Taxonomic Studies on Ants of Southern India
(Insecta: Hymenoptera: Formicidae)

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Edited by the Director, Zoological Survey of India
CITATION

ISBN 81-85874-09-3

Published : July, 1999

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PRICE
Indian Rs. 250.00
Foreign $ (U.S.) 15.00 £ 10.00

Published at the Publication Division by the Director, Zoological Survey of India, 234/4, AJC Bose Road, 2nd MSO Building, (13th Floor), Nizam Palace, Calcutta-700 020 after laser typesetting by Calcutta Laser Graphics Pvt. Ltd., Calcutta-700 006 and printed by the Manager, Government of India Press (PLU), Faridabad (Haryana).
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INTRODUCTION

Ants are very highly developed social animal and have got a specialised colonial habit with marked degree of division of labour amongsts its various constituent casts. They are the premier soil turner, channelers of energy, dominatories of the insect world and represent the culmination of insect evolution in the same sense that human beings represent the sumit of vertebrate evolution. even then, this tiny creature has remained totally neglected by the biologist.

About one-third of entire animal biomass of Amazonian rain forest is composed of ants and termites. These two kinds of insects along with wasps and bees, cover 75% of the total insect biomass (Holldobler and Wilson, 1990).

While density of ants is so much so, in the insect biomass, it is the prime duty of a Myrmecologist to assess the distribution of ants in its own continent. Southern India being the peninsular part of the country, carries more importance because of possession of tropical forests which provide the suitable environment for the growth of insect fauna. The present work is an endeavour by the author to contribute to the knowledge of ant fauna of Southern India.

Jerdon (1851) worked on Indian ants particularly from Southern India and recorded 46 species under 8 genera from this region: of these, 39 species were new to science. Later on, Rothneyi (1889), Forel (1900), Donisthorpe (1942, 1943) contributed much to the ant fauna of Southern India. Prior to this, Bingham (1903) published his valuable work on the Ant Fauna of British India, including Burma and Ceylon and gave detailed account of distribution of the species recorded.

Successive workers like Forel (1900a, 1900b, 1900c), Mukherjee (1927), Karawajew (1926, 1927, 1928), Wheeler (1927, 1928), Menozzi (1935), Donisthorpe (1942a, 1942b, 1942c, 1943), Smith (1948), Brown Jr. (1954, 1957, 1959a), Wilson (1964), Taylor (1965, 1966, 1968), Collingwood (1970), Bolton (1977), Baroni Urbani (1977a, 1977b), Tiwari et al. (1977a, 1977b, 1977c, 1986a, 1986b, 1994a, 1994b, 1996, 1997) and Imai et al. (1984) have made valuable contributions to the ant fauna of India, but no one has exclusively studied the ant fauna of Southern India. There have been some records of ants from various parts of Southern India in scattered form. This is the first attempt by the present author to consolidate the ant fauna of Southern India.

The present work is based on a collection of ants from Tamil Nadu, a part of Kerala (coll. O.B. Chhotani, and R. N. Tiwari in Feb.-March, 1969), Andhra Pradesh (coll. J. N. Maligi in 1962 and N. M. Antony in 1969). Besides this the species recorded from Southern India, lying in National Zoological Collection of this department (Zoological Survey of India), have also been incorporated. The entire material studied under this project, have been deposited in the collection of Zoological Survey of India, Calcutta.

Altogether 219 species under 48 genera and 7 subfamilies have been reported in this monograph. Out of these, 22 species are reported for the first time from Southern India and 2 species are new records from India. This includes descriptions of Worker and Female of 1 new species along with a new description of Female of 1 known species separately. The taxa marked with single asterisk (*) in “the list of Taxa in Systematic Account” are new records from the states of Southern India and those marked with double asterisks (**) are new records from India.

Key to the subfamilies, genera and species, include only those species which were studied by the author. The species, recorded from literature, have been omitted in “Key to the species” because of insufficient description and non-availability of concerned papers. The separate Table showing the distributional pattern of recorded species zone-wise, along with distributional analysis of the same is also provided to have a glimpse of the distribution of the species at a glance. The mode of arrangement of the species is followed as in
“Fauna of British India”—Bingham (1903). Illustrations given in the text are Fig. 1 after Ettershank (1966) and Figs. 2-6 after Bingham (1903). All measurements given in the text are in μm.

Southern India or the Indian peninsula is bounded by Bay of Bengal in the east, the Arabian sea on the west, the Indian Ocean on the south and Satpura and Vindhya ranges in the north. The farthest point in the south is Kanyakumari, which lies at 8°04′ N latitude and 77°36′ E longitude. The peninsula has Western Ghats on the west, which rising steeply from the narrow costal plains, reach to greater heights of more than 1,200 m above mean sea level in certain parts and to more than 2,000 m in the south in Nilgiris, the Anaimalai and Cardamon Hills, the highest peak being at an altitude of 2,695 m above mean sea level in the Anaimalai Hills. The general slope of the land is towards the east, and such as, the Eastern Ghats are much lower than the mountains on the western side. The Deccan plateau lies at the centre and is generally 300 m high, rising to more than 600 m in Southern Deccan. On the east are wide eastern coastal plains with the high Shevaroy, Javadi and Pachaimalai Hills.

The western coastal plains have numerous short and rapid flowing streams, some forming lagoons, a characteristic feature of the Malabar coast. The easter plains below 16° N, have only one large river of importance, the Kaveri, and a few small ones, the Penner, the Palar and the Vagai. These are also fairly fast flowing as they flow towards the sloping plateau. All these rivers are seasonal and depend entirely on the monsoon rains.

The peninsula has been a stable land-mass since the very ancient times, at least the pre-cambrian and consists of highly metamorphosed rocks like gneisses and schists of the Archaean-system. The deltas in Tamil Nadu and Kerala states are alluvial. The Deccan lavas, some rocks in Tamil Nadu and parts of Coromandel plains have regur soils, while the major portion of the peninsula has red soil found on the Archaean crystalline rocks.

Southern India has a fairly hot climate. The hottest months are April-May, when the maximum temperature varies from 32°C-40°C in different parts. The coldest months are December-January, when the maximum temperature varies from 27°C-30°C. The Malabar coast has fairly uniform temperature during the year varying 28°C-32°C, in Deccan between 30°C-40°C and in the south-east between 29°C-37°C.

Both south-east and south-west monsoons are active in Southern India. The south-west monsoon is more active, giving heavy rains in the Malabar coast and Western Ghats and little in Deccan and eastern coast. The north-east monsoon gives rain in the eastern coastal areas. The average annual rainfall is more than 2,500 mm in Malabar coast and Western Ghats, about 900 mm in Karnataka and south-east Tamil Nadu and about 600 mm in Deccan.

Western Ghats being very wet, have tropical evergreen forests. On the eastern side of these Ghats are found dry deciduous hill forests and some sub-tropical evergreen forests in the Shevaroy Hills.

MORPHOLOGY

Morphologically ants are at once distinguished from other aculeate Hymenoptera by a remarkable modification of the one or two segments of the abdomen immediately following the median segment or propodeum. This modification of the anterior portion of the abdomen consists in the almost complete detachment of one or two segments from the rest of the abdomen to form a highly flexible pedicel composed of one or two nodes. In the majority of the genera of the family Formicidae, the attachment of the pedicel to the median segment in front and to the rest of the abdomen behind is extremely constricted and narrow, giving great freedom of movement to both thorax and abdomen properly. When the pedicel is formed of two segments, a similar constriction lies between the two. In certain low forms of primitive ants like Myrmopone, Amblyopone, etc., the node of pedicel is attached by the whole of its posterior face to the succeeding
segment of the abdomen, showing an approximation to the stiffer and more ponderous form of abdomen possessed by fossorial wasps of the family Scoliidae.

Ants like other social Hymenopterans, such as Honey-bees and wasps, exhibit the maximum degree of social pattern and thus are differentiated into following forms:

1. The female or perfect fertile female — ♀
2. The male — ♂
3. The worker or so called Neuter — ♂

The workers are undeveloped female and are invariably wingless and generally have the thorax more or less modified and different from the thorax of male or female. On shape and size, they are further differentiated into:

(a) Worker minor — ♂ min.
(b) Worker major — ♂ maj.

Further some of the workers are especially modified in their morphology for the purpose of fighting and protecting the colony from external invasion. For this purpose, their mandibles are strong and stout and have got bigger head. They are called Soldiers (♀). They are further differentiated according to the size as follows:

(a) Soldiers minor — ♀ min.
(b) Soldiers major — ♀ maj.

The parts of the head, thorax and abdomen in an ant are homologous with those in other Hymenopterous insects, but are generally modified. The given figures (Figs. 1-4), illustrations of some of the various parts assumed by these, with details of the parts of which they are composed. The lettering in all the figures is alike and refers to the same parts (Bingham, 1903).

TERMINOLOGY

Mouth parts

Mandible : The various parts of mandible are shown in Fig. 1b. The most distal tooth is termed the apical, and the rests are sub-apical teeth; dental formulae are coded in the form “1 + 3”, indicating one apical and three sub-apical.

The basal shaft of the mandible bears several characters of classificatory importance. The mandalus is a small, unpigmented, apparently membranous lacuna which may contain the orifice of the duct from the mandibular gland. In shape, the mandalus may be linear, key-hole shaped or even triangular (Fig. 1b).

Trulleum : Distal to the mandalus is a large, more or less basin shaped depression called Trulleum, bounded laterally and distally by the blade of the mandible and medially by Canthallus (Fig. 1b).

Canthallus : It is a raised ridge running distal from the base of the mandible (Fig. 1b).

Labrum : The labrum (Fig. 2F) is movably articulated below the median area of the clypeus and folds up under the closed mandibles, forming with the exposed plates of the labio-maxillary complex, a tight seal over more delicate mouth parts and buccal opening.

Maxillary and labial palpi : The palpal formula is a valuable character in identification. The old palpal formula is out dated and not in practice (Fig. 2E-F).

A variable amount of fusion between segments which can not be seen in dried material is clear in immersed preparation (Kusnezov, 1954a, 1954b). As this fusion is important for phylogenetic reasoning the palpal formula is coded in a way, that indicates three degree of fusion.

i. Separate segment or s
ii. Partial fusion or p
iii. Complete fusion or c

“4, 3” represents four freely articulated maxillary segments and three freely articulated labial segments.

Body Parts

Thorax : The thorax of ants varies enormously in shape and development of the component parts. The thorax of a worker (♀) differs markedly from the thorax of female (♀) or male (♂) of the same species.

The thorax of ants of different subfamilies, vary greatly in the structures and as such no typical diagram of an ant serves the purpose. However, in order to give different body structures, Solenopsis sp. has been selected as a typical form.
Median meso-ster nal process: It is ventrally and posteriorly directed elaboration of the anterior margin of the mesonotum, its function is unknown.

Sub-petiolar process: It is a structure originating from the ventral surface of the petiole. It consists of 2 ridges, 1) an anterior ventral transverse ridge, and 2) posterior ventral transverse ridge which is actually an elaboration of the posterior sternal margin of the post-petiolar segment.

The post-petiolar articulates by a ball and socket joint with the gaster (or abdomen) the “Ball” of the gaster generally being concealed within the “socket” of the post-petiolar.

SYSTEMATIC ACCOUNT

Formicidae is one of the largest family of order Hymenoptera under the class Insecta and is widely distributed throughout the world, because of its cosmopolition nature. 9538 species of ants under 16 subfamilies, 59 tribes and 296 genera have been reported till date from the world (Holldobler and Wilson, 1990). The most speciose subfamilies are Myrmicinae (4377 species, 155 genera), Formicinae (2458 species, 49 genera), Ponerinae (1299 species, 42 genera), Dolichoderinae (554 species, 22 genera), Pseudomyrmecinae (197 species, 3 genera). Subfamily Myrmicinae represents 45.89% of the species and 52.34% of the genera of the world, whereas Formicinae represents 25.77% of the species and 16.55% of the genera. Similarly Ponerinae represents 13.62% of the species and 14.19% of the genera of the world (Bolton, 1995).

From Oriental region (including Indo-Australian), altogether 227 genera of ants have been reported till date, of these 27 genera are endemic in nature. The number of species described from Oriental region is 2480 (the split number being 771 from Oriental region and 1709 from Indo-Australian region).

Prior to this, Bingham (1903) reported 498 species under 79 genera from India, including Burma and Ceylon. Subsequently, Chapman and Capco (1951) recorded 2280 species, 441 subspecies and 684 varieties of ants spread over 176 genera in their check list from Asian subcontinent.
Fig. 1. a. Head of a typical ant (*Solenopsis* sp., worker) showing various parts; b. Mandible of *Solenopsis* sp., worker; c. Wing venation of fore and hind wings of *Solenopsis* sp., female; d. Body parts of a typical ant (*Solenopsis* sp., worker).
Fig. 2. A-Head of a Dorylinae, worker; B-Head of Ponerinae, female; C-Head of a Ponerinae, male; D-Head of a Camponotinae, worker; E-Mouth parts (Maxilla) of Camponotinae; F-Mouth parts (Labium) of Camponotinae. a, vertex; b, ocelli; c, sides of head; d, frontal area; e, antennal carinae; f, clypeus; g, mandible; h, scape; j, flagellum; k, compound eyes; l, stipes; m, galea; n, palpus (palpi); o, ligula.
Fig. 3. A-Thorax and wings of Ponerinae, worker; B-Thorax and wings of Myrmicinae, female; C-Thorax of Ponerinae, male; D-Thorax and wings of Camponotinae, female; E-Thorax and legs of Ponerinae, worker; F-Thorax and legs of Dolichoderinae, worker; G-Thorax and legs of Dorylinae, worker. a, pro-thorax; b, meso-thorax; c, scutellum; d, median segment; e, pro-pleurae; m, meso-pleurae; p, meta-pleurae; f, trochanters; g, femora; h, tibiae; i, tibial calcaria; k, tarsi.
Fig. 4. A - Abdomen of Dorylinae, worker; B - Abdomen of Ponerinae, worker; C - Abdomen of Dolichoderinae, worker; D (i) & (ii) - Abdomen of Myrmicinae, female; (iii) - Abdomen of Ponerinae, male; (iv) - Abdomen of Componotinae, female; E - Abdomen of Camponotinae, worker.
Fig. 5. a-A representative of subfamily Dorylinae (*Dorylus* sp., worker); b-Head of *Dorylus* sp., worker; c-Winged form of *Dorylus* sp., male; d-Head of winged form of *Dorylus* sp., male; e-A representative of subfamily Cerapachyinae (*Lioponera* sp., worker); f-A representative of subfamily Ponerinae (*Leptogenys* sp., worker); g-Head of *Leptogenys* sp., worker.
Fig. 6. a-A representative of subfamily Pseudomyrmecinae (*Tetraponera* sp., worker); b-Head of *Tetraponera* sp., worker; c-A representative of subfamily Myrmicinae (*Myrmicaria* sp., worker); d-Thorax and petiole of *Myrmicaria* sp., worker; e-A representative of subfamily Formicinae (*Oecophylla* sp., worker); f-Head of *Oecophylla* sp., worker; g-A representative of subfamily Dolichoderinae (*Dolichoderus* sp., worker); h-Head of *Dolichoderus* sp., worker.
LIST OF TAXA INCORPORATED IN SYSTEMATIC ACCOUNT

Family FORMICIDAE
1. Subfamily DORYLINAE Forel
   1. Genus Dorylus Fabricius, 1793
      Subgenus Alaopone Emery, 1881
      *1. Dorylus (Alaopone) orientalis Westwood, 1835

2. Genus Aenictus Shuckard, 1840
   2. Aenictus aratus Forel, 1900
   3. Aenictus brevicornis (Mayr, 1878)
   4. Aenictus fergusoni Forel, 1900
   5. Aenictus pachycerus (Smith, 1858)
   6. Aenictus ceylonicus (Mayr, 1866)
   7. Aenictus arya Forel, 1900
   8. Aenictus clavatus Forel, 1900
   9. Aenictus clavatus var. kanarensis Forel, 1900
   10. Aenictus wroghtoni Forel, 1890
   11. Aenictus gleadowi Forel, 1900

II. Subfamily PONERINAE Lepeletiere
   3. Genus Anochetus Mayr, 1861
      *12. Anochetus sedilloti Emery, 1884
      13. Anochetus mordax Donisthorpe, 1942
      14. Anochetus orientalis kanarensis Forel, 1900
      15. Anochetus punctiventris Mayr, 1878
      16. Anochetus punctiventris taylori Forel, 1900
      17. Anochetus ruginotis Stitz, 1929
      18. Anochetus rufus (Jerdon, 1851)

4. Genus Odontomachus Latreille, 1804
   19. Odontomachus haematodes (Linnaeus, 1758)

5. Genus Harpegnathus Jerdon, 1851
   20. Harpegnathus saltator Jerdon, 1851
   21. Harpegnathus venator (Smith, 1858)

6. Genus Leptogenys Roger, 1861
   Subgenus Lobopelta Mayr, 1862
      *22. Leptogenys (Lobopelta) birmana Forel, 1900
      23. Leptogenys (Lobopelta) ocellifera (Roger, 1861)
      24. Leptogenys (Lobopelta) dentilobis Forel, 1900
      *25. Leptogenys (Lobopelta) diminuta (Smith, 1857)
      26. Leptogenys (Lobopelta) diminuta palisseri Forel, 1900
      27. Leptogenys (Lobopelta) carinata Donisthorpe, 1943
      28. Leptogenys (Lobopelta) roberti coonoorensis Forel, 1900
      29. Leptogenys (Lobopelta) longisquamous Donisthorpe, 1943
      30. Leptogenys (Lobopelta) daliyi Forel, 1900

7. Genus Diacamma Mayr, 1862
   31. Diacamma vagans (Smith, 1860)
   32. Diacamma rugosum ceylonensis Emery, 1897
   33. Diacamma rugosum var. Jerdoni Forel, 1903
   34. Diacamma rugosum var. sculptum (Jerdon, 1851)
   35. Diacamma cyaniventre André, 1887

8. Genus Ectonomymrex Mayr, 1867
   36. Ectonomymrex annamitus (André, 1892)
   37. Ectonomymrex leeuwenhoeki (Forel, 1886)

9. Genus Bothroponera Mayr, 1862
   38. Bothroponera henryi Donisthorpe, 1942
      *39. Bothroponera rubiginosa (Emery, 1889)
      *40. Bothroponera sulcata (Frauenfeld, 1867)
      41. Bothroponera tessarinoda (Mayr, 1877)
      42. Bothroponera rufipes (Jerdon, 1851)

