

A NEW SPECIES OF *LIOMYRMEX* MAYR FROM
ANDAMAN ISLANDS
(HYMENOPTERA : FORMICIDAE)

By

R. N. TIWARI AND J. K. JONATHAN

Zoological Survey of India, 34, Chittaranjan Avenue,
Calcutta-700 012

(With 1 Figure)

INTRODUCTION

The genus *Liomyrmex*, described by Mayr (1865), for the reception of *Myrmica coeca* F. Smith, which was collected by Alfred Russell Wallace at Dory, New Guinea, belongs to subfamily Myrmicinae of the family Formicidae. F. Smith (1860) being unable to study the characters of palpi, placed *coeca* tentatively under *Myrmica*. Altogether eight species, mostly small sized about 2.7 to 4 mm long, have been reported under this genus, namely, *L. coecus* (Smith), *L. gestroi* (Emery), *L. aurianus* Emery, *L. carinatus* Stitz, *L. tagalanus* Menozzi, *L. froggatti* Donisthorpe, *L. major* Donisthorpe and *L. reneae* Donisthorpe. This genus is hitherto Indo-Malayan in distribution and has been reported from New Guinea, Burma, Malacca and Philippine Islands. The present record of this genus from Andaman Islands in Indian Ocean, is, therefore, the first from the Indian region.

Genus *Liomyrmex* Mayr, 1865

Liomyrmex, Mayr, 1865, *Reise Novara zool.* 2 (1 A) Formicidae : 23. Type-species : *Myrmica coeca* Smith Original designation.

Laparomyrmex gestroi Emery, 1887, *Ann. Mus. Civ. Genova* 25 : 461. Type-species *Laparomyrmex gestroi* Emery.

Promyrma Forel, 1912, *Rev. Suisse Zool.* 20 : 764. Type-species : *Promyrma buttelli* Emery = *Liomyrmex aurianus* Emery, 1889.

This is a distinct genus mainly characterized by 10 or 11-segmented antenna, with a well defined 3-segmented club ; eyes always absent in worker, but well developed in female ; head subquadrate, body dorso-ventrally compressed ; petiolar nodes massive and strongly transverse ; petiolar node with a short peduncle and a large keel-shaped subpetiolar process ; subpostpetiolar process heavy and lobate ; propodeal spiracle vestibular and body yellowish-red, brown to dark brown in colour.

Worker : Head subquadrate. Antennae 10 or 11-segmented, with well developed 3-segmented club. Eyes absent in worker, developed in

female. Palpal formula 2, 2; dental formula 1+3, canthus sharply inflexed before it meets the basal margin of the blade; mandalus short and broad, lying close to ginglymus. Clypeus sharply elevated medially above the lateral areas, median area flat, lateral areas abbreviated, anterior tentorial pits close to antennal sockets.

Alitrunk dorso-ventrally compressed; pro-mesonotal suture distinct only on the pleura to the height of spiracle; metanotal groove distinct. Pronotum anteriorly wide, evenly narrowing towards metanotal groove. Propodeum smoothly rounded. Metasternum bearing a distinct but simple process to receive the subpetiolar process. Metanotum unarmed. Petiolar node subquadrate, much broader than long in dorsal view, its subpetiolar process large, keel-shaped, lamellate. Postpetiolar node rounded, strongly transverse, subreniform when viewed from above; anterior subpostpetiolar process large, lobate, pendant in side view, posterior subpostpetiolar process reduced, exposing the anterior articulation of the first segment of gaster, which stimulates the posterior process in side view. Gaster broad in front, pointed towards the tip. Legs thick and short.

***Liomyrmex taylori*, sp. nov.**

(Fig. 1, a-c)

This species is allied to *Liomyrmex reneae* Donisthorpe by having subquadrate head, mandibles with 4 teeth; maxillary and labial palpi two jointed; alitrunk longer than broad; pro-mesonotal suture obsolete, but it differs in following characters: Posterior border of clypeus evenly arched; anterior border of petiolar node slightly excised, posterior border almost straight, postpetiolar node with posterior border slightly excised; scape not extending up to the middle of the head; first joint of the funiculus broad and as long as three following segments, and by the complete absence of punctures on the body.

Holotype Worker: Body length 3.7 mm. H L (head length) .84 mm; HW (head width) .82 mm; SL (scape length) .35 mm; CI (cephalic index) 97; SI (scape index) 42; PW (pronotum width) .4 mm; PNL (petiolar node length) .2 mm; PPNL (postpetiolar node length) .2 mm; PH (petiolar height) .35 mm; PPH (postpetiolar height) .28 mm; DPW (dorsal petiolar width) .31 mm; DPPW (dorsal postpetiolar width) .35 mm; PNI (petiolar node index) 77; PPNi (postpetiolar node index) 87; LPI (lateral petiolar index) 57; LPPI (lateral postpetiolar index) 71.

