



ON SOME ANTS (INSECTA: HYMENOPTERA: FORMICIDAE) FROM NAGALAND, INDIA

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INTRODUCTION

Nagaland is the hilly state of northeastern India having an area of 16,579 km² lies between 25°6' and 27°4' latitude, north of equator and between the longitudinal lines 93°20'E and 95°15'E latitude, bounded by Tirap district of Arunachal Pradesh in north-east, Assam in the west and northwest, Manipur in the south while the eastern limits are continuous with the international boundary between India and Myanmar. This is predominantly a hilly state with valleys, streams and mountains. Nagaland includes the former Naga hill district of Assam (established in 1881) and the Tuensang division of North East Frontier Agency (NEFA, now Arunachal Pradesh). The administrative "unit" known as the "Naga hills" and tuensang Area" (NHTA) was established on 1st December 1957. NHTA was renamed as Nagaland on 18th February 1961. The State of Nagaland was formally inaugurated on December 1st, 1963, as the 16th State of the Indian Union. The state consists of seven administrative districts which are Kohima, Mokokchung, Mon, Phek, Tuensang, Wokha, Zunheboto and Dimapur. The climate of Nagaland is pleasant. Heavy rainfall occurs in the period of June to September with high humidity (67-88%).

Ants have the most highly organized social life among all the insects. The major factor responsible for their ecological success is division of labour, performing different biological functions. Ants live in highly

organized and integrated units the societies or colonies.

Bingham's (1903) fauna is the main source of knowledge of ants in India. Chapman and Capco (1951) published a checklist of the ants of Asia. Bolton (1995) has dealt with taxonomic and Zoogeographical census of the extant ant taxa (Hymenoptera: Formicidae). Bolton has published a Catalogue of Ants of the World CD-ROM 2007(1758-2005). Datta & Raychaudhuri (1985) has reported a new species of ant (Hymenoptera : Formicidae) from Nagaland, north-east India in Science and Culture. In the *State Fauna Series* (Fauna of Nagaland, 2005) 5 Orders namely Orthoptera, Lepidoptera, Odonata, Diptera and Coleoptera of Class Insecta has been worked out, but Order Hymenoptera has not been worked out.

The present studies are based on the material collected by Dr. P. H. Roy, Scientist (Retd.), Zoological Survey of India, Kolkata. We are thankful to him.

SYSTEMATICS

Order HYMENOPTERA

Family FORMICIDAE Latreille, 1809

(i) Subfamily MYRMICINAE Emery, 1877

1. *Solenopsis geminata geminata* (Fabricius, 1804)
2. *Meranoplus bicolor* (Guerin, Meneville, 1844)
3. *Lophomyrmex quadrispinosus* (Jerdon, 1851)

4. *Pheidologeton affinis affinis* (Jerdon, 1851)
5. *Aphaenogaster beccarii* (Emery, 1887)
6. *Aphaenogaster smythiesii smythiesii* (Forel, 1902)
7. *Monomorium indicum indicum* (Forel, 1902)
8. *Monomorium latinode* (Mayr, 1872)
9. *Pheidole smythiesii* (Forel, 1902)
10. *Tetramorium christiei* (Forel, 1902)
11. *Tetramorium tortuosum* (Roger, 1863)

(ii) Subfamily FORMICINAE

Lepeletier, 1809

12. *Anoplolepis gracilipes* (Smith, F., 1857)
Anoplolepis longipes (Jerdon, 1851)
(Junior synonym of *gracilipes*)
13. *Plagiolepis dichroa* (Forel, 1902)
14. *Oecophylla smaragdina smaragdina* (Fabricius, 1775)
15. *Camponotus (Tanaemyrmex) invidus* (Forel, 1892)
16. *Camponotus (Orthonotomyrmex) sericeus sericeus* (Fabricius, 1798)
17. *Paratrechina longicornis longicornis* (Latreille, 1802)
18. *Paratrechina taylori taylori* (Forel, 1894)
19. *Paratrechina aseta* (Forel, 1902)
20. *Formica rufibarbis rufibarbis* (Fabricius, 1793)

(iii) Subfamily PONERINAE

Lepeletier, 1835

21. *Pachycondyla rufipes rufipes* (Jerdon, 1851)
22. *Pachycondyla melanaria melanaria* (Emery, 1893)
23. *Pachycondyla sulcata sulcata* (Mayr, 1867)

(iv) Subfamily DOLICHODERINAE Forel, 1878

24. *Tapinoma melanocephalum melanocephalum* (Fabricius, 1793)

Ants are polymorphic social insects having three distinct forms- the perfect and fertile female, the male and workers (major or minor). The largest forms are soldiers. Identification of ants is mainly based on the worker caste.

IDENTIFICATION KEY IS BASED ON THE WORKER CASTE OF ANTS**Key to the sub-families of family FORMICIDAE**
(Modified from Bolton, 1994)

1. Body with a single reduced segment ie. petiole between alitrunk and abdomen..... 2
- Body with a two reduced segment ie. petiole and post petiole between alitrunk and abdomen... ..*Myrmicinae*
2. Apex of gaster with a semicircular or circular acidopore, usually guarded by setae, sting absent.....*Formicinae*
- Apex of gaster without a semicircular or circular acidopore, sting present.....3
3. Either pygidium or hypopygidium armed with peg like teeth or short spines.....*Ponerinae*
- Pygidium or hypopygidium unarmed*Dolichoderinae*

Subfamily MYRMICINAE Emery, 1877

Key to the genera of subfamily MYRMICINAE

1. Antennae with less than 12 joints.....2
- Antennae 12 jointed.....5
2. Antennae 9 or 10 jointed.3
- Antennae 11 jointed.....4
3. Antenna 10 jointed. Pronotum and metanotum unarmed..... *Solenopsis*
- Antenna 9 jointed. Pronotum and metanotum armed with two teeth *Meranoplus*
4. Pronotum armed with two spines.
..*Lophomyrmex*
- Pronotum not armed.....*Pheidologeton*
5. Flagellum of antennae scarcely thickened towards apex without a distinct club*Aphaenogaster*
- Flagellum of antennae with a distinct club6
6. Clypeus bicarinate.*Monomorium*
- Clypeus not bicarinate, occasionally with one carina.....7
7. Neuters or workers strongly dimorphous*Pheidole*
- Neuters or workers monomorphous*Tetramorium*

Genus *Solenopsis* Westwood, 1840*Solenopsis geminata geminata* (Fabricius, 1804)

Original Combination - *Atta geminata* Fabricius, 1804

1804. *Solenopsis geminata*, Fabricius, *Syst. Piez.*, : 423, (*Atta*).