10. Genus Ponera Latreille, 1804
    *43. Ponera truncata Smith, 1860
    44. Ponera confinis Roger, 1860
    45. Ponera stenocheilos Jerdon, 1851
    46. Ponera sulcato-fossulata Forel, 1900
    47. Ponera affinis Jerdon, 1851
11. Genus *Euponera* Forel, 1861
   Subgenus *Trachymesopus* Emery, 1911
58. *Euponera* (Trachymesopus) *darwini* (Forel, 1893)
12. Genus *Cryptopone* Emery, 1893
49. *Cryptopone testacea* (Motschulsky, 1863)
50. *Cryptopone rafostestaceus* Donisthorpe, 1943
13. Genus *Brachyponera* Emery, 1901
51. *Brachyponera jerdoni* (Forel, 1900)
52. *Brachyponera luteipes* (Mayr, 1862)
53. *Brachyponera luteipes* var. *continentalis* Karawajew, 1925
14. Genus *Mesoponera* Emery, 1901
54. *Mesoponera melanaria* Emery, 1893
15. Genus *Platythyrea* Roger, 1863
55. *Platythyrea sagesi* Forel, 1900
56. *Platythyrea wroughtoni* Forel, 1900
57. *Platythyrea wroughtoni* var. *victoriae* Forel, 1900
16. Genus *Amblyopone* Erichson, 1842
58. *Amblyopone belli* Forel, 1900
III. Subfamily CERAPACHYINAE Forel
17. Genus *Lioponera* Mayr, 1878
59. *Lioponera longiarars* Mayr, 1878
60. *Lioponera parva* Forel, 1900
IV. Subfamily PSEUDOMYRMECINAE Emery
18. Genus *Tetraponera* Smith, 1852
   Subgenus *Tetraponera* Emery, 1900
61. *Tetraponera* (Tetraponera) *aitkeni* (Forel, 1902)
63. *Tetraponera* (Tetraponera) *rafinigra* (Jerdon, 1851)
64. *Tetraponera* (Tetraponera) *nigra* (Jerdon, 1851)
65. *Tetraponera* (Tetraponera) *nigra fergusoni* (Forel, 1902)
66. *Tetraponera* (Tetraponera) *difficilis longiceps* (Forel, 1902)
67. *Tetraponera* (Tetraponera) *nigres* (Jerdon, 1851)
   V. Subfamily MYRMCINAE Lepeletier
19. Genus *Aphaenogaster* Mayr, 1853
*68. *Aphaenogaster rothneyi* Forel, 1902
69. *Aphaenogaster beccarii* (Emery, 1887)
20. Genus *Messor* Forel, 1890
70. *Messor barbarus* (Linnaeus, 1767)
21. Genus *Pheidole* Westwood, 1841
Subgenus *Pheidole* s. str.
*71. *Pheidole* (Pheidole) *malinsi* Forel, 1902
72. *Pheidole* (Pheidole) *papionii* Forel, 1902
73. *Pheidole* (Pheidole) *spathifera* Forel, 1902
74. *Pheidole* (Pheidole) *sharpi* Forel, 1902
75. *Pheidole* (Pheidole) *hoogwerfii* Forel, 1902
76. *Pheidole* (Pheidole) *constanciae* Forel, 1902
77. *Pheidole* (Pheidole) *fergusoni* Forel, 1902
78. *Pheidole* (Pheidole) *mus* Forel, 1902
79. *Pheidole* (Pheidole) *minor* (Jerdon, 1851)
80. *Pheidole* (Pheidole) *roberti* Forel, 1902
81. *Pheidole* (Pheidole) *providens* (Sykes, 1835)
82. *Pheidole* (Pheidole) *malabarica* (Jerdon, 1851)
83. *Pheidole* (Pheidole) *diffusa* (Jerdon, 1851)
22. Genus *Myrmica* Latreille, 1804
84. *Myrmica caeca* Jerdon, 1851
23. Genus *Myrmicaria* Saunders, 1841
85. *Myrmicaria brunnea* Saunders, 1841
24. Genus *Crematogaster* Lund, 1831
*86. *Creematogaster wroughtoni* Forel, 1902
87. *Crematogaster dohrni* Mayr, 1878
88. *Crematogaster rogenhoferi* Mayr, 1878
89. *Crematogaster flavus* Forel, 1886
*90. *Crematogaster rothneyi* Mayr, 1878
25. Genus *Strumigenys* Smith, 1860

26. Genus *Myrmecina* Curtis, 1829

27. Genus *Monomorium* Mayr, 1855

28. Genus *Oligomyrmex* Mayr, 1867

29. Genus *Solenopsis* Westwood, 1841

30. Genus *Laphomyrmex* Emery, 1892

31. Genus *Pheidologeton* Mayr, 1862

32. Genus *Meranoplus* Smith, 1854

33. Genus *Triglyphothrix* Forel, 1890

34. Genus *Tetramorium* Mayr, 1855

109. *Monomorium glyciophilum* (Smith, 1858)

110. *Monomorium mayri* Forel, 1902

111. *Monomorium floricola* (Jerdon, 1851)

112. *Monomorium latinode* Mayr, 1872

113. *Monomorium dichroma* Forel, 1902

114. *Monomorium pharaonis* (Linnaeus, 1758)

115. *Monomorium wroughtoni* Forel, 1902

116. *Monomorium criniceps* (Mayr, 1878)

117. *Monomorium scabriceps* (Mayr, 1878)

118. *Monomorium crinicryptoscapriceps* (Forel, 1902)

119. *Monomorium nigrum* (Forel, 1902)

120. *Monomorium glabrum* (André, 1883)

121. *Monomorium glabrocriniceps* (Forel, 1902)

122. *Monomorium destructor* (Jerdon, 1851)

123. *Monomorium scholar Forel, 1902

124. *Monomorium minutum* Mayr, 1855
35. Genus *Cataulacus* Smith, 1853

36. Genus *Atta* Fabricius, 1804

VI. Subfamily FORMICINÆ Lepeletier

37. Genus *Oecophylla* Smith, 1861

38. Genus *Myrmecocystus* Wesmael, 1838

39. Genus *Acantholepis* Mayr, 1861

40. Genus *Camponotus* Mayr, 1861

41. Genus *Polyrhachis* Smith, 1858

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145. *Tetramorium mixtum* Forel, 1902
146. *Tetramorium wroughtoni* (Forel, 1902)
147. *Tetramorium rothsneyi* (Forel, 1902)
148. *Tetramorium smithi* Mayr, 1879
149. *Tetramorium tortuosum* var. *belli* Forel, 1902
150. *Tetramorium belgaense* Forel, 1902
151. *Cataulacus* (*Cataulacus*) *lotus* Forel, 1891

35. Genus *Cataulacus* Smith, 1853

36. Genus *Atta* Fabricius, 1804

152. *Atta domicola* Jerdon, 1851
153. *Atta dissimilis* Jerdon, 1851

154. *Oecophylla smaragdina* (Fabricius, 1775)

38. Genus *Myrmecocystus* Wesmael, 1838

155. *Myrmecocystus setipes* Forel, 1894

39. Genus *Acantholepis* Mayr, 1861

*156. Acantholepis frauenfeldi* (Mayr, 1855)
157. *Acantholepis opaca* Forel, 1892
158. *Acantholepis fergusoni* Forel, 1895

40. Genus *Camponotus* Mayr, 1861

159. *Camponotus angusticollis* (Jerdon, 1851)
160. *Camponotus compressus* (Fabricius, 1787)
161. *Camponotus sericeus* (Fabricius, 1798)
162. *Camponotus rufoglaucus* (Jerdon, 1851)

*163. Camponotus dolendus* Forel, 1892
164. *Camponotus partia* Emery, 1889
165. *Camponotus mendax* Forel, 1895
166. *Camponotus puniceps* Donisthorpe, 1942
167. *Camponotus barbatus* Roger, 1863
168. *Camponotus taylori* Forel, 1892
169. *Camponotus similis* Donisthorpe, 1943
170. *Camponotus variegatus* (Smith, 1858)

171. *Camponotus variegatus* *sonifica* Forel, 1902
172. *Camponotus nitidus* (Smith, 1858)
173. *Camponotus thrauso* Forel, 1893
174. *Camponotus pragmaticola* Donisthorpe, 1943
175. *Camponotus strictius* (Jerdon, 1851)
176. *Camponotus conficci* Forel, 1894
177. *Camponotus varius* Donisthorpe, 1943
178. *Camponotus nirvanae* Forel, 1893
179. *Camponotus timidus* (Jerdon, 1851)
180. *Camponotus velox* (Jerdon, 1851)
181. *Camponotus radiatus* Forel, 1892

182. *Polyrhachis mayri* Roger, 1863
183. *Polyrhachis dives* Smith, 1857
184. *Polyrhachis simplex* Mayr, 1862
185. *Polyrhachis cypraea* Mayr, 1862
186. *Polyrhachis cypraea* var. *obtusisquama* Forel, 1902
187. *Polyrhachis exercita* Walker, 1859
188. *Polyrhachis rastellata* Latreille, 1802
189. *Polyrhachis rastellata* var. *corporalis* Santschi, 1928
190. *Polyrhachis duodecim* Donisthorpe, 1942
191. *Polyrhachis illaudata* Walker, 1859
192. *Polyrhachis latispina* Donisthorpe, 1942
193. *Polyrhachis punctillata* Roger, 1863
194. *Polyrhachis punctillata fergusoni* Forel, 1902
195. *Polyrhachis dives belli* Forel, 1912
196. *Polyrhachis binghamii* Forel, 1893
197. *Polyrhachis farcata gracilipes* Forel, 1893
198. *Polyrhachis indicus* (Jerdon, 1851)
199. *Polyrhachis sylvicola* (Jerdon, 1851)
200. *Polyrhachis tibialis* Smith, 1858
201. *Polyrhachis tibialis* var. *paris* Emery, 1901
202. *Polyrhachis weberi* Donisthorpe, 1943
203. Polyrhachis wraughtoni Forel, 1894
204. Polyrhachis thirnax Roger, 1863
205. Polyrhachis indica Mayr, 1870

42. Genus Hemiptera Roger, 1862
206. Hemiptera scissa Roger, 1862
207. Hemiptera aculeata (Mayr, 1878)

43. Genus Paratrechina Motschoulsky, 1863
208. Paratrechina bourbonica (Forel, 1886)
209. Paratrechina longicornis (Latreille, 1802)
210. Paratrechina assimilis (Jerdon, 1851)
211. Paratrechina verbursi (Forel, 1894)

44. Genus Plagiolepis Mayr, 1861
212. Plagiolepis jerdoni Forel, 1894
213. Plagiolepis rogeri Forel, 1894
214. Plagiolepis wraughtoni Forel, 1902

45. Genus Anoplolepis Santschi, 1914
215. Anoplolepis longipes (Jerdon, 1851)

46. Genus Formica Linnaeus, 1758
216. Formica phyllophilus Jerdon, 1851
217. Formica vagans Jerdon, 1851

VII. Subfamily DOLICHODERINAE Forel
47. Genus Tapinoma Förster, 1850
218. Tapinoma melanocephalum (Fabricius, 1793)
48. Genus Bothriomyrmex Emery, 1865
219. Bothriomyrmex dally Forel, 1895

Key to the Subfamilies of Formicidae

1. Pedicel of the abdomen one-jointed ........2
   - Pedicel of the abdomen two-jointed ........4
2. A more or less marked constriction between basal two segments of abdomen ...........
   .................................................. PONERINAE

3. Opening at posterior end of gaster (acidopore) terminal, circular and usually surrounded by a fringe of hairs ........ FORMICINAE
   - Opening at posterior end of gaster (acidopore) transverse, slit-like; eye never present, blind .................................... DORYLINAE

4. Elongate, often very slender, eye very large and elongate; clypeus with a rounded upper margin, not prolonged upward between the frontal carinæ; frontal carinæ usually close together, usually narrow and not expanded laterally to cover the antennal insertions, antennæ short .... PSEUDOMYRMECINAE
   - Without this combination of characters: frontal carinæ usually large, nearly always covering the antennal insertions and nearly always well-separated ....... MYRMICINAE

I. Subfamily DORYLINAE Forel

Members of this subfamily are known as army ants and are sometimes referred to as legionary ants in the New World and Old World. They are predaceous and are known for their foraging expeditions, the size of which are sometimes exaggerated. Army ants exhibit a number of morphological and biological peculiarities not common to most ants, such as, wasp-like males, wingless termite-like females, blind workers, and their raiding and emigrating behaviour. Retten Meyer (1963) outlined the following traits in which they differ from other ants: 1) they feed almost exclusively on animal prey which is collected by large groups raiding workers; 2) their raiding columns usually connect to the nest by at least one continuous column; 3) the entire colony periodically and frequently emigrates to new nest’s sites; 4) emigration are largely dependant on the size, cast, age and range of ages of the brood (or broods); and 5) the colonies are founded by division of an entire colony into two (or possibly several daughter colonies. Other ants may possess some of these traits, but not all of them.
Much of the biological work on army ants has been done in Central America on the terrestrial species of Eciton which are found in large clusters above the ground and whose colonies may number upto million individuals. Most of the army ants, however, are sub-terranean in habit, though the raiding columns of some may appear above ground. Raiding may be in columns only several ants wide or in swarms of a fan-shaped pattern. Most of the prey is other arthropods, only occasionally vertebrates. All species have nomadic and stationary activity cycles where the entire colony moves from one area to another, a unique behaviour exhibited by this group.

Most of the taxonomy is based on males and workers, and for some species only one caste is known.

Key to the Genera of Dorylinae

♀♂
1. Pedicel one-jointed; pro-mesonotal suture distinct, meso-metanotal suture obsolete.....
   ...............................................................................Dorylus
   — Pedicel two-jointed; pro-mesonotal suture obsolete, meso-metanotal suture distinct.....
   ........................................................................Aenictus
   ♂♀
   1. Of comparatively large size, length over 18 mm.; node of pedicel convex ........Dorylus
   — Smaller body size, length under 13 mm.; node of pedicel concave, sometimes merely longitudinally grooved or bilobed never convex .................................Aenictus

1. Genus Dorylus Fabricius


Type-species: D. helvolus ♂ (Linnaeus, 1758), from Africa.

Subgenus Alaopone Emery


*1. Dorylus (Alaopone) orientalis Westwood


Distribution: INDIA: Kerala, Orissa, Maharashtra, West Bengal. Elsewhere: Burma, China, Malayan Peninsula, Indonesia (Java, Sumatra, Borneo), Nepal, Sri Lanka.

Biological notes: This species is commonly known as root-eating ant, the workers feed on soft parts of roots and the tuberous roots are hollowed out.

Green (1903) also agreed with above vegetation behaviour of the said species. But Mukherjee (1933) doubted this. He studied the worker's mouth parts in details and found them "better adapted for feeding on animal food than on plants. The mandible is similar to that of the species Dorylus (Typhlophone) labiatus Shuck., 1840, which is carnivorous in habit. The sharp-pointed bristles, spines and setae on the 1st and 2nd maxillae, can well pierce the skin of the victim and draw out the nutritive fluid from the body of their prey, which they suck by their a mobile tongue."

The male resembles wasps and females are wingless and blind. In Southern India only one male was collected at light no workers came across, evidently it is presumed that it is not very common species in Southern India.
2. Genus *Aenictus* Shuckard

Type-species: *A. ambiguus* Shuckard, 1840, from India.

2. *Aenictus aratus* Forel

1964. *Aenictus aratus*, Wilson, *Pacific Insects*, 6 (3) : 446 (Syns.).

**Material examined**: Nil.

**Distribution**: INDIA: Karnataka, Kerala, Tamil Nadu, Maharashtra, Himachal Pradesh. Elsewhere: Queensland, Australia.

**Remarks**: The material of this species could not be available for the study. However, Bingham (1903 : 19) reported the species, *A. aitkeni* Forel, 1900 from Poona, Kanara and Travancore.

3. *Aenictus brevicornis* (Mayr)


**Material examined**: Nil.

**Distribution**: INDIA: Kerala, Karnataka, Uttar Pradesh, Assam, West Bengal.

**Remarks**: Material of this species could not be available for the study. However, Bingham (1903 : 21) reported this species from Calcutta, Bangalore, Calicut, Assam and N. W. Provinces of India.

4. *Aenictus fergusoni* Forel


**Material examined**: Nil.

**Distribution**: INDIA: Kerala, Gujrat, Sikkim, Assam, Great Nicobar. Elsewhere: Burma, Indonesia (Java).

**Remarks**: Bingham (1903 : 18) reported this species from Travancore, Surat, Sikkim. But Wilson (1964) reported varieties of this species, var. pilze from Nedungadu, Tanjore, Tamil Nadu and var. montanus from Darjeeling, West Bengal and Missamari, Assam.

5. *Aenictus pachycerus* (Smith)


**Material examined**: Nil.

**Distribution**: INDIA: Karnataka, Kerala, Tamil Nadu, Uttar Pradesh, Maharashtra, Himachal Pradesh.

**Remarks**: The material of this species could not be available for this study. However, Bingham (1903 : 20) reported this species and mentioned its localities as Dehra Dun, Travancore, Madras, Kanara and probably throughout continental India. But Wilson (1964) reported the syntypes of *bengalensis* from Solan near Simla which are very similar to the syntypes of *pachycerus*.

6. *Aenictus ceylonicus* (Mayr)


**Material examined**: Nil.

**Distribution**: INDIA: Karnataka, Maharashtra. Elsewhere: Sri Lanka, Taiwan, Indonesia (Borneo), Philippine Is., New Guinea, Aru, Australia as far South as Northern South Wales.
Remarks: No specimen of this species were available for the study. However, Wilson (1964) reported this species from Kanara and Poona.

7. Aenictus aryta Forel


Material examined: Nil.

Distribution: INDIA: Karnataka.

Remarks: Specimen of this species could not be available for the study. But Bingham (1903: 8) and Wilson (1964), both of them, reported this species from Kanara.

8. Aenictus clavatus Forel


1964. Aenictus clavatus, Wilson, Pacific Insects, 6: 482.

Material examined: Nil.

Distribution: INDIA: Karnataka, Maharashtra, Gujarat, Sikkim.

Remarks: Specimen of this species could not be available for the study. However, Bingham (1903: 12) reported this species and mentioned its localities as “Western India, Gujarat, Kanara and Sikkim”. Wilson (1964) also reported this species from Kanara and Poona.

9. Aenictus clavatus var. kanarensis Forel


1964. Aenictus clavatus var. kanarensis, Wilson, Pacific Insects, 6: 482.

Material examined: Nil.

Distribution: INDIA: Karnataka.

Remarks: No material of this species could be available for the study. However, Wilson (1964) reported this species from Kanara.

10. Aenictus wroughtoni Forel


Material examined: Nil.

Distribution: INDIA: Kerala, Maharashtra, Madhya Pradesh.

Remarks: The material of this species could not be available for the study. However, Bingham (1903) reported this species and mentioned its localities as “Western and Central India and Travancore”.

11. Aenictus gleadowi Forel


Material examined: Nil.

Distribution: INDIA: Karnataka.

Remarks: No specimen of this species was available for study. However, Bingham (1903) reported this species from Kanara. Subsequently, Wilson (1964) also reported this species from the same area.

