

PHEIDOLE (PHEIDOLACANTHINUS) STRIATUS SP.N. FROM NEW GUINEA,
 WITH NOTES ON THE SUBGENUS *PHEIDOLACANTHINUS* F. SMITH (HYM.,
 FORMICIDAE)

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Reprinted from 'The Entomologist's Monthly Magazine,' Vol. lxxxiii.

Date of publication: 30th July, 1947.

Pheidole (Pheidolacanthinus) striatus sp.n.

♀. Head, postpetiole and gaster black, mandibles yellowish-brown, antennae, thorax, petiole, tarsi and part of femora and tibiae yellowish-red, node of petiole, middle of femora and tibiae brown.

Head shining, longer than broad, slightly broadest just before base, anterior angles slightly projecting, posterior angles rounded, posterior border somewhat deeply but not widely excised in centre, forming two lobes; a transverse, rather deep furrow is present in front of the lobes, separating them from the rest of the head, and giving them a raised appearance. The upper surface and sides of the head are strongly longitudinally striate, those of the cheeks curve round on to the lobes, where a few transverse striae form a raised network. The posterior portion of the lobes is smooth and very shining; *mandibles* massive, convex, outer border rounded and curved to apex, masticatory border almost straight, unarmed and only bluntly pointed at apex, a row of shallow, rather widely separated small punctures is present near masticatory border; *clypeus* smooth and shining on disc, subcarinate, anterior border excised in middle and slightly sinuate at sides, the striae on head short on posterior part of clypeus; *frontal carinae* wide apart, somewhat sharp and raised, forming the outside border of a smooth, rather deep scrobe; *eyes* rather small, slightly projecting, situated in front of the middle of sides of head; *antennae* twelve-jointed, moderate, when fully stretched out extending beyond the posterior border of the head by the length of the last two joints of the club, *scape* narrow, curved, fitting into the scrobe; *funiculus* with last three joints longer than the rest, last joint equal to the two preceding taken together. Thorax longitudinally striate, but the striae not nearly as strong as those on head; *pronotum* armed with two rather long, stout, sharply pointed spines, projecting outwards and slightly forwards; *mesonotum* armed with two small teeth or tubercles; *epinotum* armed with two sharp spines projecting outwards, upwards and slightly backwards, space between the spines slightly transversely striate, declivity longitudinally striate. *Petiole* long and narrow, the greater length being before the node, constricted near base, node high and slightly excised in centre of upper surface; *postpetiole* transverse, broader than node of petiole, rounded and raised above, bluntly pointed at sides; *gaster* broad, oval, narrowed to apex, first segment convex, about as long as the rest of the segments taken together, with extremely fine circular striae, which give it a dull appearance, somewhat truncate at base, sides rounded, rest of gaster very smooth and shining. *Legs* fairly long, *femora* and *tibiae* spindle-shaped. Long. 4.3-4.5 mm.

♂. Colour much as in ♀, but legs all yellow, very smooth and shining.

Head rounded in front and behind, broadest across eyes, posterior angles rounded, posterior border finely margined; *mandibles* long, triangular, masticatory border armed with a row of fine dentules, tooth at apex long and sharp, a shorter tooth is present placed just behind it; *clypeus* convex, anterior border rounded; *frontal area* small, triangular; *frontal carinae* rather wide apart, short, narrow, sharp; *eyes* moderate, oval, convex, projecting, situated a little in front of sides of head; *antennae* twelve-jointed, moderately long, *scape* only extending a little beyond posterior border of head, *funiculus* with last three joints about as long as the rest taken together. Thorax flat on disc, slightly constricted in middle; *pronotum* armed with two long spines, projecting outwards and slightly upwards; *epinotum* armed with two shorter, sharp and narrow spines, projecting backwards and slightly curved downwards at apex; *petiole* long and narrow, furnished with a small raised node; *postpetiole* broader than node of petiole, rounded above and at sides; *gaster* oval, somewhat truncate at base. *Legs* moderately long, femora and tibiae spindle-shaped. Long. 2.7-2.9 mm.

♂. Black to dark brown, mandibles, antennae and legs brownish-yellow.

Head triangular, narrowed behind eyes, finely longitudinally striate; *mandibles* small, weak, with two little teeth at apex of masticatory border; *clypeus* with anterior border almost straight and finely margined in centre, slightly sinuate at sides, a small raised round tubercle is present on disc; *eyes* very large and prominent; *ocelli* fairly large, situated on a small prominence at back of head; *antennae* thirteen-jointed, thin, narrowed to apex, *scape* short, first joint of *funiculus* globular, broader than the rest. Thorax oval, narrowed in front and behind, broadest at insertion of fore-wings; *mesonotum* large, convex, very faintly longitudinally striate; *mayrian furrows* not very distinct; *praescutellum* transverse, narrow, with rather widely separated longitudinal striae; *scutellum* oval, convex, prominent, bluntly pointed behind, anterior border almost straight, posterior border margined; *metanotum* very narrow and transverse, partly covered by point of scutellum; *epinotum* with fine circular striae on disc, dorsal surface considerably longer than declivity, which is rather abrupt and concave. *Petiole* long, narrow, slightly narrowed to node, which is small and

rounded above; *postpetiole* somewhat longer than broad, broader than node of petiole, broadest at apex, not very convex, sides gradually rounded to apex; *gaster* long, oval, smooth and shining, narrowed to apex, broadest a little behind anterior border. *Legs* long and narrow. *Wings* dusky, one discoidal cell, one small and one large cubital cell and closed radial cell present. *Long.* 3.5 mm.