1862. *Solenopsis geminata*, Roger, *Berl. Ent. Zeitschr.*, **6**: 289, Male, Female, Worker.

1903. *Solenopsis geminata*, Bingham, *Fauna Brit. India, Hym.*, **2**: 158-159. Male, Female, Worker, Soldier.

Material examined: Worker - 2 exs, Mokokchung (Munkong), 27.9.1994, P.H. Roy Coll. (Regd. No. 12858/H3).

Diagnostic Characters: Worker: Length 2.2- 2.5 mm. Pale yellow, smooth and shining. Mandibles narrow with four acute teeth. Antennae 12 jointed, scape extending beyond the top of the head, flagellum with a distinct club. Alitrunk convex above not sub-margined, alitrunk seen in profile deeply emerginate at the meso- metanotal suture. The 1st node of petiole squamiform, anteriorly petiolate, 2nd node smoothly rounded and little broader in front than posterior. Abdomen more than twice as long as broad.

Distribution : **India**: Rajasthan, Gujarat, Tamil Nadu, Punjab, Karnataka, Himachal Pradesh, Jammu & Kashmir, West Bengal(Kolkata), Orissa, Andaman & Nicobar Islands. *Elsewhere*: Spread over both the hemispheres, Oceania, Philippines, Sri Lanka, Central America.

Remarks: Reported for the first time from Nagaland state.

Genus *Meranoplus* Smith F., 1853

Meranoplus bicolor (Guerin, Meneville, 1844)

Original Combination - *Cryptocerus bicolor*, Guerin, 1844

1844. *Meranoplus bicolor*, Guerin (*Cryptocerus*) *Cuv. Inconogr. Regm. Anim. Insect*, iii, p. 425.

1875. *Meranoplus bicolor*, Smith, *Trans. Ent. Soc. Lond.*, p. 34, pl I, fig. 1-3.

1903. *Meranoplus bicolor*, Bingham, *Fauna Brit. India, Hym.*, **2**: 168-169.

Male, Female, Worker

1951. *Meranoplus bicolor*, Chapman and Capco, *Monogr. Inst. Sci. Tech., Manila (Check List Ants Asia)*, **1**: 112.

1995. *Meranoplus bicolor* Bolton, B., *A New General Catalogue of the Ants of the World*, : 250.

Material examined: Worker - 5 exs, Dimapur (Forest colony), 3.10.1994, 9 exs, Dimapur (Rangapahar reserve forest), 1.10.1994, P.H. Roy Coll. (Regd. No. 12859/H3, 12860/H3).

Diagnostic Characters: Worker: Length 4-5 mm. Head, alitrunk, leg and petiole of the abdomen bright ferruginous red in color and abdomen black, pilosity very long soft, abundant and of grey colour. Head, a little bit longer than broader and broader posteriorly than in front. Mandibles narrow, armed with 4 teeth. Clypeus convex in middle, inclined downwards. The promesonotal shield of the alitrunk about as broad as long, with the anterior angles prominent and acute, the sides posteriorly with a small incision, and beyond that produced backwards into a long laminate spine on each side overhanging the metanotum, the latter, vertical, slightly convex with a carina on each side ending above in an acute spine. The 1st node of petiole smooth, triangular 2nd node globose. Abdomen cordate.

Distribution: **India**: Gujarat, Karnataka, Kerala, Maharashtra, Manipur, Orissa, Rajasthan, Tamil Nadu, Tripura, Punjab, Uttar Pradesh, West Bengal, Uttarakhand, Chandigarh, Delhi. *Elsewhere*: China, Bhutan, Indonesia, Malaysia, Myanmar, Nepal, Pakistan, Singapore, Sri Lanka, Thailand.

Remarks: Reported for the first time from Nagaland state.

Genus *Lophomyrmex* Emery, 1892

Lophomyrmex quadrispinosus (Jerdon, 1851)

Original Combination - *Oecodoma quadrispinosus* Jerdon, 1851

1851. *Lophomyrmex oecodoma quadrispinosus* Jerdon, *Madras Jour. Lit. Sc.*, **17**: 111, (Worker) (*Oecodoma*).

1903. *Lophomyrmex quadrispinosus*, Bingham, *Fauna Brit. India, Hym.*, **2**: 195-196.

1995. *Lophomyrmex quadrispinosus* Bolton, B., *A New General Catalogue of the Ants of the World*, : 248.

Material examined: Workers - 1 ex, Mokokchung (Munkong), 27.9.1994, P.H. Roy Coll. (Regd. No. 12854/H3).

Diagnostic Characters: Worker: - 3 - 3.5 mm. Head and abdomen chestnut or reddish brown, alitrunk and petiole brownish yellow. Head a little longer than broad, with a broad posterior margin. Mandibles striate at base, slightly convex, the masticatory margin dentate. Antennae 11

jointed, slender the scape barely extending beyond the top of the head. Alitrunk the pro-mesonotal suture lying immediately behind the flattened top of the pronotum is almost more or less rounded above. Pronotum armed with two short spines or teeth. Petiole the 2nd node broader than the 1st, this latter with a long petiole in front and shorter one posteriorly, the 2nd node rounded above. Abdomen broadly oval.

Distribution : **India** : Karnataka, Kerala, Sikkim, Orissa, W. Bengal, Tamil-Nadu, Uttar-Pradesh, Meghalaya, Chandigarh. *Elsewhere* : Sri Lanka.

Remarks: Reported for the first time from Nagaland state.

Genus *Pheidologeton* Mayr, 1862

Pheidologeton affinis affinis (Jerdon, 1851)

Original Combination – *Oecodoma affinis* Jerdon, 1851

1851. *Pheidologeton affinis* Jerdon, *Madras J. Lit. Sci.*, **17**: 110, Worker, Soldier.

1903. *Pheidologeton affinis*, Bingham, *Fauna Brit. India, Hym.*, **2**: 164-165, Male, Female, Worker, Soldier.

1951. *Pheidologeton affinis*, Chapman and Capco, *Monogr. Inst. Sci. Tech., Manila (Check List Ants Asia)*, **1**: 159.

1994. *Pheidologeton affinis*, Tiwari, et al., *State Fauna Series 5: Fauna of West Bengal*, **8**: 52.