II. Subfamily PONERINAE Lepeletier

The species of this subfamily are primarily characterised by a constriction, sometimes slight but generally distinct, and often remarkably deep, between the basal two segments, and by the unmodified powerful and generally exerted sting. The body more or less elongate and cylindrical, the abdomen especially so; the mandibles powerful; the antennae more or less massive; eyes generally present, absent in one or two genera; legs moderately long. Habits pedeadeous and carnivorous. The Ponerine ants carry their prey or
food underneath the body between the fore legs, a method of carrying food, quite different from that adopted by the Camponotinae and Myrmicinae. The males and females of Ponerinae, so far as they are known, are always winged. This subfamily mostly represents the primitive group of ants and thus can be treated as the ancestral stock in the phylogeny of ants. The nests, in small colonies of a few hundred individuals or less, mostly on soil or rotten wood. They are abundantly distributed all over the tropical regions of the world, but are even reported from some European and American countries and the cause of this migration is the introduction of commerce from one part of the world to the other.

**Key to the Genera of Ponerinae**

1. Pedicel not free; a strong constriction, but no flexible joint between pedicel and abdomen .................................................. *Amblyopone*
   — Pedicel free, with a flexible joint between it and the abdomen .............................................. 2

2. Mandibles articulated close together in middle of front margin of head....................................... 3
   — Mandibles articulated wide apart at lateral angles of front margin of head ................................ 4

3. Antennal hollows not confluent posteriorly .......................................................................................... *Odontomachus*
   — Antennal hollows not confluent posteriorly .................................................................................. *Anochetus*

4. Mandibles long, curved upwards, one strong tooth at base of masticatory margin, thence denticulate to apex ................................................................. *Harpegnathus*
   — Mandibles differently formed ........................................................................................................ 5

5. Claws pectinate ................................................................................................................................. *Leptogenys*
   — Claws not pectinate ....................................................................................................................... 6

6. Posterior margin of clypeus not distinctly defined ............................................................................ *Platythyrea*
   — Posterior margin of clypeus defined by a suture ......................................................................... 7

7. Node of pedicel bispinous posteriorly .................. ............................................................................ *Diacamma*
   — Node of pedicel not bispinous, sometimes denticulate posteriorly ............................................. 8

8. Episternum of mesothorax separated from sternum by a suture .................................................. *Ectomomyrmex*
   — Episternum of mesothorax not separated from sternum ................................................................ 9

9. Posterior tibiae with only one spur ................... 10
   — Posterior tibiae with two spurs .................................................................................................... 11

10. Club of flagellum of antennae not well-defined .............................................................................. *Ponera*
    — Club of flagellum of antennae distinct and well-defined .................................................................. *Cryptopone*

11. Middle of front margin of clypeus produced, truncate at apex ..................................................... *Euponera*
    — Middle of front margin of clypeus not produced ......................................................................... 12

12. Meso-metanotal suture obsolete ...................................................................................................... *Bothroponera*
    — Meso-metanotal suture well-marked ............................................................................................ 13

13. Masticatory margin of mandibles very long, longer than inner margin .............................................. *Mesoponera*
    — Masticatory margin of mandibles shorter .................................................................................... *Brachyponera*

3. Genus *Anochetus* Mayr


8*12. *Anochetus sedilloti* Emery


Distribution: INDIA: Tamil Nadu and Western India. Elsewhere: North Africa (Tunisia).

Remarks: Bingham (1903) also reported this species and mentioned its locality as “Western India”.

13. Anochetus mordax Donisthorpe


Material examined: Nil.

Distribution: INDIA: Tamil Nadu.

Remarks: No material of this species could be available for this study. However, Donisthorpe (1942), in his Colombo Museum Expedition of Southern India, reported this species from Dohnavur, Tinnevelly dist., South India.

14. Anochetus orientalis kanariensis Forel


1903. Anochetus kanariensis, Bingham, Fauna Brit. India, Hymenoptera, 2: 44, fig.


Material examined: Nil.

Distribution: INDIA: Karnataka, Tamil Nadu, and Western India.

Remarks: The material of this species could not be available for the study. However, Bingham (1903) reported this species from Western India, Kanara and Madras. Further, he (op. cit.) also quoted, “Dr. Forel regards this as a race of A. orientalis André from Cochin-China”.

15. Anochetus punctiventris Mayr


1903. Anochetus punctiventris, Bingham, Fauna Brit. India, Hymenoptera, 2: 41, fig.


Material examined: Nil.

Distribution: INDIA: Southern and Western India, Sikkim, West Bengal.

Remarks: No specimen of this species were available for the study. However, Bingham (1903) reported this species and mentioned its localities as “Bengal, Sikkim, Western and Southern India”.

16. Anochetus punctiventris taylori Forel


1903. Anochetus taylori, Bingham, Fauna Brit. India, Hymenoptera, 2: 43, fig.


Material examined: Nil.


Remarks: The material of this subspecies could not be available for the study. However, Bingham (1903) reported taylori as a species and mentioned its localities as “the Nilgiris, Belgaum, Western India and Poona”.

17. Anochetus ruginotis Stitz


Material examined: Nil.

Distribution: INDIA: South India.

Remarks: The material of this species could not be available for the study. However, Chapman and Capco (1951) reported this species from South India, no clear locality mentioned.

18. *Anochetus rufus* (Jerdon)


Material examined: Nil.

Distribution: INDIA: Tamil Nadu (Salem).

Remarks: No material of this species could be available for the study. However, Jerdon (1851) reported this species under the Genus *Odontomachus* from Salem dist. (ex. under stone). But subsequently, Chapman and Capco (1951) recorded this species under the Genus *Anochetus* and mentioned its locality as “South India”.

4. Genus *Odontomachus* Latreille


Type-species: *Formica haematodes* Linnaeus, 1758, from the tropics of both hemispheres.

19. *Odontomachus haematodes* (Linnaeus)


Material examined: Nil.


Remarks: The material of this species could not be available for the study. However, Bingham (1903) reported this species and mentioned its distribution from different places of Southern India (Madras, Cochin, Travancore) and Sikkim, Assam, Ceylon etc. and also found in Africa and America.

5. Genus *Harpegnathus* Jerdon


Type-species: *H. salator* Jerdon, 1851, from Malabar, India.

20. *Harpegnathus salator* Jerdon


Material examined: Nil.

Distribution: INDIA: Karnataka, Kerala, Western India, Assam, Elsewhere: China ?, Sri Lanka.

Remarks: The material of this species could not be available for this study. However, Bingham (1903) recorded this species under the Genus *Drepanognathus* and mentioned its localities as “Western India, Mysore, Kanara, Travancore, Ceylon and China ?.”
21. *Harpgnathus venator* (Smith)


Material examined: Nil.


Remarks: No specimen of this species could be available for this study. But Bingham (1903) reported this species under the Genus *Drepanognathus* and mentioned its distribution as "Northern India (Dehra Dun), Sikkim, Assam, Madras ? and Burma".

6. Genus *Leptogenys* Roger


Type-species: *L. falcigera* Roger, 1861, from Sri Lanka (formerly Ceylon)

Subgenus *Lobopelta* Mayr


Key to the Species of *Leptogenys* (*Lobopelta*)

1. Node of pedicel squamiform, compressed longitudinally, its upper margin narrow, obtuse .........................................................2

— Node of pedicel not compressed longitudinally, broader above, sub-cubital with anterior and posterior margins .......................................................... *diminuta*

2. Clypeus tridentate anteriorly .......... *denticulobis*

— Clypeus not dentate ..................................................3

3. Medial joints of flagellum of antennae distinctly longer than broad .......... *ocellifera*

— Medial joints of flagellum of antennae not longer than broad .................. *birmana*

*22. *Leptogenys* (*Lobopelta*) *birmana* Forel


23. *Leptogenys* (*Lobopelta*) *ocellifera* (Roger)


Distribution: INDIA: Tamil Nadu, Kerala, West Bengal, and nearly the whole of peninsular India. Elsewhere: Sri Lanka.
Remarks: Bingham (1903) reported this species under *Lobopelta* and mentioned its distribution as “Nearly the whole of peninsular India and Ceylon, not extending to Assam or Burma”. A variety was also reported from Sarawak by Emery.

Biological notes: This ant was collected going in files over a teak tree at Top-Slip, Tamil Nadu, along the earthen galleries of *Odontotermes* sp. (Isoptera).

24. **Leptogenys (Lobopelta) dentilobis** Forel


Distribution: INDIA: Tamil Nadu, and mostly throughout India except Punjab and the dry desert areas of Central India. Elsewhere: Extending in the East through Malayan subregion to New Guinea.

Remarks: Previously this species was also recorded under the Genus *Lobopelta* by Bingham (1903 : 61) and he in the same publication, mentioned its distribution as “Extends throughout our limits and into the Malayan subregion: not recorded from the Punjab or the dry desert portions of Central India”.

26. **Leptogenys (Lobopelta) diminuta palliseri** Forel


Material examined: Nil.

Distribution: INDIA: Karnatak and Western India. Elsewhere: Burma, Indonesia (Sumatra), Taiwan (Formosa).

Remarks: The material of this subspecies could not be available for this study. However, Bingham (1903) reported *palliseri* as a species under the Genus *Lobopelta* and mentioned its locality as Kanara, besides other localities. He (op. cit.) noted “L. palliseri Forel, 1900 resembles *L. diminuta* (Smith, 1857), but is much more robustly built and larger body size”. Subsequently, Chapman and Capco (1951) also reported this subspecies from Kanara.
27. **Leptogenys (Lobopelta) carinata**  
   Donisthorpe


**Material examined**: Nil.

**Distribution**: INDIA: Kerala.

**Remarks**: No material of this species could be available for the study. However, Chapman and Capco (1951) recorded this species and mentioned “India: Travancore” as its locality.

28. **Leptogenys (Lobopelta) roberti** coonoorenensis Forel


**Material examined**: Nil.

**Distribution**: INDIA: Tamil Nadu, Kerala and Western India.

**Remarks**: The specimen of this subspecies could not be available for this study. Bingham (1903), however, reported *coonoorenensis* as a species under the Genus *Lobopelta* and mentioned its distribution as “Western India, the Nilgiri Hills”. He (ap. cit.) also noted, “*L. coonoorenensis* Forel, 1900 resembles *L. roberti* Forel, 1900, but is slightly larger and darker, with a proportionately larger head and shorter mandibles, which latter are longitudinally striate.”

29. **Leptogenys (Lobopelta) longiscapatus**  
   Donisthorpe


**Material examined**: Nil.

**Distribution**: INDIA: Kerala.

**Remarks**: No material of this species were available for this study. However, Chapman and Capco (1951) listed this species in their check list and mentioned “India: Travancore” as its locality.

30. **Leptogenys (Lobopelta) dalyi** Forel


**Material examined**: Nil.

**Distribution**: INDIA: Kerala, Karnataka, Tamil Nadu, Elsewhere: China.

**Remarks**: The material of this species could not be available for this study. Bingham (1903: 67), however, reported this species under the Genus *Lobopelta* and mentioned its distribution as “Western India, the Nilgiris, Kanara, Mysore and Cochin.”

7. Genus *Diacamma* Mayr


Type-species: *Ponera rugosa* Le Guillou, 1841, from Borneo (Indonesia).

**Key to the Species of Diacamma**

1. Colour black; head elongate oval, proportionately shorter; pronotum with concentric striae on the disc enclosing one or two transverse or longitudinal striae; node of pedicel rounded anteriorly; nodal spines
attenuate at base, pointing obliquely outwards and forming a distinct angle with the upper surface of the node; abdomen massive .......

..................................................rugosum

— Colour black with beautiful greenish bronzy tint; head oval, proportionately longer; pronotum with one to four transverse striae surrounded by concentric striae; node of pedicel gradually slopped anteriorly; nodal spines rather thick at base, pointing backwards in continuation of the upper surface of the node, not obliquely outwards; abdomen proportionately narrower and elongate ........................................vagans

31. Diacamma vagans (Smith)

1903. Diacamma vagans, Bingham, Fauna Brit. India, Hymenoptera, 2 : 81, ¶. ¶.


Biological notes: It nests in the soil at the base of trees (Seesom, 1941). In Southern India, it is collected from Mango and ‘Supari’ nut trees, may be while going in search of food.

Remarks: This species is known by a number of varieties from different places. Bingham (1903) also mentioned its locality as “Kanara”, besides other localities. He (op. cit.) further noted that this species was originally described from Batchian Is

Diacamma rugosum (Le Guillou)


32. Diacamma rugosum ceylonensis Emery

1903. Diacamma ceylonense, Bingham, Fauna Brit. India, Hymenoptera, 2 : 79, ¶.


Remarks: Bingham (1903) mentioned its distribution as “Cochin, Ceylon” and recorded it as a species. But he (op. cit.) noted that he was not very certain about this species and mentioned “it closely resembles Diacamma sculptum (Jerdon, 1851), but it is slightly larger, very black, brilliant and shining and the pubescence is not more but less dense”.

33. Diacamma rugosum var. jerdoni Forel

1903. Diacamma rugosum var. jerdoni Forel, Rev. Suisse Zool., 11 : 400, ¶.

Material examined: Nil.

Distribution: INDIA: Kerala.
Remarks: The material of this variety could not be available for this study. However, Chapman and Capco (1951) noted in their Check list that Donisthorpe (1942, 1943) reported this variety from Malabar and Travancore (Kerala) respectively.

34. Diacamma rugosum var. sculptum (Jerdon)

1851. Poneria sculpta Jerdon, Madras J. Lit. Sci., 17: 117, Φ.


1903. Diacamma sculptum, Bingham, Fauna Brit. India, Hymenoptera, 2: 80, Φ.


Material examined: Nil.

Distribution: INDIA: Karnataka, Kerala, Tamil Nadu, Sikkim, West Bengal. Elsewhere: China, Sri Lanka, Taiwan (Formosa), Philippines, Indonesia (Borneo), Singapore.

Remarks: No specimens of this variety could be available for this study. However, Bingham (1903) reported the sculptum as a species and mentioned its distribution as "Sikkim; Barrackpore, Bengal; Kanara; Mysore; Malabar, the Nilgiri hills; Cochin; Travancore; Ceylon". Prior to this, Jerdon (1851) first described this species under the genus Poneria from Malabar, Nilgiri (Southern India).

35. Diacamma cyaniventre André

1887. Diacamma cyaniventre Er. André, Rev. d’Ent., 6: 293, Φ.


1903. Diacamma cyaniventre, Bingham, Fauna Brit. India, Hymenoptera, 2: 78, Φ.


Material examined: Nil.


Remarks: The material of this species could be available for this study. Bingham (1903), however, recorded this species and mentioned its localities as 'Cochin and Ceylon'.

8. Genus Ectomomyrmex Mayr


Type-species: E. javanus Mayr, 1867, from Java (Indonesia).

36. Ectomomyrmex annanitus (André)


1903. Ectomomyrmex annanitus, Bingham, Fauna Brit. India, Hymenoptera, 2: 87, Φ, Ψ.


Material examined: Nil.


Remarks: The material of this species could not be available for this study. However, Bingham (1903) recorded this species from Calicut of South India.

37. Ectomomyrmex leeuwenhoeki (Forel)


1903. Ectomomyrmex leeuwenhoeki, Bingham, Fauna Brit. India, Hymenoptera, 2: 88, Φ.


Material examined: Nil.

**Remarks**: The material of this species could not be available for this study. However, Bingham (1903) reported this species from Calicut (Kerala).


Type-species: *B. punicosa* (Roger, 1862), from South Africa.

**Key to the Species of Bothroponera**

1. Body colour dull black to castaneous red; head, thorax and abdomen minutely reticulate-punctate; clypeus convex in the middle and subcarinate; node of pedicel as broad as long, flat and equally truncated anteriorly and posteriorly ............... *rubiginosa*

-- Body colour dull opaque black to reddish yellow; head, thorax and abdomen finely and very closely reticulate-punctate; clypeus transverse, medially sharply carinate; node of pedicel a little broader than long, roundly truncated anteriorly and abruptly truncated posteriorly .......................... *sulcata*

39. *Bothroponera rubiginosa* (Emery)


*1911. Pachycorypha (Bothroponera) rubiginosa* Emery, Genera Insect., 118 : 77.


**Material examined**: SOUTH INDIA: Tamil Nadu: Salem, several workers, 10.i.1969, ex. ground surface of soil, coll. O. B. Chhotani and R. N. Tiwari.

**Distribution**: INDIA: Tamil Nadu, Maharashtra. Elsewhere: Burma, China.

*40. Bothroponera sulcata* (Frauenfeld)


**Distribution**: INDIA: Andhra Pradesh, Tamil Nadu, West Bengal, Central and Western India.

**Remarks**: “Dr. Forel has described two varieties under the names sulcata-tesserinoda and fossulata. The former has characters intermediate between *B. sulcata* and *B. tesserinoda*; and the latter differs from typical *B. sulcata* in having the posterior...
half of the head with scattered large shallow punctures”. (Bingham, 1903 : 99).

41. *Bothroponera tesserinoda* (Mayr)


**Material examined :** Nil.

**Distribution :** INDIA : Tamil Nadu, Kerala (Cochin) to Uttar Pradesh (Dehra Dun), West Bengal, Assam. Elsewhere : Sri Lanka and Burma.

**Remarks :** The material of this species could not be available for this study. However, Jerdon (1851) described the species *rufipes* under the genus *Ponera* from Malabar. Bingham (1903) also reported this species under the genus *Bothroponera* and mentioned its distribution as “Himalayas from the Siwaliks to Assam, and upto 4000 ft.; Bengal; Western India, Kanara to Malabar; Ceylon, and throughout Burma”.

10. Genus *Ponera* Latreille


**Type-species :** *P. coarctata* Latreille, 1804, from Europe.

*43. *Ponera truncata* Smith


**Distribution :** INDIA : Tamil Nadu, West Bengal. Elsewhere : Burma, Indonesia (Celebes, Borneo, Java), Formosa (Taiwan).
44. *Ponera confinis* Roger


**Material examined**: Nil.

**Distribution**: INDIA: Karnataka, Western India, West Bengal, Elsewhere: Sri Lanka, Oceania, Indonesia (Sumatra).

**Remarks**: The material of this species could not be available for this study. However, Bingham (1903) reported this species and mentioned its localities as “Bengal, Western India, Kanara and Ceylon”.

45. *Ponera stenocheilos* Jerdon


**Material examined**: Nil.

**Distribution**: INDIA: Tamil Nadu and Kerala (Malabar).

**Remarks**: No material of this species could be available for this study. While describing this species, Jerdon (1851) mentioned that he had found this ant very rarely in Malabar. He (op. cit.) further noted some important characters of the worker of this species like “Head large square behind, pointed anteriorly; antennae long; jaws very long, linear, ending in a strong tooth; thorax narrow; abdominal pedicel raised, round, pointing backwards; abdomen very long; sting large; legs long; colour dingy greenish brown”. Later on, Chapman and Capco (1951) also recorded this species from Madras (Tamil Nadu).

46. *Ponera sulcato-fossulata* Forel


**Material examined**: Nil.

**Distribution**: INDIA: Tamil Nadu.

**Remarks**: The specimens of this species could not be available for this study. However, Chapman and Capco (1951) reported this species in their monograph and mentioned its locality as “Madras”.