Described from seven soldiers, seven workers and four males. Maffin Bay, Dutch New Guinea, viii.44, E. S. Ross Collection.

This new species is closely allied to *P. (P.) singularis* F. Smith, both possessing a transverse furrow on the head in the soldier. It differs, however, in many important particulars. The colour of *singularis* is entirely brown, whereas in *striatus* the head, thorax and gaster are black. The spines of the pronotum and epinotum are very distinctly longer and sharper

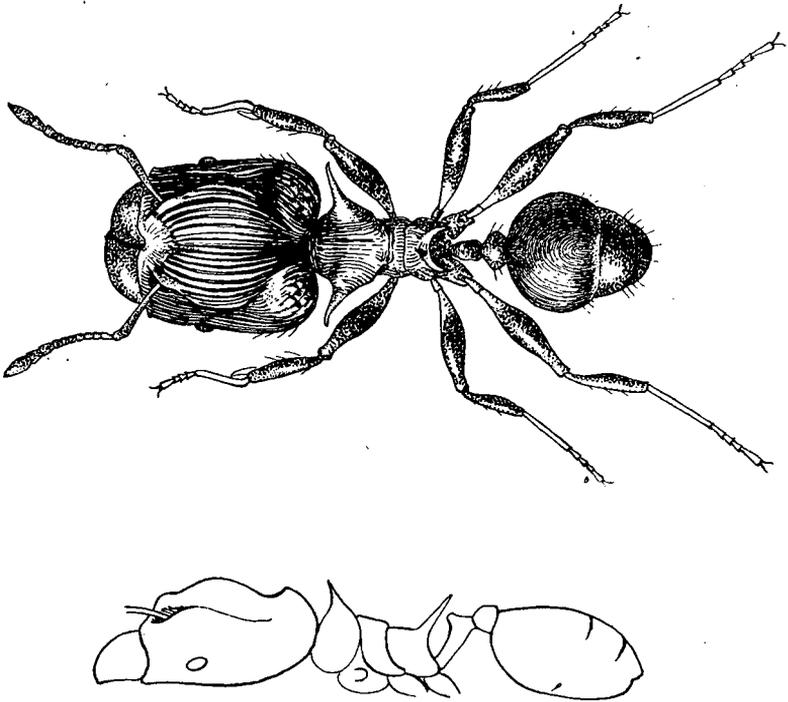


FIG. 1.—*Pheidole (Pheidolacanthinus) striatus* sp.n., soldier; above, dorsal view; below, profile.

in *striatus*. At the base of the clypeus a single, rather distinct, short, longitudinal carina is present in *singularis*; in *striatus* there are three smaller and less distinct ones. The transverse furrow in *singularis* is not so profound, and the lobes are not so well defined nor so turned up as in *striatus*. The network of raised ridges extends further along the furrow, and the ground sculpture of the same is more punctured and less shining in *singularis*. The node of petiole is distinctly excised in middle of upper surface in *singularis*, whereas in *striatus* it is very feebly so.

The distribution of *Pheidolacanthinus* extends from Malacca, through Malaya, Sumatra to New Guinea, Australia.

F. Smith described this subgenus of *Pheidole* in 1864 for the reception of a soldier from Salwatty, New Guinea, which he called *armatus*. He unfortunately gave the antennae as eleven-jointed, whereas in the type they are

twelve-jointed. This caused considerable confusion when other species of *Pheidolacanthinus* were described. He also called it a worker. He had, however, described the worker as *Myrmica quadrispinosa* from the same locality three pages before in the same paper. The species, therefore, must be called *quadrispinosus*, as pointed out by Donisthorpe in 1938.

These ants nest in rotten wood, dead logs, under bark and in old beetle burrows, and have been taken on trees, foliage and on wet rocks partly submerged in the river, at elevations from 1,200 ft. to 3,500–4,500 ft.