Material examined: Workers – 5 exs, Mokokchung (Tsumarshong), 28.9.1994, 12 exs., Dimapur (Chumuksdina) 2.10.1994, Many exs, Dimapur (Rangapahar reserve forest), 1.10.1994, P.H. Roy Coll. (Regd. No. 12855/H3, 12856/H3, 12857/H3).

Diagnostic Characters: Worker- Length 2 – 2.5 mm. Light brownish yellow, polished and shining and the mandibles black, the antennae and legs yellowish red. Sculpture more feeble and the median longitudinal furrow less deeply impressed. Head proportionately much longer and anteriorly striate. Ocellus absent. Mandibles large, smooth, the masticatory margin with two strong teeth at apex. Antennae 11 jointed, scape short, club of the antennae formed of 2 apical joints of flagellum. Alitrunk smaller, scutellum

prominent and gibbous, the basal portion of the metanotum transversely striate armed with two spines, pronotum anteriorly striate and not armed. Petiole with 1st node narrower, more conical and not emarginate above, the keel below less strongly marked. Abdomen broadly oval.

Distribution: **India**: Assam, Karnataka, Kerala, Maharashtra, Manipur, Rajasthan, Tamil Nadu, West Bengal. *Elsewhere*: Malaysia, Myanmar, Sri Lanka.

Remarks: Reported for the first time from Nagaland state.

Key to the species of Genus *Aphaenogaster*

1. Head posteriorly produced and constricted forming a more or less cylindrical neck or collar.....*beccarii*
- Head posteriorly not produced into a neck*smythiesii*

Genus *Aphaenogaster* Mayr, 1853

Aphaenogaster beccarii Emery, 1887

Original Combination – *Aphaenogaster (Ischnomyrmex) beccarii* Emery, 1887

1887. *Aphaenogaster (Deromyrma) beccarii* Emery, *Ann. Mus. Civ. Stor. Nat. Genova*, **25**: 456, pl. 1, fig. 12, (Worker, Female, Male) (*Ischnomyrmex beccarii*).

1903. *Aphaenogaster (Deromyrma) beccarii* Bingham, *Fauna Brit. India, Hym.*, **2**: 271-272. Male, Female, Worker.

Material examined: Worker – 1 ex, Mokokchung (Tsumarshong), 28.9.1994, P.H. Roy Coll. (Regd. No. 12861/H3).

Diagnostic Characters: Worker: Length – 6.5 – 7 mm. Light castaneous brown, smooth and shining, alitrunk posteriorly and the abdomen slightly darker. Head including the mandibles viewed from above elongate and oval. Mandibles triangular, broad at masticatory margin which is furnished with three conspicuous teeth towards the apex, finely striate at base. Antennae 12 jointed, scape extending well beyond the top of the head, club of the flagellum formed of the apical four joints. Alitrunk - pro-mesonotal suture generally slight, mesonotum oblique, convex above, roundly raised a little anteriorly, meso- metanotal suture deeply impressed, the basal portion of the metanotum

elongate, metanotum transversely rugose above, obliquely and somewhat coarsely striate on the sides, rounded above the apex divided into two acute dentate angles. Petiole with 1st node conical, rounded above, 2nd node suboval. Abdomen short, broadly oval.

Distribution : **India**: Karnataka, Maharashtra, Nagaland. *Elsewhere*: Sumatra.

Remarks: Reported for the first time from Nagaland state.

Aphaenogaster smythiesii smythiesii (Forel, 1902)

Original Combination - *Stenammas (Aphaenogaster) smythiesii* Forel, 1902

1902. *Aphaenogaster (Attomyrma) smythiesii* Forel, *Rev. Suisse zool.* **10**: 222, (Worker, Female, Male).

1903. *Aphaenogaster (Attomyrma) smythiesii* Bingham, *Fauna Brit. India, Hym.*, **2**: 276-277. Male, Female, Worker.

1995. *Aphaenogaster (Attomyrma) smythiesii* Bolton, B., *A New General Catalogue of the Ants of the World.* : 73.

Material examined: Worker - 8 exs, Kohima Fort (L.B. Garden, stem of garden), 22.9.1994; 12 exs, Kohima (Forest), 23.9.1994; 20 exs, Kohima (rest house), 20.9.1994; 4 exs, Mokokchung (Fazl Ali College campus under grass), 26.9.1994; 10 exs, Mokokchung (Munkong forest), 27.9.1994, P. H. Roy Coll. (Regd. No. 12862/H3, 12863/H3, 12864/H3, 12865/H3, 12866/H3).

Diagnostic Characters: Worker: Length - 4.5 - 5.5 mm. Dark castaneous brown to piceous black, smooth polished and shining. Head without the mandibles rectangular, the posterior lateral angles rounded. Mandibles triangular, striate at base, the masticatory margin dentate at apex, dentate above. Antennae 12 jointed, scape extending well beyond the top of the head, club of the flagellum formed of the apical four joints, 2-7 of joints flagellum only a little longer than broad. Alitrunk - pronotum convex, pro-mesonotal suture emarginate at the meso-metanotal suture, which is deeply marked, *pro* and mesonotum not forming a continuous convexity, *pro*-mesonotal suture distinct, anterior margin of mesonotum behind the suture raised into a crest or ridge, metanotum rounded from side to side and a little

convex longitudinally, the metanotal spines broad at base, short and acute. Petiole with 1st node obliquely sloped posteriorly, rounded above, 2nd node longer than broad. Abdomen broadly oval.

Distribution : **India**: Meghalaya, N.W. Himalayas.

Remarks: Reported for the first time from Nagaland State.

Key to the species of Genus *Monomorium*

1. Head more or less rugulose, opaque*indicum*
- Head not rugulose and opaque, but more or less smooth and shining*latinode*

Genus *Monomorium* Mayr, 1855

Monomorium indicum indicum Forel, 1902

Original Combination - *Monomorium salomonis r. indicum* Forel, 1902.

1902. *Monomorium salomonis* Linn. race *indicum* Forel, *Rev. Suisse Zool.*, **10**: 213.

1903. *Monomorium indicum* Bingham, *Fauna Brit. India, Hym.*, **2**: 205-206, Male, Female, Worker.

1995. *Monomorium (Xeromyrmex) salomonis indicum* Bolton, B., *A New General Catalogue of the Ants of the World* : 263.

Material examined: Workers - 10 exs, Dimapur (Rangapahar reserve forest), 1.10.1994, P.H. Roy Coll. (Regd. No. 12867/H3).