47. *Ponera affinis* Jerdon


**Material examined**: Nil.

**Distribution**: INDIA: Kerala (Malabar).

**Remarks**: The material of this species could not be available for this study. However, Jerdon (1851) described the worker of this species from ‘Malabar’ and noted some important characters of this species like “Body length 1/3rd of an inch; head oblong, notched behind, advanced anteriorly; jaws triangular, strongly toothed; antennae thickened at the tip; eyes somewhat anterior, moderately large; thorax slightly grooved; abdominal pedicel pointed, thin; abdomen oval; colour dingy black”.

11. Genus *Euponera* Forel


**Type-species**: *Formica stigma* Fabricius, 1793.

**Subgenus** *Trachymesopus* Emery

48. *Euponera (Trachymesopus) darwini* (Forel)


**Material examined**: Nil.

**Distribution**: INDIA: Kerala (Malabar).

**Remarks**: The species could not be available for this study. However, Donisthorpe (1943) reported this species from Nadungayam (200 ft.), Malabar, Southern India.

50. *Cryptopone rufotestaceus* Donisthorpe


**Material examined**: Nil.

**Distribution**: INDIA: Kerala.

**Remarks**: The species could not be available for this study. However, Donisthorpe (1943) reported this species and mentioned its locality as "Travancore, Kerala".

12. **Genus Cryptopone** Emery


Type-species: *Amblyopone testacea* Motschulsky, 1863, recorded so far only from Sri Lanka (formerly Ceylon).

49. *Cryptopone testacea* (Motschulsky)


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Material examined : Nil.

Distribution : INDIA : Kerala, Western India, Assam, West Bengal.

Remarks : The material of this species could not be available for this study. However, Bingham (1903) recorded this species from “Bengal, Western and Southern India and Assam”. Subsequently, Chapman and Capco (1951) also reported this species and mentioned “India : Travancore” as its locality.

52. Brachyponera luteipes (Mayr)


Material examined : Nil.

Distribution : INDIA : Kerala, West Bengal and mostly throughout India. Elsewhere : Burma, Sri Lanka, Indonesia (Java, Sumatra), Philippines, Malay peninsula.

Remarks : No material of this species could be available for this study. Chapman and Capco (1951), however, mentioned “Southern India : Travancore” as its locality.

53. Brachyponera luteipes var. continentalis

Karakajew

1925. Euponerina (Brachyponera) luteipes var. continentalis

Karakajew, Konowio, 4 : 125, ♂.


Material examined : Nil.

Distribution : INDIA : Karnatakka.

Remarks : The material of this variety could not be available for this study. But, Chapman and Capco (1951) reported this variety under the genus Euponerina (Brachyponera) and mentioned “Kanara” as its locality.

14. Genus Mesoponerina Emery


Type-species : Ponera caffraaria Smith, 1858, from South Africa.

54. Mesoponera melanaria Emery


Material examined : Nil.

Distribution : INDIA : Karnataka, Kerala and Western India. Elsewhere : Sri Lanka, Lower Burma, Indonesia (Sumatra), Singapore.

Remarks : The material of this species could not be available for this study. However, Donisthorpe (1942) reported this species from Nadungayam (200 ft.), Malabar, Southern India. Subsequently, Chapman and Capco (1951) recorded this species and mentioned its locality as “Kanara”.
15. Genus *Platythyrea* Roger


Type-species: *Pachycondyla punctata* Smith, 1858, from St. Domingo, America.

**55. Platythyrea sagedi** Forel


**Material examined**: Nil.

**Distribution**: INDIA: Karnataka, West Bengal. Elsewhere: Singapore.

**Remarks**: No material of this species could be available for this study. However, Bingham (1903) reported this species and quoted its localities as "India, recorded so far only from the Punjab and from kanara". Later on, Chapman and Capco (1951) also recorded this species from kanara and Punjab.

**56. Platythyrea wroughtoni** Forel


1903. *Platythyrea wroughtoni*, Bingham, Fauna Brit. India, Hymenoptera, 2 : 75. ¶.


**Material examined**: Nil.

**Distribution**: INDIA: Kerala, Karnataka and Tamil Nadu.

**Remarks**: The material of this species could not be available for this study. Bingham (1903), however, reported this species from Travancore, Mysore and Madras.

**57. Platythyrea wroughtoni** var. *victoriae* Forel


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1903. *Platythyrea victoriae*, Bingham, Fauna Brit. India, Hymenoptera, 2 : 75. ¶.


**Material examined**: Nil.

**Distribution**: INDIA: Karnataka, West Bengal and Western India.

**Remarks**: The material of this variety could not be available for this study. Bingham (1903) reported *victoriae* as a species under the genus *Platythyrea* and mentioned its localities as "Bengal, Western India and Mysore". He (op. cit.) also noted "it is very similar to *P. wroughtoni* Forel, 1900; in fact a barely separable race. Larger, with comparatively shorter antennae, the antennal carinae distinctly more swollen and broader. Thorax with the metanotum as in *P. wroughtoni*, but not so deeply emarginate posteriorly. Node of the pedicel comparatively shorter, about one and a half (twice in *P. wroughtoni*) as long as broad". Subsequently, Chapman and Capco (1951) also reported *victoriae* as a variety under the species *P. wroughtoni* from Mysore, Southern Indria.

16. Genus *Amblyopone* Erichson


Type-species: *A. australis* Erichson, 1842, from Australia.

**58. Amblyopone bellii** Forel


Material examined: Nil.

Distribution: INDIA: Karnataka and Western India.

Remarks: The material of this species could not be available for this study. However, Bingham (1903) reported this species and mentioned its localities as “Western India and Kanara”. Chapman and Capco (1951) also recorded this species from kanara.

III. Subfamily CERAPACHYINAEE Forel

This small subfamily, found in the tropical regions of the world, exhibits a blending of doryline and ponerine traits both morphologically and biologically. Little is known concerning the behaviour, but they are predaceous and carnivorous and the colonies are small. Wilson (1959) studied the behaviour of several species from Melanesia and Australia and found them all to be myrmecophagous, feeding on the broods and sometimes adults of other species of ants. He (op. cit.) suggested that these ant carry on an alternating group foraging and raiding behaviour pattern by which the colony efficiently exploits the surrounding territory.

However, Brown (1976) does not recognise this subfamily Cerapachyinae and is of opinion that the two tribes Cerapachyiini and Acanthostichini should be treated as the tribes of subfamily Ponerinae.

17. Genus Lioponera Mayr


Type-species: L. longitarsus, Mayr, 1878, from West Bengal, India.

59. Lioponera longitarsus Mayr


Material examined: Nil.

Distribution: INDIA: Kerala, Maharashtra, West Bengal. Elsewhere: Indonesia (Sumatra), Formosa.

Remarks: No material of this species could be available for this study. However, Bingham (1903) mentioned its localities as “Bengal and Western India, Poona to Travancore”.

60. Lioponera parva Forel


Material examined: Nil.

Distribution: INDIA: Tamil Nadu, Uttar Pradesh, West Bengal and Western India.

Remarks: The material of this species could not be available for this study. Bingham (1903), however, reported this species and mentioned its localities as “Dehra Dun, Bengal, Madras and Western India”.

IV. Subfamily PSEUDOMYRMECINAE Emery

This is a small subfamily with one genus in the New World and several genera in the Old World tropics. Smith (1951) named the subfamily Leptaleinae based on the genus Leptalea Erichson but later on, he (1952) found an earlier generic name Pseudomyrmex Lund, and changed the subfamily name to Pseudomyrmecinae which has become widely established. The species of this subfamily are most virulent, the sting being most painful and sometimes causing considerable inflammation. They are arboreal in nature. They make their nests in the dead wood of trees and very often, in the clefts of the beams and posts of wooden houses. By habit, they are ferocious in
nature, particularly *Tetraponera rufonigra* is called ‘Lohari’ in Northern India, meaning the Blacksmith, this name has been given because of it’s fierce nature.

18. Genus *Tetraponera* Smith


Type-species: *Pseudomyrma allaborans* Walker, 1859, from Sri Lanka (formerly Ceylon).

Subgenus *Tetraponera* Emery


Key to the Species of *Tetraponera* (Tetraponera)

1. Ocelli present in ♂ .......................... rufonigra
   — Ocelli not present in ♂ .......................... 2

2. Petiole anteriorly of 1st node shorter than node itself ........................................ 3
   — Petiole anteriorly of 1st node as long as, but distinctly not longer than node itself ..........
     .................................................................................. nigra

3. In profile, metanotum not higher than pro-mesonotum ............................................. allaborans
   — In profile, metanotum distinctly very much higher than pro-mesonotum ..................... aitkeni

61. *Tetraponera* (Tetraponera) aitkeni (Forel)


Distribution: INDIA: Tamil Nadu, Karnataka and Western India. Elsewhere: Sri Lanka.

Remarks: Forel (1902) did not give the exact locality while describing this species. Bingham (1903), however, recorded it from Western India and Ceylon with some doubt. He (op. cit.) also noted that he had two specimens from Sri Lanka (formerly Ceylon) and thought them to belong to a variety of *aitkeni* as they differed from Forel’s (1902) original description of the species *aitkeni* in some characters. The present specimens from Southern India, collected from coconut trees, come to *aitkeni* Forel when run through Bingham’s (1903) key. Emery (1921) has recorded it from Kanara. But subsequently, Chapman and Capco (1951) also reported this species from Kanara.

*62. Tetraponera (Tetraponera) allaborans* Walker


**Distribution: INDIA**: Tamil Nadu, West Bengal, Western India. Elsewhere: Sri Lanka, Burma, Indonesia (Sumatra), Kalimantan, China.

**Biological notes**: Collected from a mango tree trunk, running along the galleries of *Odontotermes* sp. (Isoptera).
63. Tetraponera (Tetraponera) rufonigra (Jerdon)


Distribution: INDIA: Tamil Nadu, Kerala, Karnataka, Maharashtra, Sikkim, West Bengal, but widely distributed in India. Elsewhere: Sri Lanka, Burma and extends into the Malayan subregion.

Remarks: Bingham (1903) also recorded this species and mentioned its localities as "Sikkim, Bengal, Poona, the Malabar Coast, Kanara, Ceylon, Burma and it extends into the Malayan subregion". Bingham (op. cit.) further noted "This, like S. rufonigra, is a tree-ant and almost as fierce as that species; its sting, however, is not so severe. Sometimes S. nigra forms its nest in hollow thorns".

65. Tetraponera (Tetraponera) nigra fergusoni (Forel)


Material examined: Nil.


Remarks: No specimens of this subspecies could be available for this study. However, Bingham (1903) reported fergusoni as a species under the genus Sima and mentioned its locality as "Travancore" from Southern India.
66. *Tetraponera* (*Tetraponera*) *difficilis longiceps* (Forel)


**Material examined**: Nil.

**Distribution**: INDIA: Kerala.

**Remarks**: The material of this subspecies could not be available for this study. Bingham (1903), however, recorded this as *Sima longiceps* from Travancore, South India.

67. *Tetraponera* (*Tetraponera*) *rufipes* (Jerdon)


**Material examined**: Nil.

**Distribution**: INDIA: Tamil Nadu.

**Remarks**: No specimens of this species could be available for this study. Jerdon (1851) first described this species under the genus *Eciton* and at the same time he mentioned that he had only found this species on one occasion under a stone in Salem district (South India). He (op. cit.) also noted some important characters of the worker of this species as “Body length 11/48th of an inch; head oblong; eyes very large, slightly advanced; thorax considerably grooved, abdominal pedicle long, low; abdomen long, ovate, black with rufous legs”. Subsequently, Chapman and Capco (1951) recorded this species under the genus *Tetraponera* (*Tetraponera*) in their monograph and also mentioned its locality as “Salem district”.

V. Subfamily MYRMICINAE Lepeletier

This is the largest subfamily of ants and is found throughout the world. In phylogenetic tree, it stands at the top, i.e., it has adapted to the highest adaptation and as such the sizes have appreciably reduced. This subfamily can be distinguished from the other subfamily of the family Formicidae by the pedicel being distinctly two-jointed in all sexes. The neuters of the genus *Aenictus* also have two-jointed pedicel, but they are absolutely without eyes and ocelli. The antennae are long, thick and massive planted extremely close to the anterior margin of the head with their bases very close together. The sting in the Myrmicinae is present but not often exerted, and the pupae are not enclosed in cocoons. No specific demarcation can be made for their habitat and habitat, because they are found in almost all habitat except water.

**Key to the Genera of Myrmicinae**

1. Antennae with less than 12 joints ...........2

   — Antennae 12-jointed .........................13

2. Antennae 11-jointed ..........................3

   — Antennae with less than 11 joints ........10

3. Lateral margins of head and thorax denticulate and spiny ..................*Cataulacus*

   — Lateral margins of head and thorax not dentate or spiny ..........................4

4. Pedicel attached to dorsal surface of abdomen .....................................*Crematogaster*

   — Pedicel attached to middle of front or to ventral surface of abdomen ........5

5. Pronotum armed with spines or teeth ............*Lophomyrmex*

   — Pronotum unarmed .............................6

6. Antennae lacking a distinct 2- or 3- jointed club ..................................*Atta*

   — Antennae with a distinct club ..............7
7. Club of antennae formed of apical 2 joints of flagellum .......... *Phidologeton*

--- Club of antennae formed of apical 3 joints of flagellum ........................................ 8


--- No antennal furrows ................................................................. 9

9. Clypeus bicarinate .......... *Myrmecina*

--- Clypeus not bicarinate, occasionally with one carina ....................... *Xyphomyrmex*

10. Antennae 10-jointed .......... *Solenopsis*

--- Antennae with less than 10 joints .............................................. 11

11. Antennae 9-jointed; club of flagellum defined ........ *Meranoplus*

--- Antennae with less than 9 joints; club of flagellum well-defined .......... 12

12. Antennae 7-jointed .......... *Myrmicaria*

--- Antennae 6-jointed .......... *Strumigenys*

13. Erect hair on body trifid ....... *Triglyphothrix*

--- Erect hairs on body not trifid, simple .......... 14

14. Flagellum of antennae scarcely thickened towards apex, without distinct club .......... 18

--- Flagellum of antennae with distinct club .......... 15

15. Clypeus bicarinate .......... *Monomorium*

--- Clypeus not bicarinate, occasionally with one carina ................ 16

16. Neuters or workers strongly dimorphic .......... *Pheidoile*

--- Neuters or workers monomorphous .......... 17

17. 1st joint of pedicel with an appendix beneath ......................... *Acidomyrmex*

--- 1st joint of pedicel without any appendix beneath .......... *Tetramorium*, pt.

18. Metanotum armed with 2 short spines ......

--- Metanotum unarmed or at most bidentate ..

19. Genus *Aphaenogaster* Mayr


--- Type-species: *A. sardous* Mayr, 1853, from Sardinia, Italy.

--- *68. Aphaenogaster rothneyi* Forel


**Material examined**: SOUTH INDIA: Tamil Nadu: Kanyakumari, several workers, 27.01.1969, coll. O. B. Chhotani and R. N. Tiwari.

**Distribution**: INDIA: Tamil Nadu, Sikkim, Madhya Pradesh, West Bengal.

**Remarks**: This species is recorded here for the first time from Tamil Nadu, Southern India.

69. *Aphaenogaster beccarii* (Emery)


**Material examined**: Nil.
**Distribution**: INDIA: Karnataka, Maharashtra. Elsewhere: Indonesia (Sumatra).

**Remarks**: The material of this species could not be available for this study. However, Bingham (1903) recorded this species from Western India, Bombay; Kanara; Sumatra.

20. Genus *Messor* Forel


Type-species: *Formica barbara* Linnaeus, 1767, from South Europe.

70. *Messor barbarus* (Linnaeus)


**Material examined**: Nil.

**Distribution**: INDIA: Kerala, West Bengal, and North-West Himalayas.

**Remarks**: No material of this species could be available for this study. However, Bingham (1903) recorded this species from the North-West Himalayas, and from Cochin.

21. Genus *Pheidole* Westwood


Type-species: *Atta providens* Sykes, 1835, from India.

Subgenus *Pheidole* s. str.


**Key to the Species of Pheidole (Pheidole)**

1. 1st joint of pedicel with no projection or appendix beneath ................................................................. *phipsoni*

   — 1st joint of pedicel with a projection or appendix beneath ................................................................. 2

2. Metanotal spines clavate and obtuse towards apex like the halteres or poisers of a dipteran ................................................................. *spatiferi*

   — Metanotal spines more or less acute at apex, not clavate ................................................................. 3

3. Upper margin of node on 1st joint of pedicel emarginate; appendix beneath with a spine anteriorly ................................................................. *malinsi*

   — Upper margin of node on 1st joint of pedicel entire, not emarginate; appendix beneath without any spine ................................................................. *sharpi* 3

*71. Pheidole (Pheidole) malinsi* Forel


**Remarks**: This is the first record of this species from Tamil Nadu, Southern India.

72. *Pheidole (Pheidole) phipsoni* Forel


**Distribution**: INDIA: Tamil Nadu, Karnataka and Western India.

**Remarks**: Bingham (1903) also recorded this species from Kanara and Western India.

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73. *Pheidole* (Pheidole) *spathifera* Forel


**Distribution**: INDIA: Tamil Nadu, Andhra Pradesh, Kerala, Western India (the Nilgiris), Assam, West Bengal. Elsewhere: Sri Lanka, Burma.

**Remarks**: Bingham (1903) also reported this species and mentioned its localities as “Barrackpore: Western India, the Nilgiris to Cochin; Ceylon; Assam; Burma, Pegu Yoma”. Prior to this, Forel (1902) recognised the variety *aspatha* from Cochin, Assam and Burma having the metanotal spines obtuse but not clavate, and the 2nd node of the pedicel 3 times as broad as long and the variety *yerburi* from Sri Lanka having the head strongly medially impressed and the 1st node of the pedicel very slightly emarginate above.

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74. *Pheidole* (Pheidole) *sharpi* Forel


**Distribution**: INDIA: Tamil Nadu, Southern India and Western India. Elsewhere: Burma.

**Remarks**: Bingham (1903) also recorded this species and mentioned its localities as “Western and Southern India”.

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75. *Pheidole* (Pheidole) *hoogwerfi* Forel


**Material examined**: Nil.

**Distribution**: INDIA: Karnataka, Maharashtra.

**Remarks**: The material of this species could not be available for this study. Bingham (1903), however, reported *hoogwerfi* Forel as a species...
under the genus *Phidole* and mentioned its localities as “Bombay and Mysore”.

76. **Phidole (Pheidole) constanciae** Forel


**Material examined**: Nil.

**Distribution**: INDIA: Southern and Western India (Nilgiris).

**Remarks**: The material of this species could not be available for this study. However, Bingham (1903) recorded this species so far only from the Nilgiris. He (op. cit.) also noted “Specimens, also from the Nilgiris, vary much darker, almost black, have been separated as var. nigra by Dr. Forel”.

77. **Phidole (Pheidole) fergusoni** Forel


**Material examined**: Nil.

**Distribution**: INDIA: Kerala.

**Remarks**: No material of this species could be available for this study. However, Bingham (1903), however, recorded this species so far only from Travancore.