Body reddish-yellow, mandible dark red; smooth and shiny. Pubescence very fine and sparse, a few long scattered yellowish hairs present on the anterior margin of clypeus, mandible, pronotum, petiolar nodes and at the apex of the gaster.

Head subquadrate, slightly narrower in front than behind, posterior angles rounded, posterior border almost straight. Mandibles strong, triangular, masticatory border armed with four teeth, first and second teeth long, stout and blunt, equal in size, very dark at its margin, the following two short and almost equal in size. Maxillary and labial palpi two segmented. Clypeus convex, anterior border almost straight, posterior border evenly arched, extending between the frontal lobes.

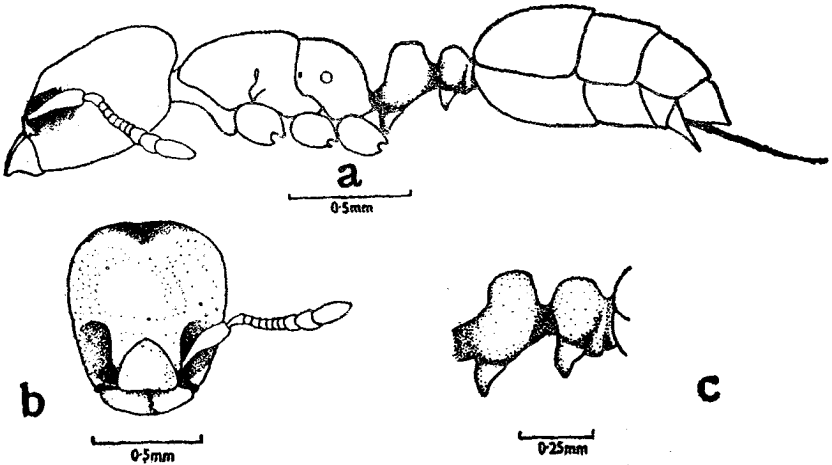


Fig. 1. (a-c). *Liomyrmex taylori* sp. nov.: (a) body, side view; (b) head, front view; (c) petiolar nodes, enlarged view.

Frontal lobes short with sharp edges, partly covering the base of the antennae; antennal foveae round, rather deep. Eyes absent. Antennae 11-segmented, scape flat at its distal end, not extending to the mid-length of the head when laid back. First segment of the funiculus broad and as long as the following three segments taken together, club three-segmented, considerably broader than the preceding segments, the last segment slightly longer than the preceding two segments taken together. Alitrunk longer than broad, slightly convex and constricted posteriorly at mesonotal-propodeal junction. Promesonotal suture obsolete, metanotal groove well defined; propodeum at the same level as promesonotum, its sides rounded and the angle between dorsal surface and declivity very gradual. Petiolar node with a short peduncle, flat above, transverse, anterior border slightly concave, posterior border almost straight, armed ventrally with a rather large translucent forwardly directed tooth. Postpetiolar node slightly convex above, broader than the node of the petiole, anterior border excised in the form of a groove, posterior border straight, comparatively larger than the petiolar lobe,

armed beneath with a short and blunt tooth. Gaster oval ; pygidium pointed ; sting well developed ; hypopygium pointed. Legs rather short ; femora incrassate, compressed at sides.

Holotype Worker : INDIA : S. ANDAMAN ISLANDS : Port Blair, South Point, 17.xii.1975, Coll. P. K. Maity & Party (Z. S. I.).

Paratypes Workers : Two examples, same data as for holotype (Z. S. I.).

SUMMARY

This paper deals with the description of a new species of ants, viz., *Liomyrmex taylori*, sp. nov. from Andaman Islands in Indian Ocean. This is the first record of the genus from Indian region.

ACKNOWLEDGEMENTS

The authors are thankful to Dr. R. W. Taylor, Principal Research Scientist, Curator of Ants, Australian National Insect Collection, for confirming the identity of the species and for his valuable comments. We are thankful to Dr. B. K. Tikader, Director, Zoological Survey of India, for his interest in this work and for providing necessary facilities.

REFERENCES

- DONISTHORPE, H. 1947. *Liomyrmex reneae* sp. n. (Hym., Formicidae) with a list of the species of and some notes on the genus *Liomyrmex* Mayr. *Entomologist's Monthly Magazine*, **83** : 293-294.
- EMERY, C. 1887. *Lapromyrmex*, n. g., for *L. gestroi* n. sp., N. Guinea, *Ann. Mus. civ. Genova*, **25** : 461.
- ETTERS HANK, G. 1966. A generic revision of the world Myrmicinae related to *Solenopsis* and *Pheidologeton*. *Australian Journal of Zoology*, **14** : 73-171.
- FOREL, A. 1912. Descriptions provisoires de genres, sous genres et especes de Formicides des Indes orientales. *Rev. Suisse Zool. Geneve*, **20** : 761-774.
- MAYR, G. L. 1865. Formicides der Reise der oesterreichischen Fregatte Novara um die Erde, p. 23, Taff. 4 Wien.