Diagnostic Characters : Length worker : 3-3.5 mm.

Worker : Ferruginous red with abdomen dark brown. Head opaque almost as broad as long, broader anteriorly than posteriorly. Mandibles narrow with three to four teeth, when closed partially concealed under the projecting margin of the clypeus. Antennae moderately long, the scape not quite reaching the posterior margin of the clypeus. Alitrunk anteriorly rounded moderately broad, the meso-metanotal suture distinct, the basal portion of the metanotum broadening posteriorly, Petiole - Seen from above 2nd node broader than 1st, nodes subequal. The rounded 1st node higher than the 2nd node and petiolate anteriorly. Abdomen oval.

Distribution : **India:** Uttarakhand, Rajasthan, Gujarat, Maharashtra, Chandigarh, Karnataka, Punjab, West Bengal, Andhra Pradesh, Tamil Nadu. *Elsewhere:* Myanmar, All tropical countries (Europe)

Remarks: Reported for the first time from Nagaland state.

Monomorium latinode Mayr, 1872

Original Combination – *Monomorium latinode* Mayr, 1872.

1872. *Monomorium (Monomorium) latinode* Mayr, *Ann. Mus. Civ. Stoc. Nat. Genova*, 2: 152, (Worker).

1903. *Monomorium (Monomorium) latinode* Bingham, *Fauna Brit. India, Hym.*, 2: 211-212.

Material examined: Workers – 1 exs, Mokokchung (Tsumarshong), 28.9.1994 ; 10 exs, Kohima (Jotsama basti), 23.9.1994, P.H. Roy Coll. (Regd. No. 12868/H3, 12869/H3).

Diagnostic Characters : Length Worker – 3 – 3.7 mm.

Worker : Light castaneous brown, mandibles, antennae smooth, polished and shining. Head longer than broad, mandibles smooth armed with four teeth. Antennae 12 jointed, moderately long, scape nearly reaching the top of the head. Alitrunk elongate, pro-mesonotum convex, broad nearly as broad as head, emarginate at the mesonotal suture. Petiole 1st petiolate in front, a little higher than the 2nd node which is very much broader than the 1st. Abdomen long oval.

Distribution : **India :** Rajasthan, Tamil Nadu, W. Bengal (Kolkata), Orissa, Manipur. *Elsewhere :* Sri-Lanka, Myanmar extending to Borneo, Formosa, Oceania.

Remarks: Reported for the first time from Nagaland state.

Genus ***Pheidole*** Westwood, 1839

Pheidole smythiesii Forel, 1902

Original Combination – *Pheidole (Ceratopheidole) smythiesii* Forel, 1902

1902. *Pheidole smythiesii* Forel, *Rev. Suisse Zool.*, X: 165 & 185, (Worker, Female, Male); id *J. Bombay nat. Hist. Soc.* xiv (1902): 523 & 538.

1903. *Pheidole smythiesii* Bingham, *Fauna Brit. India, Hym.*, 2: 227-228. Male, Female, Worker.

1995. *Pheidole (Ceratopheidole) smythiesii* Bolton, B., *A New General Catalogue of the Ants of the World.* : 330

Material examined: Workers – 5 exs, Mokokchung (Munkong forest rest house), 25.9.1994; 6 soldier, 7 female, Kohima (Jotsama basti), 23.9.1994, P. H. Roy Coll. (Regd. No. 12870/H3, 12871/H3).

Diagnostic Characters : Length worker – Soldier – 6 8.5 mm. Worker –

Clear light or reddish chestnut, brown all over, slightly shining covered with abundant reddish-yellow erect hairs. Head enormously large, much broader than long, posteriorly deeply emarginate. Mandibles punctured and sparsely striate, the masticatory margin acutely pointed at apex, without distinct teeth. Antennae short, the scape from its insertion reaching barely halfway to the top of the head, the apical four joints subequal. Alitrunk elongate, meso-metanotal suture distinct, metanotum with the basal portion sloping and ending posteriorly in a spine or tooth. Petiole 2nd node oval longer than broad. Abdomen broadly oval.

Distribution : **India :** Chandigarh, Meghalaya, Assam. *Elsewhere :* Vietnam.

Remarks: Reported for the first time from Nagaland state.

Key to the species of Genus *Tetramorium*

- (1) Antenna 12 jointed. *christiei*
- Antenna 11 jointed. *tortuosum*

Genus ***Tetramorium*** Mayr, 1855

Tetramorium christiei Forel, 1902

Original Combination – *Tetramorium christiei* Forel, 1902.

1902. *Tetramorium christiei* Forel, *Rev. Suisse Zool.*, X: 232.

1903. *Tetramorium christiei*, Bingham, *Fauna Brit. India, Hym.*, 2: 178.

1995. *Tetramorium christiei*, Bolton, B., *A New General Catalogue of the Ants of the World.* : 406.

Material examined: Workers – 6 exs,

Mokokchung (Munkong Reserve forest), 27.9.1994; P. H. Roy Coll. (Regd. No. 12872/H3).

Diagnostic Characters: Worker:- 3 mm. Dark brown or black, mandibles, antennae, alitrunk reddish brown. and petiole brownish yellow. Head without the mandibles, seen from front rectangular, posteriorly longer than broad. Mandibles longitudinally striate, triangular the masticatory margin dentate. Clypeus not carinate. Antennae 12 jointed, slender the scape barely extending beyond the top of the head. Alitrunk elongate and narrow, convex, without an emargination above, the pro-mesonotal suture obsolete, meso-metanotal suture slightly impressed, basal portion of the metanotum short, metanotal spines very short, barely a quarter of the length of the space between their bases. Petiole elongate the nodes rounded slightly longer than broad, first node of petiole distinctly longer than broad, the 2nd node a little broader than the 1st, this latter with a long petiole in front. Abdomen oval, convex, somewhat truncate anteriorly.

Distribution : **India :** Chandigarh, Punjab, Haryana, Himachal Pradesh, Uttar Pradesh, Meghalaya, Sikkim, West Bengal.

Remarks: Reported for the first time from Nagaland State.

Tetramorium tortuosum Roger, 1863

Original Combination - *Tetramorium tortuosum* Roger, 1863

1863. *Tetramorium tortuosum* Roger, *Berlin. ent. Zeit.* VII: 181.

1903. *Tetramorium tortuosum* Bingham, *Fauna Brit. India, Hym.*, 2: 188.