78. **Phidole (Pheidole) mus** Forel


**Material examined**: Nil.

**Distribution**: INDIA: Karnataka, West Bengal.

**Remarks**: The material of this species could not be available for this study. Bingham (1903) reported this species and cited its distribution as “Calcutta and Kanara”.

79. **Phidole (pheidole) minor** (Jerdon)


**Material examined**: Nil.

**Distribution**: INDIA: Kerala.

**Remarks**: The material of this species could not be available for this study. However, Jerdon (1851) first described this species under the genus *ocodoma* which was found under a stone in his garden at Tellicherry, Kerala. Subsequently, Champan and capco (1951) also recorded this species under the genus *Phidole (Pheidole)* and mentioned its locality only from “South India”.

80. **Phidole (Pheidole) roberti** Forel


**Material examined**: Nil.

**Distribution**: INDIA: Karnataka, West Bengal, Sikkim.
Remarks: The material of this species could not be available for this study. Bingham (1903) reported this species and mentioned its distribution as "Sikkim, Kanara".

81. Pheidole (Pheidole) providens (Sykes)

Material examined: Nil.

Distribution: INDIA: Southern India.

Remarks: Atta providens Sykes, 1835, reported as type-species of Pheidole from India (Bingham, 1903: 220), has not yet been included to the 'Fauna of British India'. However, Jerdon (1851) treated this species as Oecodoma providens (Sykes) with some doubt, but on careful analysis it is found that the species ought to have been treated as Atta providens which he (op. cit.) misclassified under Oecodoma. This species has been included separately in this paper under the genus Pheidole (Pheidole). The distribution of this species as shown by Jerdon (1851) happens to be "Southern India".

82. Pheidole (Pheidole) malabarica (Jerdon)

Material examined: Nil.

Distribution: INDIA: Southern India.

Remarks: No material of this species could be available for this study. However, Jerdon (1851) described this species under the genus Oecodoma from Southern India.

83. Pheidole (Pheidole) diffusa (Jerdon)

Material examined: Nil.

Distribution: INDIA: Southern India.

Remarks: The material of this species could not be available for this study. Jerdon (1851) first described this species under the genus Oecodoma from Southern India.

22. Genus Myrmica Latreille
Type-species: M. rubra Latr., 1804, from Europe.

84. Myrmica caeca Jerdon

Material examined: Nil.

Distribution: INDIA: Southern India.

Remarks: Jerdon (1851) described this species under the genus Myrmica with question mark and doubted that it may fall under Oecodoma. He (op. cit.) reported this species from Southern India. However, Bingham (1903) and Chapman and Capco (1951) placed this species under the genus Myrmica.

23. Genus Myrmicaria Saunders
Type-species: Myrmicaria brunnea Saunders, 1841, from India.

85. Myrmicaria brunnea Saunders


distribution: INDIA: Tamil Nadu, Kerala, West Bengal, and throughout India except the drier and more desert parts of the country. Elsewhere: Burma, Sri Lanka, Indonesia (Sumatra).

Remarks: Donisthorpe (1941) reported this species from Nadungayam (Kerala). Prior to this, Jerdon (1851) described Myrmica fodiens, the junior synonym of this species, from Malabar. Bingham (1903) mentioned its distribution as “Throughout our limits, avoiding the drier and more desert parts of the country”.

24. Genus Crematogaster Lund


Type-species: Formica scutellaris Oliv., 1791, from Europe and North Africa.

Key to the Species of Crematogaster

1. Head smooth and shining, at most with a few half-obsolete striae anteriorly ..........2
   — Head not smooth, entirely sculptured ........3

2. Pilosity yellowish, abundant, fine and long; the scape of antennae reaching up to the top of the head; the club of flagellum formed of the apical 4 joints ..................wroughtoni
   — Pilosity almost entirely wanting, represented by a few scattered whitish hairs; the scape of antennae reaching a little beyond the top of the head; the club of flagellum formed of the last 3 joints ..................................subnuda

3. Metanotal spines shorter than metanotum ...
   — Metanotal spines distinctly longer than metanotum

4. Metanotal spines slender, apex directed backwards, outwards and slightly downwards
   — Metanotal spines very thick at base, apex directed backwards and inwards

5. Pilosity pale, sparse and very short; head from the front nearly square; mandibles rugulose; clypeus slightly convex, the anterior margin of the medial portion slightly squarely produced; the scape of antennae reaching up to the top of the head; pronotum reticulate; pro-mesonotal suture distinct; abdomen somewhat elongate .....rothneyi
   — Pilosity almost entirely wanting; head a little broader than long; mandibles stout, smooth; clypeus very convex, the anterior margin transverse and bent inwards; the scape of antennae barely reaching the top of the head; pronotum longitudinally striate; pro-mesonotal suture indicated, but not distinct; abdomen very cordate, short and broad ...

86. Crematogaster wroughtoni Forel


1922. Crematogaster (Paraecrema) wroughtoni, Emery, Genera Insect., 174 B : 156.


Distribution: INDIA: Tamil Nadu, Maharashtra, West Bengal.

Remarks: This is the first record of this species from Southern India (Tamil Nadu).

87. Crematogaster dohreni Mayr


1922. Crematogaster (Acrocoelia) dohreni, Emery, Genera Insecta, 174 B: 150.


Biological notes: This species has been collected from nests on trees.

Remarks: Bingham (1903) reported this species and mentioned its distribution as “Sikkim; Calcutta; Western India, from Bombay to Cochin; Ceylon; Assam; Burma: Tenasserim”.

89. Crematogaster flavo Forel


1922. Crematogaster (Acrocoelia) dohreni rogenhoferi var. flavo, Emery, Genera Insecta, 174 B: 151.


Distribution: INDIA: Tamil Nadu, Kerala, Assam, Orissa, Sikkim, West Bengal.

Remarks: Bingham (1903) also reported this species (only ♀) and mentioned its distribution as "Sibsagar, Assam; Sikkim; Orissa; Travancore".

The female (♀) of this species C. flava, so far unknown, is described here under.

New Description of Crematogaster flava
Forel (♀)
(Figs. 7)

♀. Head and body yellowish to brownish yellow; abdomen somewhat darker than head; pronotum with three darker longitudinal lines. Fairly densely hairy with short and long hairs, wings densely covered with short hairs.

Head-capscule subsquarish, broader than long upto clypeus (length 1.37-1.47 mm., width with eyes 1.63-1.70 mm.); sides weakly convex; posterior margin incurved a little when seen in dorsal view; with fine striations, somewhat curved around antennal sockets, straight medially and curved outwards laterally. Eyes oval (length 0.40-0.47 mm., width 0.27-0.28 mm.), black-faceted, lying antero-laterally in middle; lower margin somewhat incurved medially. Ocelli small, oval; translucent with a black, oval spot interiorly. Clypeus oval, projecting behind in between antennae, longitudinally striate, with long hairs anteriorly. Mandibles thick, short, with thicker striations and longer hairs; masticatory margin with 5 teeth. Antennae with 11 segments; scape long, cylindrical, reaching behind upto 3/4th of head-length; 1st segment of flagellum long, cylindrical; club formed of 3 apical segments, last segment of club longest, little longer than the other two put together.

Alitrunk narrower than head with eyes. Pronotum elongately suboval, smooth, convex above. Mesonotum transverse, narrower medially. Metanotum semicircular. Legs long; foretibia with a pectinate spur; tarsi 5-jointed. Wings transparent, thin, covered densely with short hairs. Pedicel 2-jointed; 1st joint subtriangular, rounded at antero-lateral corners; 2nd joint broadly transverse, with a faint groove medially and a round petiole in front, either as wide as or slightly narrower than 1st joint.

Abdomen oval, large and massive; tip pointed, sting exerted.

Measurements (in µm):
Total body length (excluding antennae and wings) : 8.00-9.00
Median length of head (including clypeus) : 1.37-1.47
Max. width of head with eyes : 1.63-1.70
Length of scape of antennae : 0.97-1.00
Length of eye : 0.40-0.47
Width of eye : 0.27-0.28
Max. width of alitrunk : 1.37-1.47
Length of forewing : 8.00-8.60
Length of hindwing : 5.00-5.60
Max. width of 1st joint pedicel : 0.63-0.70
Max. width of 2nd joint pedicel : 0.63-0.67
Head width index (length × 100/max. width) : 82.04-88.02
Scape-head length index (scape length × 100/head length) : 68.03-70.80
Scape-head width index (scape length × 100/head width) : 58.05-61.35
Pedicel index (width of 1st joint × 100 / width of 2nd joint) : 1.00-1.06

Fig. 7- Crematogaster flava Forel (Dorsal view; Female)

Distribution: INDIA: Tamil Nadu.

*90. *Crematogaster rothneyi* Mayr


Distribution: INDIA: Tamil Nadu, Assam, West Bengal, and throughout India, except in the hot dry desert parts. Elsewhere: Burma, Sri Lanka.

92. *Crematogaster ransonneti* Mayr


Material examined: Nil.


Remarks: The material of this species could not be available for this study. However, Bingham (1903) reported this species and mentioned its localities as "Sikkim; Kanara; Ceylon".

93. *Crematogaster diffusa* (Jerdon)


Material examined: Nil.

Distribution: INDIA: Kerala (Malabar) and mostly throughout India.

Remarks: Bingham (1903: 136) wrongly synonymised this species under *Cremastogaster*
aberrans Forel, 1892. At the same time, he (op. cit.) placed this species under the genus Myrmica (Cremastogaster). Subsequently, Chapman and Capco (1951) also treated it as a separate species under Cremastogaster (Acrocoelia). Prior to this, Jerdon (1851) described this species under the genus Myrmica from Malabar, Kerala. He (op. cit.) also mentioned, “This is a well known and widely diffused species, being found throughout India. It makes its nest in holes in branches of trees”.

Jerdon (1851) further mentioned “It runs with its abdomen turned upwards almost over its head especially when excited, and feeds on honey and other vegetable secretions. Occasionally they appear to join their nest among the roots of Moss, Orchideae, and various Epiphytic plants. It is very pugnacious, and bites very severely, not appearing to use its sting much.”

94. Cremastogaster rufa (Jerdon)

Material examined: Nil.

Distribution: INDIA: Tamil Nadu.

Remarks: The material of this variety could not be available for this study. However, Chapman and Capco (1951) reported this variety nilgirica from Coonoor (Tamil Nadu).

95. Cremastogaster brunnea var. nilgirica Forel

Material examined: Nil.

Distribution: INDIA: Tamil Nadu.

Remarks: The material of this variety could not be available for this study. However, Chapman and Capco (1951) reported this variety nilgirica from Coonoor (Tamil Nadu).

96. Cremastogaster brunnea contempa var. notabilis Forel

Material examined: Nil.

Distribution: INDIA: Tamil Nadu and Maharashtra.

Remarks: No material of this variety could be available for this study. Chapman and Capco (1951), however, reported this variety notabilis Forel and mentioned its distribution as Poona (Maharashtra) and Coonoor (Tamil Nadu).

97. Cremastogaster aberrans Forel
Material examined: Nil.

Distribution: INDIA: Karnataka and Maharashtra.

Remarks: The material of this species could not be available for this study. However, Chapman and Capco (1951) reported this species from Western India and Kanara. Prior to this, Bingham (1903) also recorded this species and mentioned its distribution as "Western India: Thana; Kanara".

98. Crematogaster aberrans var. inglebyi Forel


Material examined: Nil.

Distribution: INDIA: Kerala.

Remarks: The material of this variety could not be available for this study. However, Bingham (1903: 137) mentioned this variety under the species, C. aberrans Forel, 1892 from Travancore (Kerala) and noted "it differs from aberrans in not having the head so truncate anteriorly and the antennae proportionately longer; the scape extending beyond the top of the head". Subsequently, Chapman and Capco (1951) also recorded this variety from the same locality.

99. Crematogaster ebenina Forel


Material examined: Nil.

Distribution: INDIA: Tamil Nadu and Western Ghats.

Remarks: The material of this species could not be available for this study. Bingham (1903) reported this species from Western Ghats. But subsequently, Chapman and Capco (1951) recorded this species under the genus Crematogaster (Oxygene) and mentioned its locality as "Coonoor" (Tamil Nadu).
102. Crematogaster biroi Mayr

1897. Crematogaster biroi Mayr, Termész. Füzetek, 20 : 428, _♀._


Material examined : Nil.


Remarks : No material of this species could be available for this study. However, Bingham (1903) reported this species and mentioned its distribution as "Kanara; Dehra Dun; Sikkim; Ceylon". He (op. cit.) further noted "This remarkable species of Crematogaster is as aberrant in habits as in the form of the _♀_. It makes no nests in trees as most of the other species do, but lives in small communities under stones".

103. Crematogaster biroi var. aitkeni Forel


Material examined : Nil.

Distribution : INDIA : Karnataka.

Remarks : The material of this variety could not be available for this study. However, Chapman and Capco (1951) mentioned its locality as "India : Kanara". But previously, Bingham (1903 : 139) also mentioned aitkeni Forel, 1902 as a variety under C. biroi Mayr, 1897 from the same locality and noted "The specimens from Kanara separated as var. aitkeni Forel, are more pilose, have the thorax striate-reticulate, subopaque, and the metanotal spines divergent, not curved downwards".

104. Crematogaster pradipi sp. nov.

(Figs. 8-9)

_♀._ Head and body blackish brown; legs somewhat paler. Head and body covered with short hairs. Total length 3.8-4.5 mm.

Head-capsole subsquarish, sides weakly convex; posterior margin substraight when viewed flat in dorsal view; with fine striations in anterior part; striations near antennae curved around them and straighter elsewhere. Eyes black, oval, facetted; situated laterally in middle; length 0.17-0.23 mm., width 0.13-0.17 mm. Ocelli absent. Clypeus suboval, appreciably projecting behind in between antennal carinae; with longitudinal striations and anteriorly with a few long bristle-like hairs. Antennae with 11 segments; scape elongate, a little shorter than flagellum and not reaching up to hind margin of head; 1st segment of flagellum elongate; club 3-jointed; apical segment of club subequal to preceding two segments put together. Mandibles strong, thick and hairy; masticatory margin with 5 teeth.

Alitrunk much narrower than head. Pronotum flat rounded at sides and ridged at upper lateral margin; with a few faint longitudinal striations. Mesonotum oval, sloping posteriorly and weakly depressed medially; ridged on sides; pro-mesonotal suture laterally clear, dorsally not marked. Metanotum transversely broad, with a median longitudinal ridge and fairly large lateral spines; posteriorly sloping downwards; meso-metanotal suture well-marked. First joint of pedicel wider and rounded anteriorly, narrowing posteriorly. Second joint of pedicel divided into two small, round tubercles by a longitudinal groove and with a small, flat, tubercle at base; apex attached to upper basal surface of abdominal segment.

_♀._ Head and body blackish brown, legs slightly paler; wings transparent, trisdescent. Head and body covered with small, short hairs; mandibles and clypeus with a few, long bristles. Total length without wings 7.60-8.00 mm.

Head-capsole as in _♀_, but larger; striations more prominent, otherwise as in _♀_. Eyes oval (length 0.40-0.43 mm., width 0.27-0.33 mm.), black, facetted, lying laterally and antero-posteriorly, with lower margin sometimes faintly
Fig. 8 - *Crematogaster pradipi* sp. nov. (Dorsal view: Worker)

Fig. 9(a) - *Crematogaster pradipi* sp. nov. (Dorsal view: Female)

Fig. 9(b) - Fore wing and Hind wing of *Crematogaster pradipi* sp. nov., Female
Measurements (in μm):

<table>
<thead>
<tr>
<th>Parts measured</th>
<th>Ψ (Worker) Range (5 exs.) (Measurements in μm)</th>
<th>Ψ (Worker) Holotype (Measurements in μm)</th>
<th>Ψ (Female) (5 exs) (Measurements in μm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total body length (excluding antennae and wings)</td>
<td>3.80-4.50</td>
<td>4.50</td>
<td>7.60-8.00</td>
</tr>
<tr>
<td>Median length of head including clypeus</td>
<td>0.86-1.07</td>
<td>1.07</td>
<td>1.43-1.50</td>
</tr>
<tr>
<td>Maximum width of head with eyes</td>
<td>0.90-1.13</td>
<td>1.13</td>
<td>1.47-1.50</td>
</tr>
<tr>
<td>Length of scape of antenna</td>
<td>0.73-0.83</td>
<td>0.83</td>
<td>0.90-1.00</td>
</tr>
<tr>
<td>Length of eye</td>
<td>0.17-0.23</td>
<td>0.23</td>
<td>0.40-0.43</td>
</tr>
<tr>
<td>Width of eye</td>
<td>0.13-0.17</td>
<td>0.17</td>
<td>0.27-0.33</td>
</tr>
<tr>
<td>Maximum width of alitrunk</td>
<td>0.53-0.63</td>
<td>0.63</td>
<td>1.23</td>
</tr>
<tr>
<td>Length of fore wing</td>
<td>—</td>
<td>—</td>
<td>6.70 (1 ex.)</td>
</tr>
<tr>
<td>Length of hind wing</td>
<td>—</td>
<td>—</td>
<td>5.10 (1 ex.)</td>
</tr>
<tr>
<td>Maximum width of 1st joint of pedicel</td>
<td>0.30-0.40</td>
<td>0.40</td>
<td>0.50-0.53</td>
</tr>
<tr>
<td>Maximum width of 2nd joint of pedicel</td>
<td>0.27-0.33</td>
<td>0.33</td>
<td>0.50-0.53</td>
</tr>
</tbody>
</table>

Incurved. Ocelli small, round, translucent; median ocellus (0.11-0.13 mm. in diameter) slightly larger than lateral ones (0.10-0.11 mm. in diameter). Clypeus suboval, projecting behind in between antennal carinæ; longitudinally striated and with a few long bristle-like hairs at anterior margin. Mandibles thick, short, punctate, thickly striate and hairy; masticatory margin with 5 teeth. Antennae with 11 segments as in a whole larger, otherwise as in Ψ.

Alitrunk a little narrower than head; pronotum, mesonotum and metanotum distinctly separated. Pronotum elongated oval, smooth, convex above. Mesonotum transverse, narrower medially and wider laterally. Metanotum semicircular narrowed posteriorly. Legs elongate, fore tibia with a pectinate spur, tarsi 5-jointed. Wings transparent, thin and hairy; venation as in figure 9b. Pedicel 2-jointed; 1st joint subtriangular, broad in front and narrowing posteriorly, flat above, somewhat depressed inferiorly; 2nd joint broad, indistinctly divided into two by a longitudinal groove and with thick, round petiole anteriorly.

Abdomen oval, large and massive; pointed at tip; sting not well exerted.