Some nineteen species have been described, *striatus* bringing the total up to twenty. The literature on the same is as follows:—

Pheidolacanthinus F. Smith, 1864, *J. linn. Soc. (Zool.)*, **8**: 75. (Subgenus of *Pheidole* Westwood, 1840. Subfamily: Myrmicinae; Tribe: Pheidolini.) Type: *Pheidolacanthinus armatus* F. Smith, 1864, ♀ = *Myrmica quadrispinosa* F. Smith, 1864, ♀ (monobasic). Donisthorpe, 1938, *Ann. Mag. nat. Hist. (11)* **1**: 144. Type locality: Salwatty, New Guinea.

1. *P. (P.) amber* Donisthorpe, 1941, *Trans. R. ent. Soc. Lond.*, **91**: 55. ♀ Japen Island.
2. *P. (P.) barumtaua* Donisthorpe, 1938, *Ann. Mag. nat. Hist. (11)* **1**: 141. ♀, ♂, ♂. Dutch New Guinea, Waigeu Island.
3. *P. (P.) bifurcus* Donisthorpe, 1941, *Entomologist*, **74**: 36. ♀, ♂. Dutch New Guinea, Waigeu Island.
4. *P. (P.) elegans* Donisthorpe, 1938, *Ann. Mag. nat. Hist. (11)* **1**: 144. ♀. Papua.
5. *P. (P.) flavothoracica* Viehmeyer, 1914, *Zool. Jb., Syst.*, **37**: 610, fig. c. ♀. New Guinea.
6. *P. (P.) hercules* Donisthorpe, 1941, *Trans. R. ent. Soc. Lond.*, **91**: 53. ♀, ♂. Japen Island.
7. *P. (P.) medioflava* Donisthorpe, 1941, *Entomologist*, **74**: 37. ♀. Dutch New Guinea, Waigeu Island.
8. *P. (P.) mjobergi* Forel, 1915, *Ark. Zool.*, **9**: 66, pl. I, fig. 5. ♀, ♂. Australia.
9. *P. (P.) purpurascens* Emery, 1897, *Ann. Mus. Stor. nat. Genova*, **38**: 565. ♀ (Sub. *Pheidole*). New Guinea.
10. *P. (P.) quadrispinosa* F. Smith, 1864, *J. linn. Soc. (Zool.)*, **8**: 72, pl. IV, fig. 6. ♀. (Sub. *Myrmica*.) = *Pheidolacanthinus armatus* F. Smith, 1864, *l.c.*: 75, fig. 8. ♀. ♂ and ♀ described, Donisthorpe, *Entomologist*, **74**: 38–39. New Guinea.
11. *P. (P.) sexspinos* Mayr, 1870, *Verh. zool.-bot. Ges. Wien*, **20**: 997. ♀, ♂. Ellice Island.
- 11a. *P. (P.) sexspinos* *adamsoni* Wheeler, 1932, *Pacific Ent. Survey Publ.*, **1** (16); *Bull. Biol. Bish. Mus., Honolulu*, **98**: 157. ♀, ♂, ♀, ♂. Maquesas Isls. and Tahiti.
- 11b. *P. (P.) sexspinos* *biroi* Emery, 1900, *TermTud. Füz.*, **23**: 323. 4 ♀, ♂. New Guinea.
- 11c. *P. (P.) sexspinos* *biroi* Emery var. *ralumensis* Forel, 1901, *Mitt. zool. Mus. Berl.*, **2**: 14. ♀. Bismarck Archipelago.
- 11d. *P. (P.) sexspinos* *Mayr* var. *fuscescens* Emery, 1900, *TermTud. Füz.*, **23**: 323. 4 ♀. New Guinea.
12. *P. (P.) singularis* F. Smith, 1863, *J. linn. Soc. (Zool.)*, **7**: 22. ♀. (Sub. *Pheidole*.) Mysol.
13. *P. (P.) tetracantha* Emery, 1894, *Ann. Mus. Stor. nat. Genova*, **38**: 564. ♀. New Guinea.
14. *P. (P.) transfigens* Forel, 1911, *S.B. bayerisch. Akad. Wiss.*, **41**: 268. ♀. (Sub. *Pheidole*.) New Guinea.
15. *P. (P.) cervicornis* Emery, 1900, *TermTud. Füz.*, **23**: 322, pl. 8, fig. 25. ♀. New Guinea.
16. *P. (P.) lokitae* Forel, 1913, *Zool. Jb., Syst.*, **36**: 46, figs. L, M. ♀, ♂, ♀. Malacca Sumatra.
17. *P. (P.) quadrensis* Emery, 1900, *Ann. Soc. ent. Belg.*, **44**: 25. ♀. Sumatra. Malacca.
18. *P. (P.) quadricuspis* Emery, 1901, *Ann. Mus. Stor. nat. Genova*, **40**: 683. ♀, ♂. Sumatra. Malacca.
19. *P. (P.) sperata* Forel, 1915, *Tijdschr. Ent.*, **58**: 29. ♀, ♂. Simalur.
20. *P. (P.) striatus* Donisthorpe, *huj. ref.* ♀, ♂, ♂. New Guinea.

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May 1st, 1947.