1977. *Tetramorium tortuosum* Bolton, B., *The ant tribe Tetramoriini* (Hymenoptera : Formicidae). The genus *Tetramorium* Mayr in the Oriental and Indo-Australian regions, and in Australia. *Bull.Br.Mus.(Nat. Hist.) Entomol.* 36: 83.

Material examined: Workers - 4 exs, Dimapur (Rangapahar reserve forest), 1.10.1994, P.H. Roy Coll. (Regd. No. 12873/H3).

Diagnostic Characters: Length worker - 3 - 3.5 mm. Chestnut red. Head without the mandibles elongate, trapezoidal, posteriorly broader than in front. Mandibles longitudinally striate, triangular the masticatory margin

comparatively broad, dentate. Antennal carinae produced posteriorly almost to the top of the head. Antennae 12 jointed, stout and long, the scape extending up to the top of the head. Alitrunk elongate, broad anteriorly, pronotum in front arched, meso and metanotum narrowing posteriorly, the sutures almost obsolete, the spines on the posterior lateral angles of basal portion of metanotum slender, acute, pointing divergently backwards. Petiole the 1st node longer than broad, petiolate in front, the 2nd node transverse broader long. Abdomen oval.

Distribution : **India :** Western India, Karnataka. *Elsewhere :* Sri Lanka, Philippines.

Remarks: Reported for the first time from Nagaland State.

Key to the genera of sub-family FORMICINAE

1. Antenna 11 jointed.....2
- Antenna 12 jointed.....3
2. Length over 2 mm. Scape of antennae extending beyond top of head by less than half its length.....*Anoplolepis*
- Length under 2 mm. Scape of antennae barely extending beyond the top of head*Plagiolepis*
3. Maxillary palpi 5 jointed.....*Oecophylla*
- Maxillary palpi 6 jointed..... 4
4. Antennae inserted at a perceptible distance from posterior margin of clypeus*Camponotus*
- Antennae inserted immediately above posterior margin of clypeus, almost touching it..... 5
5. Antennal and clypeal hollows not confluent, distinct. Ocelli absent.*Paratrechina*
- Antennal and clypeal hollows confluent, distinct. Ocelli present.....*Formica*

Genus *Anoplolepis* Santschi, 1914

Anoplolepis gracilipes (Smith, F., 1857)

Anoplolepis longipes (Jerdon, 1851)
(Junior synonym of *gracilipes*)

Original Combination - *Formica longipes* Jerdon, 1851

1851. *Anoplolepis longipes* Jerdon, *Madras Jour. Lit. Sc.*, 17: 122, (Worker) (*Formica longipes*).

1903. *Plagiolepis longipes* Bingham, *Fauna Brit. India, Hym.*, 2: 320-321.

1995. *Anoplolepis longipes* Bolton, B., *A New General Catalogue of the Ants of the World* : 67.

Material examined: Workers - 1 ex, Mokokchung (Munkong forest), 27.9.1994, P.H. Roy Coll. (Regd. No. 12852/H3).

Diagnostic Characters: Worker: 3.5 - 4.5 mm
In colour from honey yellow to a light orange yellow, antennae, legs a lighter shade, abdomen with a tinge of brown. Alitrunk and abdomen shining with a few scattered erect yellow hairs. Head oval, very roundly posteriorly. Mandibles narrow, acutely dentate along the masticatory margin with the apices crossing and folded beneath the margin of the clypeus. Maxillary palpi 6 jointed. Antennae 12 jointed, the joints of the flagellum much longer than broad. Alitrunk narrow, elongate constricted at the metanotum, meso-metanotal suture slightly emarginate, the metanotum rounded, convex and gibbous. Node of the petiole thick, low, conical, rounded above. Abdomen broadly oval, short and massive oval.

Distribution : **India** : Maharashtra, Central India, Tripura, Punjab, Kerala, E Himalayas, Karnataka, West Bengal, Meghalaya, Sikkim, Andaman & Nicobar Islands. *Elsewhere* : Dutch New Guinea; Maffin bay.

Remarks: Reported for the first time from Nagaland state.

Genus *Plagiolepis* Mayr, 1861

Plagiolepis dichroa Forel, 1902

Original Combination - *Plagiolepis dichroa* Forel, 1902

1902. *Plagiolepis dichroa* Forel, *Rev. Suisse Zool.*, 10 : 235, footnote, (Worker).

1903. *Plagiolepis dichroa* Bingham, *Fauna Brit. India, Hym.*, 2: 323.

1995. *Plagiolepis longipes* Bolton, B., *A New General Catalogue of the Ants of the World*, : 335.

Material examined: Workers - 7 exs, Mokokchung (Tsumarshong), 28.9.1994, P.H. Roy Coll. (Regd. No. 12853/H3).

Diagnostic Characters: Worker: 2 mm. From pale dull brownish yellow abdomen with a tinge of brown. Head, alitrunk and abdomen smooth, not punctured. Head shading to light or sometimes to dark brown. Head without the mandibles nearly square, broader posteriorly and proportionately more narrowed anteriorly. Mandibles narrow, acutely dentate along the masticatory margin. Maxillary palpi 6 jointed. Antennae 12 jointed, slender the scape barely extending beyond the top of the head. Alitrunk the meso-metanotal emargination distinct, the metanotum about as broad as the pronotum, its basal portion very short, much shorter than its oblique portion, convex and gibbous. Node of the petiole, low, somewhat thick at base, rounded above. Abdomen broadly oval, gibbous anteriorly.

Distribution : **India**: Meghalaya, Sikkim, West Bengal (Barrackpore), Karnataka.

Remarks: Reported for the first time from Nagaland state.

Genus *Oecophylla* Smith, 1860

Oecophylla smaragdina smaragdina (Fabricius, 1775)

Original Combination - *Formica smaragdina* Fabricius, 1775

1775. *Oecophylla smaragdina* Fabricius, *Syst. Ent.*, : 828, Worker.

1806. *Oecophylla smaragdina* Smith, *J. Proc. Linn. Soc. Lond. Zool.*, 4 (Suppl.): 102.

1903. *Oecophylla smaragdina* Bingham, *Fauna Brit. India, Hym.*, 2: 311, Male, Female, Worker.

1951. *Oecophylla smaragdina*, Chapman and Capco, *Monogr. Inst. Sci. Tech., Manila (Check List Ants Asia)*, 1: 220.

1995. *Oecophylla smaragdina* Bolton, B., *A New General Catalogue of the Ants of the World* : 298.

