 1930–Jan. 1931.

This species is larger than all the other known species, except *O. picardi* Forel, from which it differs in colour, punctuation, etc.

FORMICINÆ.

Camponotus (Myrmotrema) lamborni, sp. n.

♂ major.—Black, somewhat shining, base of scape, last two joints of anterior and intermediate tarsi, strigils, and spurs reddish. Body clothed with long erect scattered yellow hairs, more abundant on gaster, and little golden adpressed hairs, the gaster with longer and closer decumbent greyish pubescence.

Head transverse, wider behind than in front, sides evenly rounded, posterior border slightly excised, the whole of the surface covered with fine coriaceous puncturation, and coarse fairly large foveolate punctures are scattered unevenly about, more abundant on the mandibles, cheeks, clypeus, between the frontal carinæ, temples, and round the eyes, bare spaces, except for the surface-puncturation, occur outside the frontal carinæ and on the occiput; *mandibles* with six rather large smooth and shining teeth, the apical one distinctly longer than the rest; *clypeus* somewhat flat, not carinate, longer than broad, slightly broader in front than behind, anterior border truncate, posterior border with a narrow but distinct suture, triangularly rounded in the middle to define the anterior part of the *frontal area*, which is

not distinctly defined behind; *frontal furrow* narrow but broadest in front; *frontal carinæ* strongly arched, divergent in front and behind; *eyes* large, rather flat; *antennæ*: *scape* considerably curved and narrower at base, reaching a little beyond the posterior angles of head, *funiculus* with all the joints elongate and subequal, except first and last which are a little longer. *Thorax* with similar surface coriaceous puncturation to that of head; declivity of *epinotum* and anterior and posterior sides of *scale* of *petiole* finely transversely striate; *promeso-* and *mesoepinotal sutures* distinctly defined; upper surface of *scale* rounded, not excised. *Gaster* with surface-puncturation considerably finer than that of head and thorax, with small widely separated piligerous punctures scattered over it. *Legs* with coriaceous surface-puncturation and larger scattered punctures, *tibiæ* flat without outstanding hairs. *Long.* 9.2 mm.

♂♀ *media* and *minor* differ from the worker major only in the smaller sizes, smaller and narrower heads, the foveolate punctures much less distinct in the *media* and almost wanting in the *minor*. *Long.* 8.8 and 6.9 mm.

♂.—Black, apex of joints of tarsi, claws, strigils, and base of antennæ reddish. Body clothed with longer and shorter erect yellow hairs and some small adpressed ones. *Head* small, triangular, whole of head with fine coriaceous surface-puncturation and traces of scattered larger punctures especially on cheeks and clypeus; *mandibles* narrow, but well developed, no teeth to terminal border; *clypeus* transverse, convex; *frontal area* ill defined; *frontal furrow* distinct, reaching median ocellus; *frontal carinæ* short, low, and ill defined behind; *eyes* very large and prominent; *ocelli* large, prominent; *antennæ* long, *scape* extending by half its length beyond the posterior angles of the head. *Thorax* with fine coriaceous surface-puncturation; *pronotum* narrow, slightly transversely striate; *scutum* of *mesonotum* flat on disc, round and convex in front; *parapsidal furrows* reaching base of scutellum and continued in a fine raised transverse ridge bordering the scutellum; *præscutellum* short, transverse, convex, with one or two round punctures on antero-lateral border; *scutellum* very convex, very smooth and shining on lower half of sides and projection of the same. *Scale* of *petiole*

low, transverse, hexagonal, rather thick, straight on anterior border, convex and finely transversely striate on anterior surface, somewhat flat and finely transversely striate on posterior surface, with two hair-bearing punctures at the corners of the two short antero-lateral sides, and a small tooth at the base of the postero-lateral sides, three or four long hairs and some shorter ones project from the sides. *Gaster* slender, shining, very finely coriaceously punctured and with small scattered piligerous punctures. Wings dusky, with pale brown veins and darker *pterostigma*. *Legs* long, *femora* somewhat flat, curved, broadest about middle, finely transversely striate, *tibiae* flat, finely punctured and pubescent, with some little golden adpressed hairs. *Long.* 7.6 mm.

Type and allotype in Coll. Brit. Mus.

Described from three ♂♂ and a number of ♀♀ taken by W. A. Lamborn in Nyassaland, Maiwale near Fort Johnston, on December 2nd, 1931.

Camponotus (Tanæmyrmex) similis, sp. n. = *Camponotus badius* Bingham (1903), nec Smith (1857).

The *Camponotus badius* described by Bingham in the 'Fauna of British India, Hymenoptera,' vol. ii., "Ants and Cuckoo-Wasps," p. 358 (1903), and said to be Smith's species, is a *Tanæmyrmex*, whereas the latter is a *Colobopsis*.

Type in Coll. Brit. Mus.

XXIII.—*Tarsonemus approximatus Banks var. narcissi*
Ewing a Variety of Tarsonemid new to the British
List. By A. M. MASSEE (Research Station, East
 Malling, Kent).

ON January 28th, 1932, the writer received specimens of a *Tarsonemid* mite which were found in a stock of bulbs a few days previously by Mr. W. E. H. Hodson, Entomologist, Reading University, with a request for the determination of the species.

Some time later a large quantity of bulbs infested by a species of *Tarsonemid* mite were received from Mr. Hodson, and a further supply was sent to East Malling by Mr. A. S. Buckhurst of the Plant Pathological Laboratory, Harpenden, Herts.

Mr. Hodson reported that the mite was first recorded by himself in Great Britain on January 25th in a stock of bulbs of the variety Diadem at Abingdon, Berks. This particular stock of bulbs had been in the country for a number of years, which makes it improbable that the mite is a recent import.

In the following months mite-infested stocks of bulbs were found at Penzance, Cornwall; Bromham, Wilts; Slough and Taplow, Bucks; and elsewhere—indicating that the distribution is fairly general. The infested varieties found by Mr. Hodson include the following:—Soleil d'Or, Argent, Sir Watkin, Dante, Golden Spur, Diadem, Emperor, King Alfred, and Victoria.

Mr. Hodson also states that a study of the bionomics of the mite has already been commenced, and that it is already apparent that it is responsible for the so-called "loss of vigour" in many field-stocks, and is further capable of causing complete or partial failure of the flower-crop, particularly in forced bulbs.

The mites in question were compared with other species of the same genus which occur in this country, and it was evident that the species was new to Britain.

In 1929 Mr. H. E. Ewing, of the United States Bureau of Entomology, described a new variety of *Tarsonemus* from the Pacific Coast, and it was stated that the mites were found infesting narcissus plants and bulbs, causing some injury to the same. Thus it seemed imperative to compare the English and American species of bulb-mite to determine whether they were one and the same species.

Material of the English species was sent to Dr. A. C. Oudemans, the celebrated acarologist of Arnhem, Holland, who very kindly made preparations and drawings of the mite, and later on determined the species as being *Tarsonemus approximatus* Banks var. *narcissi* Ewing.

Mr. Hodson also informs me that specimens were sent to Mr. H. E. Ewing, at Washington, who confirmed the opinion already made by Dr. Oudemans, namely, that the English and the American species were one and the same variety.

Tarsonemus approximatus Banks var. *narcissi* Ewing was described by Ewing* in a paper entitled "A new

* 'The Proceedings of the Entomological Society of Washington,' 1929, xxxi. no. 2, pp. 31-32.