Various indexes of Holotype

\[
\text{Head Index} = \frac{\text{[Length} \times 100]}{\text{Max. width of the head}} = \frac{1.07 \times 100}{1.13} = 94.690
\]

\[
\text{Scape} - \text{head length Index} = \frac{\text{Scape length} \times 100}{\text{Head length}} = \frac{0.83 \times 100}{1.07} = 77.570
\]

\[
\text{Scape} - \text{head width Index} = \frac{\text{Scape length} \times 100}{\text{Head width}} = \frac{0.83 \times 100}{1.13} = 73.451
\]

\[
\text{Pedicel Index} = \frac{\text{Width of 1st joint} \times 100}{\text{Width of 2nd joint}}
\]
\[ \frac{0.40 \times 100}{0.33} = 121.212 \]

Holotype: \( \varpi \), INDIA: Tamil Nadu: Madras, Top-Slip, 24.ii.1969, coll. O. B. Chhotani and R. N. Tiwari; paratypes: 4 \( \varpi \), 7 \( \varphi \), locality same as holotype; deposited in National Zoological Collections, Zoological Survey of India, Calcutta.

This new species approaches close to *Crematogaster anthracina* Smith, 1857 in the nature of body pattern, colour of the body and other structural characters, but differs from the latter in having pronotum flat dorsally and rounded anteriorly; pro-mesonotal suture obsolete dorsally, but laterally marked; mesonotum medially depressed; metanotal spines thick at the base, convergent posteriorly and bent inwards; first joint of pedicel posteriorly with a raised rounded node; second joint of pedicel distinctly bilobed; abdomen subcordate.


Type-species: *S. mandibularis* Smith, 1860, from Brazil.


1903. *Strumigenys godeffroyi*, Bingham, Fauna Brit. India, Hymenoptera, 2: 149, \( \varpi \), \( \varphi \).


Material examined: Nil.

Distribution: INDIA: Southern and Western India. Elsewhere: Malaysia, Oceania, Samoan.

Remarks: The material of this species could not be available for this study. However, Bingham (1903) mentioned its habitat as "Western and Southern India." He (op. cit.) further mentioned that the Indian form has been separated as var. *indica* Forel, 1902 and characterised by more pilosity, with a slightly longer abdomen, densely striate at the base.


Type-species: *M. latreilli* Curtis, 1829, from South of England.


Distribution: INDIA: Kerala.

Remarks: This species belongs to a little known genus *Myrmecina*. This genus was recorded for the first time from India by Tiwari (1994).

The species *urbanii* Tiwari, 1994 under the genus *Myrmecina* is characterised by alltrunk convex above, triangular, tapering posteriorly; pronotum straited transversely; meso- and metanotum with posteriorly converging longitudinal striae, forming a distinct "Y" shaped structure at base; pronotum arm with a small spine on each antero-lateral corner, spines directed downward; mesonotum armed with a pair of small acute spines, thick at base and situated at the postero-lateral end of the mesonotum; metanotum armed with a pair of long spines directed outwards and slightly bent upwards at tips.


Distribution: INDIA: Kerala.

Remarks: The species *M. vidyae* is very close to *M. urbanii* Tiwari, 1994, in having body
pattern, antennae, legs and throrax characters mostly similar, but it differs from urbanii by having the following characters: mandibular formula "1+6" i.e., one apical tooth and 6 small sub-apical teeth; absence of mesonotal spine; metanotal spines thinner and longer in shape; striae on meso- metanotum outwardly divergent; gaster not truncate anteriorly and having finer granulation all over the dorsum.

27. Genus Monomorium Mayr


Type-species: M. minutium Mayr, 1855, from Europe.

Key to the Species of Monomorium

1. Head more or less rugulose, opaque ..........2
   - Head not rugulose and opaque, but more or less smooth and shining .........................3

2. Head in front distinctly broader than posteriorly; the nodes of pedicel, seen from above, nearly equal .................................. indicum
   - Head as broad posteriorly as in front; the 2nd node of pedicle broader than 1st node ............................................. glyciphilum

3. 2nd node of pedicle not broader than the 1st node ............................................. mayri
   - 2nd node of pedicel broader than the 1st node .................................................................4

4. Length 1.5-2 mm.; pilosity almost entirely wanting; 2nd node of pedicel very little broader than the 1st node ...................... floricola
   - Length 3-3.7 mm.; pilosity moderate or sparse, fine and rather long; 2nd node of pedicel very much broader than the 1st node .................................. latinode

108. Monomorium indicum Forel


Remarks: Bingham (1903: 206) also mention its distribution as "The Punjab to Madras, and Bombay to Burma".

**109. Monomorium glyciphilum (Smith)


1922. Monomorium (Xeromyrmex) glyciphilum, Emery, Genera Insect., 174 B: 176.


Remarks: This is the first record of this species from India (Tamil Nadu, South India).

*110. Monomorium mayri Forel


**Distribution**: INDIA: Tamil Nadu, Kerala. Elsewhere: Burma.

**Biological notes**: This ant has been collected from the trunk of a coconut tree at Coimbatore and from the soil along with *Crematogaster rogenhoferi* Mayr, 1878 and *Solenopsis geminata* (Fabricius, 1804) at Salem (Tamil Nadu).

**Remarks**: Bingham (1903 : 211) noted "Typical *M. gracillimum*, so far as I know, has been recorded within our limits only from Ceylon; but the form separated as var. *mayri* (Forel, *Rev. Suisse Zool.* X (1902), p. 209) is spread throughout India and Burma. It differs from true *M. gracillimum* in being dark brown with the mandibles, antennae and legs pale yellow; the basal portion of the metanotum is submargined and is more abruptly truncate at apex, it is densely and very finely transversely striate and opaque".

111. *Monomorium floricola* (Jerdon)


**Distribution**: INDIA: Tamil Nadu, Kerala, West Bengal. Elsewhere: Sri Lanka, Oceania.

**Biological notes**: This is a common house-ant in India and damages all sorts of materials.

**Remarks**: Jerdon (1851) first described this species *floricola* under the genus *Atta* from Tellicherry (Kerala). While describing this species, he also noted in the same publication that he had obtained this very small ant, of which he had only seen one kind of individual, in small numbers on flowers and leaves and it appeared to feed solely on vegetable secretions.

*112. Monomorium latinode* Mayr


**Distribution**: INDIA: Tamil Nadu, West Bengal and spread throughout India. Elsewhere: Sri Lanka, Burma, Indonesia (Borneo), Formosa (Taiwan).

**Biological notes**: This is also a house-ant in India and damages all sorts of materials. It has been collected from soil under the withering seedlings of *Eucalyptus* sp. It’s association, however, in the death of seedlings could not be confirmed.

**Remarks**: Bingham (1903) reported this species and mentioned its distribution as “spread throughout India, Ceylon, and Burma, extending to Borneo”. But Ettershank (1966) has restricted *latinode* to Borneo only.

113. *Monomorium dichroum* Forel


**Material examined**: Nil.

**Distribution**: INDIA: Southern India (Nilgiri Hills).

**Remarks**: The material of this species could not be available for this study. However, Bingham (1903) recorded this species and mentioned its locality as “Southern India, Nilgiri Hills”.

114. *Monomorium pharaonis* (Linnaeus)


**Material examined**: Nil.

**Distribution**: INDIA: Karnataka and throughout India. Elsewhere: Spread over the tropical regions to both hemispheres.

**Remarks**: Jerdon (1851) described the species *minuta* under the genus *Atta* from Karnataka, which was synonymised with *M. pharaonis* (Linn.) by Bingham (1903). Bingham (op. cit.) mentioned its distribution as “Throughout our limits, and spread over the tropical regions of both hemispheres”.

Jerdon (1851) further noted “this minute species makes a temporary nest in various situations, in an empty box, between the back and its leaves, even among the loose pages of a book, in an empty shell etc. Nothing is used in its construction, a shelter from the light merely being sought for. It is perhaps not very numerous in individuals, one wingless female is generally found in the nest. It appears to prefer dead animal matter to saccharine or vegetable products”.

115. *Monomorium wroughtoni* Forel


**Material examined**: Nil.

**Distribution**: INDIA: Karnataka, Maharashtra.
Remarks: No material of this species could be available for this study. Bingham (1903) however, reported this species, *M. wroughtoni* Forel, 1902 and mentioned its distribution as “Western India, Poona, Kanara”.

116. *Monomorium criniceps* (Mayr)


Material examined: Nil.


Remarks: The material of this species, *M. criniceps* (Mayr) could not be available for this study. While recording this species *criniceps* under the genus *Holcomyrnex*, Bingham (1903) mentioned its distribution only “Western India; Southern India; Ceylon; Burma; Pegu Yoma”.

117. *Monomorium scabriceps* (Mayr)


Material examined: Nil.

Distribution: INDIA: Tamil Nadu, Kerala, Punjab.

Remarks: No material of this species could be available for this study. However, Donisthorpe (1942c) recorded this species under the genus *Holcomyrnex* and mentioned its locality as “Dohnavur, Tinnelvelly Dist. (S. India). Prior to this, Bingham (1903) also reported this species under the same genus and quoted “Distributed irregularly throughout India from Punjab to Cochin; not recorded from Ceylon, Assam or Burma”.

118. *Monomorium crinicipitoscabriceps* (Forel)


Material examined: Nil.


Remarks: The material of this species could not be available for this study. However, Chapman and Capco (1951) recorded this species as a variety from Mysore and Burma.

According to Forel (1902), this variety is the intermediate between *H. criniceps* Mayr, 1878 and *H. scabriceps* Mayr, 1878. But later, Ettershank (1966) treated this variety as a species under the genus *Monomorium*.

119. *Monomorium nigrum* (Forel)


Material examined: Nil.

Distribution: INDIA: Karnataka, Maharashtra.
Remarks: The material of this species could not be available for this study. However, Chapman and Capco (1951) mentioned its distribution as “India: Kanara and Poona”.

120. *Monomorium glabrum* (André)


Material examined: Nil.

Distribution: INDIA: Tamil Nadu, Southern and Western India. Elsewhere: Sri Lanka and Burma.

Remarks: No material of this species could be available for this study. However, Bingham (1903) mentioned its distribution as “Western and Southern India, Ceylon, and Burma”. Subsequently, Donisthorpe (1942c) also recorded this species from Dohnavur (550 ft.), Tinnelvelly Dist. Tamil Nadu (South India).

121. *Monorium glabrociniceps* (Forel)


Material examined: Nil.

Distribution: INDIA: Karnataka and Maharashtra.

Remarks: No specimens of this species could be available for this study. However, Chapman and Capco (1951) mentioned its localities as “India: Kanara and Bombay”.

122. *Monomorium destructor* (Jerdon)


Material examined: Nil.

Distribution: INDIA: Southern India and mostly throughout India. Elsewhere: Spread through the torrid regions of both hemispheres.

Biological notes: They live in holes in the ground, or in walls, etc., and are very numerous in individuals. They prefer animal to vegetable substances, destroying dead insects, bird skins etc., but also feed greedily on sugar (Jerdon, 1851).

Remarks: The material of this species could not be available for this study. However, Jerdon (1851) described this species under the genus *Atta* from Southern India and further mentioned its distribution as “They are common in all parts of India, and often prove very troublesome and destructive to the Naturalist”. Later, while reporting this species under the genus *Monomorium*, Bingham (1903) noted its distribution as “Throughout our limits, and spread (probably carried and introduced by shipping) through the torrid regions of both hemispheres”.

123. *Monomorium schurri* Forel


**Material examined**: Nil.

**Distribution**: INDIA: Tamil Nadu and Kerala (Nilgiri Hills).

**Remarks**: The material of this species could not be available for this study. Bingham (1903), however, recorded this species from the Nilgiri Hills, Southern India.

124. *Monomorium minutum* Mayr


**Material examined**: Nil.


**Remarks**: No material of this species could be available for this study. However, Bingham (1903) recorded this species from Travancore (Southern India) and also found in Southern Europe, Africa and North America.

28. Genus *Oligomyrmex* Mayr


Type-species: *O. concinnus* Mayr, 1867, from Australia.

125. *Oligomyrmex leei* Forel


**Material examined**: Nil.

**Distribution**: INDIA: Karnataka.

**Remarks**: No specimens of this species could be available for this study. However, Bingham (1903) recorded this species from Mysore (South India).

126. *Oligomyrmex lamellifrons* (Forel)


**Material examined**: Nil.

**Distribution**: INDIA: Karnataka.

**Remarks**: The material of this species could not be available for this study. However, Bingham (1903) recorded this species under the genus *Phidologiton* so far from Belgaum (South India). Subsequently, Chapman and Capco (1951) also mentioned its locality as “Belgaum” in their monograph. Ettershank (1966) synonymised and placed the species under the genus *Oligomyrmex*.

29. Genus *Solenopsis* Westwood


Type-species: *S. mandibularis* Westwood, 1841, from America.

127. *Solenopsis geminata* (Fabricius)


Solenopsis geminata var. rufa, Bingham, Fauna Brit. India, Hymenoptera, 2 : 159.


Distribution : INDIA : Tamil Nadu, Kerala, Karnataka, West Bengal. Elsewhere : Spread pretty nearly over the tropics of the two hemispheres.

Biological notes : While describing the species Atta rufa, Jerdon (1851) noted “It is found in holes under ground, mud walls and often appears in houses, coming through a hole or crevice in the floor or wall. Its favourite food is dead insects and other matter. It stings very severely, leaving a burning pain that lasts for several minutes”.

According to Beeson (1941) S. geminata, commonly known as ‘Brown Fire Ant’, has a severe sting. It makes its nest in soil and is reported to be injurious to seedlings buds and leaves. It is reported to be an important enemy of aphids, soft scales, termites, bed bugs and moth larvae and can be introduced in the control of termites and caterpillars of Eublemma amabilita and Holococera pulverea in the lac godowns.

In Southern India, this ant has been collected from coconut and banana plants and also from soil and under stones.

Remarks : Jerdon (1851) described the species rufa under the genus Atta from Malabar and Karnataka. Bingham (1903) mentioned the distribution of S. geminata (Fabr., 1804) as “Throughout out limits, and spread pretty nearly over the tropics of the two hemispheres”. Further he (op. cit.) noted “var. rufa Jerdon is a darker reddish yellow”. Subsequently, Chapman and Capco (1951) also recorded the rufa as a subspecies from Malabar. But Ettershank (1966) synonymised the species Atta rufa Jerdon, 1851 and placed it under the species Solenopsis geminata (Fabricius, 1804).

30. Genus Lophomyrmex Emery


Type-species : Ocodoma quadrispinosus Jerdon, 1851, from Malabar.

128. Lophomyrmex quadrispinosus (Jerdon)


Biological notes : Jerdon (1851) noted that it appeared to be feeding on the vegetable secretions surrounding the seeds.

Remarks : Jerdon (1851) first described this species under the genus Ocodoma from Southern India (Malabar), having thorax with two small spines anteriorly and two large, curved spines posteriorly. Later on, Bingham (1903) mentioned
this species under the genus *Lophomyrmex*, having thorax with the characters of the genus, a slight transverse carina between the pronotal spines, the latter triangular, dentate; mesonotum with a prominent transverse carina about the middle, generally bidentate; basal portion of metanotum short, widening posteriorly, the metanotal spines long, acute and slightly curved. He (op. cit.) noted its distribution as "N. W. Provinces, Dehra Dun; Sikkim; Orissa; Calcutta; Malabar; Kanara".

31. Genus *Pheidologeton* Mayr


Type-species: *Oecodoma diversa* Jerdon, 1851, from South India.

129. *Pheidologeton affinis* (Jerdon)


**Material examined** : Nil.

**Distribution** : INDIA : Kerala, Karnataka, Maharashtra, Sikkim, West Bengal. Elsewhere : Burma and extending into the Malayan subregion.

**Biological notes** : Most of the ants of the genus *Pheidologeton* make their nests under bricks, stones, flower pots, rock-works, or any spot offering shelter or shade of this nature (Rothney, 1889 : 369). Later on, Bingham (1903 : 161) also noted that nests of this group of ants can be found under the blocks of laterite road-material collected by the sides of roads repairing purpose. He had also found large and populous nests under stacks of bricks in a brickfield, under fallen logs in the jungle, and in the foundations of the pillars of the

130. *Pheidologeton diversus* (Jerdon)


wooden bungalows. He (op. cit.) further mentioned, “the gaint soldiers, however formidable they look, are absolutely unable to give even a decent nip, but the bites of the smaller forms of soldiers and of ♀ min. are vicious and to be remembered. In a nest of these ants, the workers far outnumber the various forms of soldiers. So the attack of the tiny worker is far more ferocious and effective than that of the soldiers”.

Remarks: No material of this species could be available for this study. However, Jerdon (1851) first described this species from Southern India. Bingham (1903) also recorded this species from Southern India and mentioned its distribution as “Sickkim; Bengal; Western India, Poona, Kanara, Calicut, Travancore; Burma and Tenasserim. Extending into the Malayan subregion”.

32. Genus Meranoplus Smith


Type-species: Cryptocerus bicolor Guérin, 1838, from India.

Key to the Species of Meranoplus

1. Pilosity very long; head a little longer than broad; clypeus smooth, convex in the middle; the pro-mesonotal shield about as broad as long; mesonotum armed posteriorly with two long acute spines; 2nd node of pedicel unarmed .............................................. bicolor

— Pilosity shorter; head nearly square; clypeus striate, medially concave; the pro-mesonotal shield broader than long; mesonotum armed posteriorly with only comparatively short teeth; 2nd node of pedicel armed posteriorly above with a distinct rather thick tooth pointing backwards ..................................... bellii

*131. Meranoplus bicolor (Guérin)


Distribution: INDIA: Tamil Nadu, West Bengal and mostly throughout India, except the hot dry plains in the North-Western Provinces, Punjab and Central India. Elsewhere: Nepal, Burma, Indonesia (Sumatra) and extending to the Malayan subregion.

132. Meranoplus bellii Forel


Distribution: INDIA: Tamil Nadu, Karnataka and Western India.

Remarks: Bingham (1903) also recorded this species and mentioned its distribution as “Western India, Kanara”.

133. Meranoplus carinatus Donisthorpe

Material examined: Nil.

Distribution: INDIA: Kerala (Malabar).

Remarks: The material of this species could not be available for this study. However, Donisthorpe (1942c) described this species and mentioned its locality as “Amarambalam Forest, 500-1500 ft., Malabar, Southern India”. Chapman and Capco (1951) also mentioned its distribution as “S. India: Malabar”.

134. *Meranoplus flaviventris* Donisthorpe


Material examined: Nil.

Distribution: Kerala.

Remarks: No material of this species could be available for this study. Donisthorpe (1943) first described this species from Tenamalai (500-800 ft.), Trivancore, Southern India. Later on, Chapman and Capco (1951) also recorded this species and mentioned its distribution as “S. India: Trivancore”.

135. *Meranoplus levis* Donisthorpe


Material examined: Nil.

Distribution: INDIA: Tamil Nadu.

Remarks: No specimens of this species could be available for this study. However, Donisthorpe (1942c) mentioned its locality as “Dohnavur (350 ft.), Tinnelvelly Dist., Southern India”.

136. *Meranoplus rothneyi* Forel


Material examined: Nil.


Remarks: The material of this species could not be available for this study. However, Bingham (1903) and Chapman and Capco (1951) recorded this species from Cochin, South India.

33. Genus *Triglyphothrix* Forel


Type-species: *T. walshi* Forel, 1890, from India.