Material examined: Workers: 8 exs, Dimapur (Forest training school), 3.10.1994; P.H. Roy Coll. (Regd. No. 12851/H3).

Diagnostic Characters: Worker: Length of Worker Maj. 9.5- 11 mm. Worker Min. 7- 8 mm. Rusty red in colour. Head of Maj. and Min.

relatively the same size, roundly quadrangular, posteriorly not emarginated and slightly broader than in front. Mandibles long with masticatory margin very broad in proportion to length, dentate and the apical tooth acute and curved. The clypeus strongly convex about two third as high as broad and its anterior margin strongly arched. Antennae 12 jointed, originating from the anterior margin of the clypeus. Alitrunk elongated. The pronotum convex, anteriorly narrowed into a collar, mesonotum constricted, narrow, saddle shaped and metanotum rounded above and gibbous. Petiole elongated, incrassate in the middle scarcely nodiform. Abdomen short and oval.

Distribution : **India:** Andaman, Assam, Gujarat, Karnataka, Kerala, Maharashtra, Meghalaya, North- West Himalayas, Orissa, Punjab, Rajasthan, Sikkim, Tamil Nadu, Uttarakhand (Dehradun), Uttar Pradesh, West Bengal, Chandigarh. *Elsewhere:* Australia, Java, Malaysia, Myanmar, New Guinea, South China, Sri Lanka, Philippines.

Remarks: Reported for the first time from Nagaland state.

Key to the species of *Camponotus*

1. Thorax viewed from side from side forming a regular arch. *invidus*
- Regular arch of the thorax interrupted at the meso-metanotal suture by the metanotum forming an angle with the mesonotum, basal portion of metanotum horizontal, flat or slightly concave, apical portion excavate *sericeus*

Genus *Camponotus* Mayr, 1861

Camponotus (Tanaemyrmex) invidus

Forel, 1892

Original Combination – *Camponotus invidus* Forel, 1892

1892. *Camponotus (Tanacmyrmex) invidus* Forel, J. *Bombay nat. Hist. Soc.*, 7 : 225 & 234, fig. 2, Worker, Soldier.

1903. *Camponotus (Tanaemyrmex) invidus* Bingham, *Fauna Brit. India, Hym.*, 2: 367.

1995. *Camponotus (Tanaemyrmex) invidus* Bolton, B., A *New General Catalogue of the Ants of the World*: 105.

Material examined: Workers: 3 exs, Mokokchung (Tsumarshong), 28.9.1994, P.H. Roy Coll. (Regd. No. 12843/H3).

Diagnostic Characters: Length worker – 5 – 6 mm.

Worker : Head, alitrunk and abdomen entirely pale yellow with sparse erect yellowish pubescent. Head more or less elongate, sides of the head straight not convex. Mandibles with 6 teeth; clypeus comparatively broad. Antennae 12 segmented, comparatively long and thick. Alitrunk convex anteriorly, strongly laterally compressed posteriorly, with the pro-meso and metanotum more strongly curved. Legs stout, tibia cylindrical. Petiole one jointed, node low, convex in front, flat posteriorly, abdomen comparatively long and massive.

Distribution : **India:** Uttarakhand, Rajasthan, Orissa, Himachal Pradesh, Sikkim, West Bengal, Delhi, Uttar Pradesh, Andaman & Nicobar Islands.

Remarks: Reported for the first time from Nagaland State.

Camponotus (Orthonotomyrmex) sericeus sericeus (Fabricius, 1798)

Original Combination – *Formica sericea* Fabricius, 1798

1798. *Camponotus (Orthonotomyrmex) sericeus* Fabricius, *Ent. Syst. Suppl.*, 279, Worker (*Formica*).

1903. *Camponotus (Orthonotomyrmex) sericeus* Bingham, *Fauna Brit. India, Hym.*, 2: 376-377.

Material examined: Workers : 12 exs., Dimapur (Rangapahar reserve forest), 1.10.1994, P.H. Roy Coll. (Regd. No. 12844/H3).

Diagnostic characters : Length worker maj. 10 mm.

Worker : Black with the head blood red in colour Abdomen with a dense silky golden pubescence hiding the sculpture. Head very broad, emarginate posteriorly, mandibles with 5 teeth. The anterior border of clypeus emarginate in the middle. Alitrunk broad in front, strongly

compressed posteriorly, emarginate at the meso-metanotal suture, the basal face of the metanotum horizontal, flat the sides margined posterior face excavate. Tibia of legs spinous beneath. Node of petiole rounded knob like. Abdomen very broad, globose.

Distribution : **India**: Uttarakhand, Rajasthan, Gujarat, Maharashtra, Chandigarh, Karnataka, Tamil Nadu, West Bengal, Meghalaya, Punjab, Orissa, Manipur, Delhi.

Elsewhere: Myanmar, Sri Lanka, Africa, Arabia, Egypt, Indo-China, Senegal.

Remarks: Reported for the first time from Nagaland state

Key to the species of *Paratrechina*

1. Scape of antennae extending beyond top of head by less than half its length.....*longicornis*
 - Scape of antennae remarkably long, extending beyond top of head by more than half its length.....2
2. Head oval, narrowed posteriorly.....*taylori*
 - Head more or less quadrangular, broad posteriorly.....*aseta*

Genus *Paratrechina* Motschoulsky, 1863

Paratrechina longicornis longicornis (Latreille, 1802)

Original Combination - *Formica longicornis*, 1802

1802. *Prenolepis longicornis* Latreille, *Hist. Nat. Fourmis*, pp. 113, (*Formica longicornis*), Worker.

1894. *Prenolepis longicornis* Forel, *J. Bombay. nat. Hist. Soc.*, 8: pp. 406 & 407, (Worker, Male).

1903. *Prenolepis longicornis* Bingham, *Fauna Brit. India, Hym.*, 2: 326-327. (Worker, Female, Male).

Material examined: Workers - 10exs., Dimapur (Forest Colony under log), 3.10.1994; 4 exs, Mokokchung (Tsumarshong), 28.9.1994, 3 exs, Kohima (Jalsana basti), 23.9.1994, P. H. Roy Coll. (Regd.No. 12845/H3, 12846/H3, 12847/H3).

Diagnostic characters : Length: Worker - 2.5 - 3 mm. Dull coppery brown in colour, with fairly abundant, long, erect, somewhat coarse hairs. Head oval as broad in front as posteriorly. Mandible small with 5-6 teeth. Antennae 12

jointed, scape of antennae remarkably long, extending beyond the top of the head by more than half its length. Alitrunk elongate, rounded above viewed from side lightly emarginate at the mesonotum, not constricted at the mesometanotal suture. Node of the petiole not so broad as high. Abdomen anteriorly gibbous oval and massive.

Distribution : **India**: Uttarakhand, Rajasthan, Western India, Maharashtra, Orissa, West Bengal, Uttar Pradesh, Tamil Nadu, Lakshadweep, Manipur, Andaman & Nicobar Islands, Karnataka, Meghalaya, Tripura, N.W. India. *Elsewhere*: Srilanka, Senegal, Oceania, Australia, New Caledonia, All tropical countries (Europe).

Remarks: Reported for the first time from Nagaland State.

Paratrechina taylori taylori (Forel, 1894)

Original Combination - *Paratrechina taylori* Forel, 1894

1894. *Prenolepis taylori* Forel, *J. Bombay. nat. Hist. Soc.*, 8: 407, (Worker, Female, Male).

1903. *Prenolepis taylori* Bingham, *Fauna Brit. India, Hym.*, 2: 328, (Worker, Female, Male).

1995. *Paratrechina taylori* Bolton, B., *A New General Catalogue of the Ants of the World*: 315.

Material examined: Workers - 3exs, Mokokchung (Tsumarshong), 28.9.1994, P.H. Roy Coll. (Regd.No. 12848/H3).

Diagnostic characters : **Length** Worker : 1.5 - 2 mm. Pale yellow in colour, body covered with scattered, short semi-erect, pale hairs. Head oval longer than broad, very convex in front. Mandibles narrow, the masticatory margin oblique. Antennae 12 jointed, scape of antennae remarkably long, extending beyond the top of the head by more than half its length. Alitrunk elongate, the pro-meso- and meso-metanotal sutures distinct, mesonotum not constricted. Node of the petiole low, inclined forward, flat, rounded above. Abdomen massive, convex above, gibbous in front.

Distribution : **India** : West Bengal, Orissa, Western India. *Elsewhere* :- Sri Lanka.

Remarks: Reported for the first time from Nagaland state.

***Paratrechina aseta* (Forel, 1902)**

Original Combination – *Prenolepis aseta* Forel, 1902

1902. *Prenolepis aseta* Forel, *Ann. Soc. Ent. Belg.*, **46** : 292, (Worker).

1903. *Prenolepis aseta* Forel, *Fauna Brit. India, Hym.*, **2** (1903) : 335, (Worker)

1995. *Paratrechina aseta* Bolton, B., *A New General Catalogue of the Ants of the World* : 312.

Material examined: Workers – 8 exs, Kohima (Jalsana basti), 23.9.1994, P.H. Roy Coll. (Regd. No. 12849/H3).

Diagnostic characters : **Length**: Worker : 1.5 – 2 mm. Brownish, alitrunk reddish yellow. Head rectangular the sides straight, a little longer than broad, posteriorly, slightly emarginated. Mandibles narrow, armed with 6 teeth. Antennae 12 jointed, scape of antennae passing extending beyond the top of the head about one fourth of its length. Alitrunk the pro-meso- and meso-metanotal sutures distinct but feeble, the meso-metanotal suture slightly emarginate, metanotum raised a little. Node of the petiole somewhat quadrangular, inclined forwards. Abdomen broad anteriorly.

Distribution : **India** : Sikkim, West Bengal, Gujarat.

Remarks: Reported for the first time from Nagaland state.

Genus *Formica* Linnaeus, 1758

***Formica rufibarbis rufibarbis* Fabricius, 1793**

Original Combination – *Formica rufibarbis* Fabricius, 1793

1793. *Formica rufibarbis* Fabricius, *Ent. Syn.*, **2** : 355, (Worker),

1903. *Formica rufibarbis* Bingham *Fauna Brit. India, Hym.*, **2** : 335.

Material examined: Workers – 2exs, Kohima (Jotsama village), 23.9.1994, P.H. Roy Coll. (Regd. No. 12850/H3).

Diagnostic characters: Length–Worker–5–6 mm.

Head, alitrunk, mandibles, antennae and abdomen yellowish red, abdomen fuscous

brown. Mandibles broad with the minute teeth on the masticatory margin. Alitrunk the constriction at the meso-metanotal suture deep, the metanotum viewed from side regularly arched. Antennae 12 jointed, scape of antennae passing beyond the top of the head about one fourth of its length. Node of the petiole flat or a little convex, both anteriorly and posteriorly. Abdomen broad.

Distribution : **India** : Sikkim, Himachal Pradesh. *Elsewhere* : Europe, Northern America, France, China.

Remarks: Reported for the first time from Nagaland State.

Sub-family Ponerinae Lepeletier

Key to the species of Genus *Pachycondyla*

1. Posterior margin of node of petiole armed with a number of blunt processes.....*rufipes*
- Node of petiole simple, unarmed.....2
2. Meso-metanotal suture well marked*melanaria*
- Meso-metanotal suture obsolete*sulcata*

Genus *Pachycondyla* Smith, 1858

***Pachycondyla rufipes rufipes* (Jerdon, 1851)**

Original Combination – *Ponera rufipes* Jerdon, 1851

1851. *Ponera rufipes* Jerdon, *Madras J. Lit. Sci.*, **17**: 119, Worker.

1858. *Pachycondyla rufipes*, Smith, *Cat. Hym. Brit. Mus.*, **4**:106.

1903. *Bothroponera rufipes*, Bingham, *Fauna Brit. India, Hym.*, **2**: 96-97, Worker.

1911. *Pachycondyla (bothroponera) rufipes*, Emery, *Genera Insect*, **118**: 76-77.

1951. *Bothroponera rufipes*, Chapman and Capco, *Monogr. Inst. Sci. Tech., Manila (Check List Ants Asia)*, **1**: 50.

1994. *Bothroponera rufipes*, Tiwari et al., *State Fauna Series 3: Fauna of West Bengal*, **8**: 21.

1995. *Pachycondyla rufipes*, Bolton, B., *A New General Catalogue of the Ants of the World* : 309.

Material examined:

Workers : 6 exs, Mokokchung (Minkong forest- rotten tree) , 27.9.1994; 1 ex., Kohima

(forest), 22.9.94, P.H. Roy Coll. (Regd. No. 12836/H3, 12837/H3).