137. *Triglyphothrix decamera* Forel


Material examined: Nil.

Distribution: INDIA: Karnataka.

Remarks: The material of this species could not be available for this study. However, Bingham (1903) recorded this species from Kanara. Subsequently, Chapman and Capco (1951) also listed this species from the same locality.

138. *Triglyphothrix musculus* Forel


**Material examined:** Nil.

**Distribution:** INDIA: Kerala and Tamil Nadu.

**Remarks:** The material of this species could not be available for this study. However, Bingham (1903) recorded this species and mentioned its locality as "The Nilgiris".

139. *Triglyphothrix obesa* (André)


**Material examined:** Nil.

**Distribution:** INDIA: Karnataka, Maharashtra, West Bengal.

**Remarks:** No material of this species could be available for this study. Bingham (1903), however, reported this species and mentioned its distribution as "Bengal; Western India, Bombay and kanara". Subsequently, Tiwari et al. (1994) also recorded its distribution as "West Bengal, Karnataka, Maharashtra".

34. Genus **Tetramorium** Mayr


Type-species: *Formica caespitum* Linnaeus, 1758, from Europe.

**Key to the Species/Subspecies of Tetramorium**

1. Antennae 12-jointed ................... *guineense*
   — Antennae 11-jointed ........... *pilosum yerburyi*

140. *Tetramorium guineense* (Fabricius)


**Material examined:** SOUTH INDIA: Kerala: Trivandrum, several workers, vii.1968, coll. N. M. Antony.

**Distribution:** INDIA: Kerala, Karnataka, Maharashtra.

**Remarks:** Bingham (1903) also recorded this species and mentioned its distribution as "Western India, Bombay, Kanara".

**141. Tetramorium pilosus yerburyi** Forel


**Distribution:** INDIA: Tamil Nadu. Elsewhere: Sri Lanka.

**Remarks:** This subspecies is recorded here for the first time from Indian territory.

142. *Tetramorium fergussoni* Forel


**Material examined**: Nil.

**Distribution**: INDIA: Tamil Nadu and Kerala.

**Remarks**: The material of this species could not be available for this study. However, Bingham (1903) recorded this species so far only from Travancore.

143. *Tetramorium inglebyi* Forel


**Material examined**: Nil.

**Distribution**: INDIA: Kerala.

**Remarks**: No material of this species could be available for this study. Bingham (1903) however, reported this species and mentioned its locality as “Travancore”.

144. *Tetramorium coonoorense* Forel


**Material examined**: Nil.

**Distribution**: INDIA: Kerala and Tamil Nadu.

**Remarks**: The material of this species could not be available for this study. However, Bingham (1903) recorded this species so far only from the Nilgiri Hills.

145. *Tetramorium mixtum* Forel


**Material examined**: Nil.

**Distribution**: INDIA: Karnataka, West Bengal.

**Remarks**: No material of this species could be available for this study. However, Bingham (1903)
reported this species from Bangalore, Southern India.

148. *Tetramorium smithi* Mayr


**Material examined**: Nil.

**Distribution**: INDIA : Southern and Western India, West Bengal.

**Remarks**: The material of this species could not be available for this study. Bingham (1903) however, mentioned its distribution as “Bengal, Western and Southern India”.

149. *Tetramorium tortuosum* var. *belli* Forel


**Material examined**: Nil.

**Distribution**: INDIA : Karnataka, Western India.

**Remarks**: No material of this species could be available for this study. Bingham (1903) however, reported this species and mentioned its localities as “Western India, Belgaum”. Subsequently, Chapman and Capco (1951) also recorded this species from Belgaum.

35. Genus *Cataulacus* Smith


Type-species: *C. taprobanae* Smith, 1853, from Sri Lanka (formerly Ceylon).

151. *Cataulacus* (*Cataulacus*) *latus* Forel


**Material examined**: Nil.

**Distribution**: INDIA : Kerala, Orissa, West Bengal. Elsewhere : Burma.

**Remarks**: The material of this species could not be available for this study. However, Donisthorpe (1943) in reports of ants of Southern India, based on Colombo Museum Expedition (Sept.-Oct., 1983), mentioned its locality as “Tenamalalai, 500-800 ft., Travancore, Southern India”.

36. Genus *Atta* Fabricius


Type-species: *Formica cephalotes* Linnaeus, 1861.
152. *Atta domicola* Jerdon


**Material examined**: Nil.

**Distribution**: INDIA: Andhra Pradesh.

**Remarks**: No material of this species could not be available for this study. However, Jerdon (1851) first described this species from Nellore, South India in a hole of a house.

153. *Atta dissimilis* Jerdon


**Material examined**: Nil.

**Distribution**: INDIA: Kerala (Malabar).

**Remarks**: The material of this species could not be available for this study. However, Jerdon (1851) described this species under the genus *Atta* which was found in small numbers on trees in Malabar, South India.

VI. Subfamily FORMICINAE Lepeletier

The species belonging to this subfamily are probably mentally and socially the most highly developed of all the ants. Structurally they are distinguished by having a one-jointed pedicel with no constriction between the two basal abdominal segments; the poison-glands and stings are considerably modified, the former being converted into a cushion of convolutions, the latter forming merely an orifice for the ejaculation of the poison, which in certain genera (*Oecophylla*, for instance) can be done with considerable force; the orifice of the cloaca is in this subfamily always circular, and ciliated round the margin.

Certain genera of this subfamily such as *Formica* and *Myrmecocystus* are well known as slave-makers, but this habit seems confined to these genera in Europe, and does not so far as has been observed, obtain in the representatives or even in the same genera in India. Species of representative genus *Camponotus* of this subfamily, are pre-eminently known as farmers of Aphides, Homoptera, Lycaenid-larvae and such like ant-cattle.

37. Genus *Oecophylla* Smith


Type-species: *Formica virescens* Fabricius, 1775, from Australia.

154. *Oecophylla smaragdina* (Fabricius)


**Distribution**: INDIA: Tamil Nadu, Karnataka, Kerala (Malabar), West Bengal and mostly the whole of India, except desert and treeless areas. Elsewhere: Burma, Sri Lanka, S. China, Malay, New Guinea, Australia.

**Biological notes**: This species was collected from nests on *Mangifera indica*, *Strychnose* sp., *Nuxvomica* sp., coconut and *Ashoka* trees. The nests are made in the leaves which are bound together by fine whitish membranous tissue paper
lilu synthetic substance. Some eggs were also found in the nest at Salem.

This is the notorious and vicious 'Red-Ant' of India; it inhabits in trees and makes nest in leaves. Its habits have been very well described by Jerdon (1851), Aitken (1889), Rothney (1899), Wroughton (1893-94) and Green (1896, 1900). In Kanara and some other parts of the country, and through Burma and Siam, a paste made of this species of ant pounded is eaten as a condiment with curry.

The eggs of O. smaragdina have been found to contain high protein, fat and as such it is used as a medicine to combat the condition of A-Vitaminosis, particularly in case of Marasemus condition. It is widely used for above purpose in tribal people and the eggs are sold in weekly-market for the purpose.

Remarks: Jerdon (1851) also reported this species under the genus Formica from South India and noted "This ant is well known in Malabar, and the wooded parts of India, but is rare in the Carnatic, where I have only seen it in one or two large Mango groves". Subsequently, Bingham (1903) mentioned its distribution as "The whole of India, Burma and Ceylon within our limits, except the desert and treeless tracts. The range of this species extends through the Malayan subregion to Australia and New Guinea."

38. Genus Myrmecocystus Wesmael


Type-species: Formica melleri Llave, 1832, from America.

155. Myrmecocystus setipes Forel


Material examined: Nil.


Remarks: No material of this species could be available for this study. However, Negi et al. (1930) recorded setipes as a subspecies from Salem, Tamil Nadu.

39. Genus Acantholepis Mayr


Type-species: Hypoclinea frauenfeldi Mayr, 1855, from Europe.

*156. Acantholepis frauenfeldi (Mayr)


Remarks: This is a variable species and is reported by a number of varieties and subspecies extending to North Africa and Southern Europe. Its habitat is within the limits spread irregularly in one form or another through Continental India, confined chiefly to the hills but procured by Mr. Rothney at Barrackpore, West Bengal (Bingham, 1903).
157. *Acantholepis opaca* Forel


**Material examined**: Nil.

**Distribution**: INDIA: Karnataka, Goa.

**Remarks**: The material of this species could not be available for this study. However, Bingham (1903) recorded this species from Kanara and Goa. Later on, Chapman and Capco (1951) also reported this species from "Kanara".

158. *Acantholepis fergusoni* Forel


**Material examined**: Nil.

**Distribution**: INDIA: Kerala.

**Remarks**: The material of this species could not be available for this study. However, Bingham (1903) and Chapman and Capco (1951) reported this species from Travancore, South India.

40. Genus *Camponotus* Mayr


Type-species: *Formica ligniperdus* Latreille, 1798, from Europe.

**Key to the Species of Camponotus**

1. Thorax viewed from side forming a regular arch .................................................. 2

2. Regular arch of the thorax interrupted at the meso-metanotal suture by the metanotum forming an angle with mesonotum .................. sericeus

3. Head, thorax and abdomen black ............... 3

— Head, thorax and abdomen never all black or all yellow ......................... rufoglaucus

4. ♂ maj. Length 11-16 mm.; ♂ min. with head posteriorly narrow but not constricted to form a collar ............................................ dolendus

— ♂ maj. Length 17-21 mm.; ♂ min. with head posteriorly constricted so as to form a collar ............................................ angusticollis

159. *Camponotus angusticollis* (Jerdon)


**Material examined**: SOUTH INDIA: Tamil Nadu: 15 workers (maj. and min.), Coimbatore (Sugarcane Research Institute compound),

Remarks: Jerdon (1851) first described this species under the genus Formica in the forests in Malabar. Donisthorpe (1942) also reported this species under the genus Camponotus from South India. This ant has been collected here from trunks of Acacia sp. and an unknown tree and also on ground.

160. Camponotus compressus (Fabricius)

1787. Formica compressa Fabricius, Mon. Insect., 1: 307, Ψ.


1903. Camponotus compressus, Bingham, Fauna Brit. India, Hymenoptera, 2: 351, Ψ maj., Ψ min., Ψ, Ψ.


Distribution: INDIA: Tamil Nadu, Assam, West Bengal. Elsewhere: Sri Lanka, Nepal, Burma, Philippines, Borneo, Russia, Arabia and Africa.

Biological notes: This is the common black ant in India. The nests are in soil and heaps of earth are brought out in the form of small files. In Southern India, it was collected from soil and from a tree the wood of which is used in making the match sticks. Their food is chiefly vegetable secretions, sugar etc. They bite rather severely, but the pain is quite momentary. This species is plentiful where it occurs. It is one of the ants noted for tending and keeping “ant-cattle”.

Remarks: Jerdon (1851) and Donisthorpe (1943) also reported this species from South India under the genera Formica and Camponotus respectively. Negi et al. (1930) also recorded this species under the genus Camponotus from Tamil Nadu (Salem).

161. Camponotus sericeus (Fabricius)


1851. Formica cinerascens Fabr. ?, Jerdon, Madras J. Lit. Sci., 17: 123, Ψ, Ψ, Ψ.


1900. Camponotus sericeus, Bingham, Fauna Brit. India, Hymenoptera, 2: 376, Ψ maj., Ψ min., Ψ.


Distribution: INDIA: Tamil Nadu, Karnataka, West Bengal and more or less common throughout the country. Elsewhere: Burma, Sri Lanka, Indochina, Arabia, Egypt and Tropical Africa.

Remarks: Jerdon (1851) reported Formica cinerascens Fabr. ? from Karnataka, South India which was later considered as a synonym of C. sericeus (Fabr.) by Bingham (1903). Subsequently,
Donisthorpe (1941 : 458) also reported this species *sericeus* under the genus *Camponotus* (*Orthonotomyrmex*) from Tamil Nadu, South India.

162. *Camponotus rufoglaucus* (Jerdon)


**Distribution**: INDIA: Tamil Nadu, Sikkim, N. W. Himalayas (above 5000 ft.), West Bengal.

164. *Camponotus paria* Emery


**Material examined**: Nil.

**Distribution**: INDIA: Kerala (Malabar), Assam and apparently throughout India. Elsewhere: Burma, Sri Lanka.

**Remarks**: The material of this species could not be available for this study. However, Donisthorpe (1942) reported this species and mentioned its locality as "Nadangayam, Malabar".

165. *Camponotus mendax* Forel


**Material examined**: Nil.

**Distribution**: INDIA: Karnataka.

**Remarks**: No material of this species could be available for this study. However, Bingham (1903)
reported this species from Mysore, Southern India. But Chapman and Capco (1951) also recorded this species as a variety from the same locality of South India.

166. Camponotus puniceps Donisthorpe


Material examined : Nil.

Distribution : INDIA : Tamil Nadu.

Remarks : The material of this species could not be available for this study. However, Donisthorpe (1942c) mentioned its locality as “Dohnavur, 350 ft., Tinnelvelly Dist., South India”.

167. Camponotus barbatus Roger


Material examined : Nil.


Remarks : The material of this species could not be available for this study. However, Donisthorpe (1943) mentioned its locality as “Tenamalai, 500-800 ft., Travancore, South India”.

168. Camponotus taylori Forel


Material examined : Nil.

Distribution : INDIA : Kerala, Tamil Nadu, Maharashtra, Orissa, Sikkim, the N. W. Himalayas and distributed mostly throughout India. Elsewhere : Sri Lanka, Burma and China.

Remarks : No material of this species could be available for this study. Bingham (1903), however, recorded this species from the Nilgiris of South India. But Donisthorpe (1942) reported taylori as a subspecies from Tenamalai, Travancore.

169. Camponotus similis Donisthorpe


Material examined : Nil.


Remarks : The material of this species could not be available for this study. However, Donisthorpe (1943) described this species and mentioned its locality as “Tenamalai, Travancore”.

170. Camponotus variegatus (Smith)


Material examined : Nil.

Remarks: The material of this species could not be available for this study. Donisthorpe (1942), however, mentioned its locality as "Dohnavur, Tirunelvelly Dist., South India".

171. Camponotus variegatus somifica Forel


Material examined: Nil.


Remarks: No specimens of this subspecies could be available for this study. However, Chapman and Capco (1951) recorded this subspecies from The Nilgiris, South India.

172. Camponotus mitis (Smith)


Material examined: Nil.

Distribution: INDIA : Tamil Nadu. Elsewhere: Sri Lanka, China, Indonesia (Java, Sumatra, Timor, Celebes), New Guinea, Prince Island.

Remarks: The specimens of this species could not be available for this study. Negi et al. (1930), however, recorded this species from Salem, Tamil Nadu. It is a variable species.

173. Camponotus thraso Forel


Material examined: Nil.


Remarks: No material of this species could be available for this study. Donisthorpe (1943) first reported this species from India (Travancore, South India) which was later recorded in the Check List by Chapman and Capco (1951).

174. Camponotus phragmaticola Donisthorpe


Material examined: Nil.

Distribution: INDIA : Kerala.

Remarks: The material of this species could not be available for this study. Donisthorpe (1943) first described this species and mentioned its locality as "Tenamalai, 500-800 ft., Travancore, South India".

175. Camponotus strictus (Jerdon)


Material examined: Nil.


Remarks: The specimens of this species could not be available for this study. However, Jerdon (1851) first described this species under the genus Formica from Malabar. He (op. cit.) also mentioned that he had found this ant on flowers. Later on, Bingham (1903) also mentioned its distribution as “Malabar; Burma; extending to Borneo”.

176. Camponotus confucii Forel

Material examined: Nil.

Distribution: INDIA: Karnataka and Western India. Elsewhere: Upper Burma.

Remarks: No material of this species could be available for this study. However, Bingham (1903) mentioned its distribution as “Western India, Kanara; Upper Burma”. He (op. cit.) further noted that some specimens of the 3 minor have the abdomen castaneous red.

177. Camponotus varius Donisthorpe

Material examined: Nil.

Distribution: INDIA: Tamil Nadu.

Remarks: The material of this species could not be available for this study. While describing this species from India, Donisthorpe (1943) mentioned its locality as “Muthikolam, 3000 ft., Coimbatore Dist.”

178. Camponotus nirvanae Forel

Material examined: Nil.

Distribution: INDIA: Tamil Nadu, Karnataka, Western India.

Remarks: No specimens of this species could be available for this study. Bingham (1903) and Chapman and Capco (1951) mentioned its locality as “Kanara”. But Negi et al. (1930) reported this species from Salem Dist., Tamil Nadu.

179. Camponotus timidus (Jerdon)

Material examined: Nil.

Distribution: INDIA: Kerala (Malabar Coast).

Remarks: The material of this species could not be available for this study. While describing this species, Jerdon (1851) noted that it is very common ants in Malabar Coast, living chiefly on vegetable secretions and it has its nest under the ground.

180. Camponotus velox (Jerdon)
Material examined: Nil.

Distribution: INDIA: Kerala (Malabar), Karnataka.

Remarks: No material of this species could be available for this study. Jerdon (1851) first described this species which is mostly common in Malabar and also found in Karnataka. He (op. cit.) further noted “it frequents flowers, especially delighting in those that have great quantities of pollen, such as Cucurbitaceae, Hibiscus sp. etc. It runs very speedily, and is very easily alarmed, dropping to the ground on being touched”.

181. Camponotus radiatus Forel


Material examined: Nil.

Distribution: INDIA: Karnataka, Western India.

Remarks: The material of this species could not be available for this study. However, Bingham (1903) reported this species and mentioned its locality as “Western India, Kanara”. Later on, it was further recorded in the Check List by Chapman and Capco (1951) from South India and mentioned the same locality as “Kanara”.

41. Genus Polyrhachis Smith


Type-species: Formica bihamata Drury, 1773, from Malay Peninsula.

Key to the Species of Polyrhachis

1. Thorax more or less rounded above, the sides not margined along their whole length; pubescence sparse or dense..........................2

2. Pubescence sparse, almost entirely wanting; node of pedicel without median spines ...... ......................................................... simplex

3. Pubescence dense, silky, recumbent and bronzy yellow or golden; 2 small teeth between spines on upper lateral angles of node of pedicel ........................................dives

182. Polyrhachis mayri Roger


Distribution: INDIA: Tamil Nadu, Kerala, Karnataka, Assam, Sikkim, West Bengal. Elsewhere: Sri Lanka, Nepal, Burma, China, Philippines, Formosa (Taiwan), Gulf of Siam, Krakatau, Indonesia (Java, Sumatra, Borneo, Celebes).

Remarks: Donisthorpe (1943) treated P. mayri Roger, 1863 as a synonym of P. (Myrma) illaudata Walker, 1859, but Collingwood (1970) considered mayri as a valid species under Polyrhachis. As the author has no access to the types of these species, it is not possible to give any opinion by him. The
present specimens come to mayri when run through Bingham’s (1903) key.

Prior to this, Bingham (1903) also reported this species and mentioned its distribution as “Bengal, Sikkim, Kanara, Travancore; Ceylon, Burma; extending down to the Malayan subregion”. Later on, Donisthorpe (1943) and Chapman and Capco (1951) mentioned its habitat as ‘S. India’ along with other localities.