Diagnostic Characters : Worker: length 13- 15 mm. Dull black, mandibles, antennae and legs castaneous red, the apical two or three abdominal segment bright ferruginous. The whole insect covered with an abundant pale reddish yellow pilosity. Mandibles longitudinally striate without distinct teeth. Eyes small. Antennae 12 jointed, scape of antennae reaching to posterior margin of head, club thick at apex. Alitrunk rounded above, metanotum unarmed, the apical truncated face of metanotum smooth and shining and strongly margined on the sides and above. The node of pedicel about twice as broad as long, convex and rounded above, posteriorly concave, smooth and shining, spinous processes on the posterior margin above irregular. Abdomen very massive, constriction between the basal two segments distinct, sting powerful and exerted, claws simple.

Distribution : **India**: Andaman & Nicobar Islands, Assam, Karnataka, Kerala, Maharashtra, Meghalaya, Orissa, Sikkim, Tripura, Western India (from Kanara to Malabar), West Bengal. *Elsewhere*: Myanmar, Sri Lanka, Vietnam.

Remarks: Reported for the first time from Nagaland State.

Pachycondyla melanaria melanaria
(Emery, 1893)

Original Combination - *Ponera melanaria* Emery, 1893

1893. *Euponera (Mesoponera) melanaria* Emery, *Ann. Soc. Ent. Fr.*: 260, (Worker) (*Ponera*).

1903. *Mesoponera melanaria* Bingham, *Fauna Brit. India, Hym.*, 2: 100, Worker.

Material examined: Workers : 4 exs, Kohima (forest), 22.9.94; 6 exs, Dimapur (Chumuksdina), 3.10.1994, P.H. Roy Coll. (Regd. No. 12839/H3, 12840/H3).

Diagnostic Characters : Worker: Length 7.5-8.5 mm. Dark, castaneous brown, smooth and shining, mandibles, antennae and legs much lighter, pilosity almost wanting. Head without the mandibles rectangular, longer than broader,

the posterior lateral angle rounded not prominent, broad posteriorly in front. Mandibles strong, triangular, masticatory margin of mandible very long. Posterior margin of clypeus defined by a suture. Antennae 12 jointed, scape reaching to the posterior margin of head. The pronotum of the alitrunk, broad and convex. The mesonotum prominent, more or less gibbous. The pro-meso and meso-metanotal sutures well marked. The metanotum more or less acute along its basal portion above, the obliquely truncate posteriorly viewed from the back the apical face is subtriangular. Petiole one jointed, node very convex in front, flat, almost concave posteriorly, not so broad at the apex as at base. Gaster with powerful and exerted sting, claws simple.

Distribution : **India**: Karnataka, Kerala. *Elsewhere*: Myanmar, Singapore, Sri Lanka, Sumatra.

Remarks: Reported for the first time from Nagaland state.

Pachycondyla sulcata sulcata (Mayr, 1867)

Original Combination - *Ponera sulcata* Mayr, 1867

1867. *Bothroponera sulcata* Frauenfeldi, *Verh. zool.-bot. Ges. Wien*, 17 (1867): 441, (Worker) (*Ponera*).

1903. *Bothroponera sulcata*, Bingham, *Fauna Brit. India, Hym.*, 2: 98-99, Worker.

1995. *Pachycondyla sulcata* Bolton, B., *A New General Catalogue of the Ants of the World*: 310.

Material examined: Workers : 2 exs, Mokochung (Minkong forest), 27.9.1994, P.H. Roy Coll. (Regd. No. 12838/H3).

Diagnostic Characters: Worker: length 8 - 11.5 mm. Dull black, mandibles, antennae and legs castaneous red, alitrunk and abdominal with a dense pubescence.. Mandibles triangular, masticatory margin with 7-8 teeth. Eyes small. Antennae 12 jointed, 1st joint of flagellum of antennae distinctly longer than 2nd. Alitrunk convex, rounded above as the head, narrowing towards the apex which is truncate. Node of petiole thick, about as long as broad, comparatively flat and truncate anteriorly and

posteriorly. Abdomen very massive and cylindrical.

Distribution : **India** : Maharashtra, Western India, Andhra-Pradesh, Tamil-Nadu, W.Bengal, Orissa, Central India, N.W. Provinces.

Remarks : Reported for the first time from Nagaland state.

Sub-family DOLICHODERINAE Forel

Genus *Tapinoma* Forster, 1850

Tapinoma melanocephalum melanocephalum
(Fabricius, 1793)

Original Combination - *Formica melanocephala*, 1793

1793. *Tapinoma (Micromyrma) melanocephalum* Fabricius,
Ent. Syst., **2**: 353, (*Formica melanocephala*).

1903. *Tapinoma (Micromyrma) melanocephalum* Bingham,
Fauna Brit. India, Hym., **2**: 304.

Material examined: Workers: 12 exs, Dimapur (Chumuksdina), 3.10.1994; 5 exs, Dimapur (Rest house complex), 31.10.1994, P.H. Roy Coll. (Regd. No. 12841/H3, 12842/H3).

Diagnostic characters : Length worker : 1.5 mm.

Worker : Head and thorax dark brown in colour abdomen yellowish white. Head longer than broad. Oval, not emarginate, rounded posteriorly. Mandibles triangular broad with the masticatory margin equal to the outer margin and armed with minute teeth. Clypeus evenly convex, broader than high, its anterior margin slightly arched. Antennae thick the scape extending beyond the top of the head. The joints of the flagellum longer than broad. Alitrunk viewed from the side not emarginate, the pro-meso and

meso-metanotal sutures distinct slightly constricted at the latter suture. Petiole with a distinct node. Base of the abdomen overhanging the pedicel.

Distribution : **India**: Uttarakhand, Rajasthan, Gujarat, Maharashtra, Meghalaya, Tripura, Chandigarh, Karnataka, Tamil-Nadu, West Bengal, Orissa, Lakshadweep, Andaman & Nicobar Islands. *Elsewhere*: Spread through both the hemispheres, S. America, French Guiana.

Remarks: Reported for the first time from Nagaland state.

SUMMARY

The manuscript deals with 24 species distributed under 15 genera of the family Formicidae comprising four subfamilies namely Ponerinae with 1 genera, and 3 species, Dolichoderinae with 1 genera, and 1 species, Formicinae with 5 genera and 9 species, Myrmicinae with 8 genera and 11 species. All the 24 species and 15 genera are new records from Nagaland state.

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