*183. Polyrhachis dives Smith


*184. Polyrhachis simplex Mayr


Distribution : INDIA : Tamil Nadu, West Bengal and also throughout the country. Elsewhere : Burma, Sri Lanka.

Remarks : This species is nearly the most common species of this genus and widely distributed throughout the country (Bingham, 1903).

185. Polyrhachis clypeata Mayr


Material examined : Nil.


Remarks : The material of this species could not be available for this study. However, Bingham (1903) reported this species from Travancore of South India.

186. Polyrhachis clypeata var. obtusisquama Forel


Material examined : Nil.

Distribution : INDIA : Karnatak.
Remarks: No specimens of this variety could be available for this study. Chapman and Capco (1951) mentioned its locality as ‘India: Konkan’.

187. *Polyrhachis exercita* Walker


Material examined: Nil.

Distribution: INDIA: Tamil Nadu.

Remarks: The material of this species could not be available for this study. However, Donisthorpe (1942c) reported this species from Dohnavur, South India.

188. *Polyrhachis rastellata* Latreille


Material examined: Nil.

Distribution: INDIA: Karnataka, Elsewhere: Sumatra.

Remarks: No material of this variety could be available for this study. The variety *pagans* Santschi, 1928 of *P. rastellata* was synonymised with the variety *corporaali* Santschi, 1928 of the same species by Chapman and Capco (1951 : 265) and at the same time they mentioned the habitat of the variety *pagans* as ‘Kanara’.

190. *Polyrhachis duodentata* Donisthorpe


Material examined: Nil.

Distribution: INDIA: Kerala (Malabar).

Remarks: The material of this species could not be available for this study. Donisthorpe (1942c) described this species and mentioned its locality as “Nadungayam, 200 ft, Malabar, South India”, which was later recorded with the same locality in the Check list by Chapman and Capco (1951).

191. *Polyrhachis illaudata* Walker


Material examined: Nil.


Remarks: No specimens of this species could be available for this study. However, Donisthorpe (1943) mentioned its locality as “Nadghani Ghaut, Gudulur Dist., South India”. Chapman and Capco (1951) also mentioned its distribution as “S. India, Bengal” and other localities.

192. Polyrhachis latispinosa Donisthorpe


Material examined: Nil.

Distribution: INDIA: Kerala.

Remarks: The specimens of this species could not be available for this study. Donisthorpe (1942c) described this species and mentioned its locality as “Tenamalai, 500-800 ft., Travancore, South India”.

193. Polyrhachis punctillata Roger


Material examined: Nil.


Remarks: No material of this species could be available for this study. Donisthorpe (1943) mentioned its locality as “Mothikalam, 300 ft., Coimbatore Dist.” Prior to this, Bingham (1903) also recorded this species from Kanara of South India along with other localities.

194. Polyrhachis punctillata fergusoni Forel


Material examined: Nil.

Distribution: INDIA: Kerala.

Remarks: The material of this subspecies could not be available for this study. Bingham (1903: 410) considered P. punctillata race fergusoni Forel, 1902 as a synonym of P. punctillata Roger, 1863. But later on, Chapman and Capco (1951) treated fergusoni as separate subspecies under the same species and mentioned its habitat as “India: Travancore”.

195. Polyrhachis dives belli Forel


Material examined: Nil.

Distribution: INDIA: Karnataka.

Remarks: No specimens of this subspecies could be available for this study. While recording this subspecies in the Check list, Chapman and Capco (1951) mentioned its locality as “India: Kanara”.

196. Polyrhachis bingham Forel


Material examined: Nil.


Remarks: No material of this species could be available for this study. However, Donisthorpe
(1942) reported this species from South India and mentioned its locality as "Tenamalai, 500-800 ft., Travanore", which was further noted in the Check list by Chapman and Capco (1951).

197. Polyrhachis furcata gracilior Forel


Material examined : Nil.

Distribution : INDIA : Kerala, Assam.

Remarks : The material of this subspecies could not be available for this study. Bingham (1903) recorded gracilior as a species from Travanore, South India, but Chapman and Capco (1951) treated it as a subspecies from the same locality.

198. Polyrhachis indicificans (Jerdon)


Material examined : Nil.

Distribution : INDIA : Kerala (Malabar).

Remarks : The specimens of this species could not be available for this study. While describing this species under the genus Formica from Malabar, South India, Jerdon (1851) noted "This ant makes a small nest about 1/2 inch or more in diameter, of some papyraceous material, which it fixes on a leaf. Each of the nests contains one female and 8 or 10 workers. It is very rare species".

199. Polyrhachis sylvicola (Jerdon)


Material examined : Nil.

Distribution : INDIA : Kerala (Malabar).

Remarks : The specimens of this variety could not be available for this study. However, Donisthorpe (1942) reported this variety and mentioned its locality as "Nadungayam, 200 ft., Malabar, South India".

200. Polyrhachis tibialis Smith


Material examined : Nil.

Distribution : INDIA : Karnataka, Kerala (Malabar), West Bengal. Elsewhere : Burma, Indonesia (Borneo, Celebes).

Remarks : The material of this species could not be available for this study. Bingham (1903) mentioned its distribution as "India : Kanara, Bengal; Ceylon, Burma and extending to the Malayan subregion". Subsequently, Donisthorpe (1942) also reported this species from Tenamalai (500-800 ft.), Travanore and Nadungayam (200 ft.), Malabar of South India.

201. Polyrhachis tibialis var. parris Emery


Material examined : Nil.


Remarks : The specimens of this variety could not be available for this study. However, Donisthorpe (1942) reported this variety and mentioned its locality as "Nadungayam, 200 ft., Malabar, South India".

Memoirs of the Zoological Survey of India
202. *Polyrhachis weberi* Donisthorpe


**Material examined**: Nil.

**Distribution**: INDIA : Kerala.

**Remarks**: No material of this species could be available for this study. Donisthorpe (1943) described this species from Travancore, South India, which was again recorded in the Checklist from the same locality by Chapman and Capco (1951).

203. *Polyrhachis wroughtoni* Forel


**Material examined**: Nil.

**Distribution**: INDIA : Karnataka.

**Remarks**: No specimens of this species could be available for this study. This species previously reported from ‘Kanara’, South India by Bingham (1903) and Chapman and Capco (1951).

204. *Polyrhachis thrinax* Roger


**Material examined**: Nil.

**Distribution**: INDIA : Karnataka, Kerala (Malabar), West Bengal. Elsewhere : Sri Lanka, Burma, Java.

**Remarks**: The material of this species could not be available for this study. Bingham (1903) recorded the species *P. thrinax* Roger, 1863 and mentioned its distribution as “India : Bengal, Kanara, Travancore; Ceylon, Burma, Java”, which was again reported by Donisthorpe (1942) from Nadungayam (200 ft.), Malabar, South India. Donisthorpe, in the same year, also described another new variety *muconis* under the same species from Malabar, which was later considered as a new synonym of *P. (Myrmotherax) thrinax* Roger, 1863 by Brown (1959).

205. *Polyrhachis indica* Mayr


**Material examined**: Nil.

**Distribution**: INDIA : Tamil Nadu (Pondicherry).

**Remarks**: The specimens of this species could not be available for this study. Bingham (1903 : 411) treated this species *P. indica* Mayr, 1870 as a synonym of *P. clypeata* Mayr, 1862, but later on, Chapman and Capco (1951) gave *P. indica* as a separate species status in their Check List and mentioned its locality as “Pondicherry, South India”.

42. Genus *Hemioptica* Roger


**Type-species**: *H. scissa* Roger, 1862, from Sri Lanka (formerly Ceylon).

206. *Hemioptica scissa* Roger


**Material examined**: Nil.

**Distribution**: INDIA: Kerala, Tamil Nadu.

**Remarks**: No material of the species could be available for this study. However, Donisthorpe (1942) mentioned its localities as “Tenamalai, Travancore (Kerala) and Dohnavur, Tinnelvelly Dist. (Tamil Nadu)”.

207. *Hemiopica aculeata* (Mayr)


**Material examined**: Nil.


**Remarks**: The material of this species could not be available for this study. While reporting this species under the genus *Hemiopica*, Bingham (1903) mentioned its distribution as “Kanara, Travancore” of South India along with other localities.

43. Genus *Paratrechina* Motschulsky


**Type-species**: *Paratrechina currens* Motschulsky, 1863.

**Key to the Species of Paratrechina**

1. The scape of antennae hardly extending up to the top of the head ...................... *bourbonica*
   — The scape of antennae clearly extending beyond the top of the head ...... *longicornis*

*208. Paratrechina bourbonica* (Forel)


**Distribution**: INDIA: Tamil Nadu, West Bengal. Elsewhere: Burma, Seychelles, Pemba Is., Oceania.

**Biological notes**: This species of ant has been collected from the trees, *Mangifera indica* and *Peltophorum pterocarpum* and from a dead stump of an unknown plant.

**Remarks**: Taylor (1987) also treated *Paratrechina* as a genus and made a list of some species along with some synonyms under the genus *Paratrechina*.

*209. Paratrechina longicornis* (Latreille)


Distribution: INDIA: Tamil Nadu, West Bengal and mostly throughout the country.

210. Paratrechina assimilis (Jerdon)


Material examined: Nil.

Distribution: INDIA: Kerala (Malabar)

Remarks: No specimens of this species could be available for this study. While describing this species under the genus Formica, Jerdon (1851) noted that he found it frequenting flowers in Malabar, but not abundant. Chapman and Capco also mentioned its locality as “S. Hindustan”.

211. Paratrechina yerburyi (Forel)


Material examined: Nil.


Remarks: The material of this species could not be available for this study. Bingham (1903) mentioned its distribution as “Ceylon; Southern India, the Nilgiris”.

44. Genus Plagiolepis Mayr


Type-species: Formica pygmnea Latreille, 1798, from Europe.

212. Plagiolepis jerdoni Forel


Material examined: Nil.

Distribution: INDIA: Kerala, Maharashtra.

Remarks: The specimens of this species could not be available for this study. However, Bingham (1903) and Chapman and Capco (1951) also recorded this species under the genus Plagiolepis from Travancore, Southern India and Poona, Western India.

213. Plagiolepis rogeri Forel


Material examined: Nil.

Distribution: INDIA: Karnataka, Western India. Elsewhere: Burma.

Remarks: No material of this species could be available for this study. Bingham (1903) mentioned its distribution as “Western India, Kanara; Tenasserim, Mergui”.

214. Plagiolepis wroughtoni Forel


Material examined: Nil.

Distribution: INDIA: Tamil Nadu and Kerala (The Nilgiris).

Remarks: The material of this species could not be available for this study. However, Bingham (1903) recorded this species so far only from ‘The Nilgiris’.
45. Genus *Anoplolepis* Santschi


Type-species: *Formica longipes* Jerdon, 1851, from India.

215. *Anoplolepis longipes* (Jerdon)


**Material examined:** Nil.

**Distribution:** INDIA: Kerala, West Bengal and mostly throughout the country except in the hot dry portions of the North-Western Provinces, the Punjab and parts of Central India.

**Remarks:** The specimens of this species could not be available for this study. Jerdon (1851), while describing this species under the genus *Formica*, mentioned its habitat as “Tellicherry” of South India. He (op. cit.) further noted “this ant is found in all the forests of India living in holes in the ground, in tolerable numerous societies, and feeding on vegetable secretions”.

46. Genus *Formica* Linnaeus


Type-species: *F. rufa* Linnaeus, 1758, from Europe.

216. *Formica phyllophila* Jerdon


**Material examined:** Nil.

**Distribution:** INDIA: South India.

**Biological notes:** The little species forms a temporary nest between two leaves usually, or sometimes in a head of flowers; it lives in small societies, and feeds entirely on vegetable secretions (Jerdon, 1851).

**Remarks:** No material of this species could be available for this study. Jerdon (1851) described this species from South India, but no specific locality mentioned. Later, Chapman and Capco (1951) also mentioned its locality as “South India”.

217. *Formica vagans* Jerdon


**Material examined:** Nil.

**Distribution:** INDIA: Karnataka.

**Biological notes:** It takes up its quarters in any sheltered spot in a house, under a box, a stone, a hole in the wall, or such like places, and when disturbed flits with great speed to another suitable spot. It’s society is very numerous in individuals and there are many females and males, sometimes with wings, at other times without wings. It feeds both on vegetable and animal substances (Jerdon, 1851).

**Remarks:** The material of this species could not be available for this study. While describing this species under the genus *Formica* from South India, Jerdon (1851) mentioned that this little ant was exceedingly common in the Karnataka.

VII. Subfamily DOLICHODERINAE Forel

The species belonging to this subfamily can be distinguished at a glance from the subfamily Ponerinae on the one hand by there being no constriction between the 1st and 2nd segment of the abdomen, and on the other hand from the subfamily Formicinae by the anal aperture being transverse, and not circular nor ciliated. The head is short and broad; the thorax robust, the metanotum often compressed and raised (*Dolichoderus*) or spinous (*Aneuretus*); pedicel 1-jointed, the node placed closer to the abdomen than to the thorax, sometimes inclined anteriorly, and often impinging on the front of the abdomen, which has a hollow anteriorly for its reception; abdomen generally
gibbous in front (except in Liometopum), broadly oval (Dolichoderus, Iridomyrmex); sting not modified, but only in one genus (Aneuretus) exerted; legs slender (Aneuretus), long and robust (Iridomyrmex, Tapinoma), but short and stout (Bothriomyrmex, Technomyrmex).

47. Genus Tapinoma Förster


Type-species: Formica erraticum Latreille, 1798, from Europe.

218. Tapinoma melanocephalum (Fabricius)


Material examined: Nil.

Distribution: INDIA: Tamil Nadu, West Bengal, Western India and mostly spread throughout India.

Remarks: The material of this species could not be available for this study. However, Bingham (1903) recorded this species from 'Coonoor' of South India.

DISTRIBUTIONAL ANALYSIS OF THE SPECIES RECORDED

Altogether 219 species of ants have been reported from Southern India till date. Of these, 98 species (about 44.75%) are found to be Endemic in nature. Of the rest 121 species (55.25%), about 26 species (21.49%) are found to be cosmopolitan and hence are widely distributed throughout India. Three other major zones of India, i.e., Eastern India, Western India and Northern India, share about 20 species (16.53%), 35 species (28.93%) and 2 species (1.65%) respectively of the non-endemic species. Central India, however, does not share any of the non-endemic species except the cosmopolitan species. 38 of the non-endemic species, comprising about 31.40% are found to be sharing more than one major zones of India—along with Southern India.

The strong endemism (44.75%) indicates certain factors or barriers, which kept these species confined to Southern India only. In order to establish the nature of the endemism, zoogeographical and ecological study of the Endemic species is suggested. Above analysis is based on illustrative data in Distributional Table No. 1 and Figs. 10 A-B.
Pie-chart showing zone-wise distribution of species recorded (Non-endemic) in Percentage (%)

- W. India: 28.93%
- E. India: 16.53%
- N. India: 1.65%
- Cosmopoliton: 21.49%
- More than one zone: 31.40%

C. India: Recorded Nil

Figure 10 A
Histogram showing Endemism of ants from Southern India

- Total No. of Species: 219
- Non-Endemic Species: 121
- Endemic Species: 98

Figure 10 B
Table 1: Ant Fauna of Southern India (Insecta: Hymenoptera: Formicidae) Along with their Distribution in other regions in India.

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the species</th>
<th>Eastern India</th>
<th>Western India</th>
<th>Central India</th>
<th>Northern India</th>
<th>Southern India</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td><em>Dorylus (Alapone) orientalis</em> Westwood</td>
<td>*</td>
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<tr>
<td>2</td>
<td><em>Aenictus aratus</em> Forel</td>
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<td>3</td>
<td><em>Aenictus brevicornis</em> (Mayr)</td>
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<td>4</td>
<td><em>Aenictus fergusoni</em> Forel</td>
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<td>5</td>
<td><em>Aenictus pachycerus</em> (Smith)</td>
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<td>6</td>
<td><em>Aenictus ceylonicus</em> (Mayr)</td>
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<td>7</td>
<td><em>Aenictus arya</em> Forel</td>
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<td>8</td>
<td><em>Aenictus clavatus</em> Forel</td>
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<td>9</td>
<td><em>Aenictus clavatus var. kanarensis</em> Forel</td>
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<td>10</td>
<td><em>Aenictus wroughtoni</em> Forel</td>
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<td>11</td>
<td><em>Aenictus gleadowi</em> Forel</td>
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<td>12</td>
<td><em>Anochetus sedilloti</em> Emery</td>
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<td>13</td>
<td><em>Anochetus mordax</em> Donisthorpe</td>
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<td>14</td>
<td><em>Anochetus orientalis kanarensis</em> Forel</td>
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<td>15</td>
<td><em>Anochetus punctiventris</em> Mayr</td>
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<td><em>Anochetus punctiventris taylori</em> Forel</td>
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<td><em>Anochetus ruginotis</em> Stitz</td>
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<td><em>Anochetus rufus</em> (Jerdon)</td>
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<td>19</td>
<td><em>Odontomachus haematodes</em> (Linnaeus)</td>
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<td>20</td>
<td><em>Harpegnathus saltator</em> Jerdon</td>
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<td>21</td>
<td><em>Harpegnathus venator</em> (Smith)</td>
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<td>22</td>
<td><em>Leptogenys (Lobopelta) birmana</em> Forel</td>
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<td>23</td>
<td><em>Leptogenys (Lobopelta) ocellifera</em> (Roger)</td>
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<td><em>Leptogenys (Lobopelta) dentilobis</em> Forel</td>
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<td><em>Leptogenys (Lobopelta) diminuta</em> (Smith)</td>
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<td><em>Leptogenys (Lobopelta) diminuta palliseri</em>Forel</td>
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<td><em>Leptogenys (Lobopelta) carinata</em> Donisthorpe</td>
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<td><em>Leptogenys (Lobopelta) roberti coonoorensis</em> Forel</td>
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<td>Leptogenys (Lobopelta) longiscapus Donisthorpe</td>
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<td>Leptogenys (Lobopelta) dalyi Forel</td>
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<td>Diacamma vagans (Smith)</td>
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<td>Diacamma rugosum ceylanensis Emery</td>
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<td>Diacamma rugosum var. jerdoni Forel</td>
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<td>Diacamma rugosum var. sculptum (Jerdon)</td>
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<td>Diacamma cyaniventre André</td>
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<td>Ectomyrmex annamitus (André)</td>
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<td>Ectomyrmex leeuwenhoeki (Forel)</td>
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<td>Bothroponera henryi Donisthorpe</td>
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<td>Bothroponera rubiginosa (Emery)</td>
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<td>Bothroponera sulcata (Frauenfeld)</td>
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<td>Bothroponera tesserinoda (Mayr)</td>
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<td>Ponera truncata Smith</td>
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<td>Ponera stenochelos Jerdon</td>
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<td>Ponera sulcata-fossulatus Forel</td>
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<td>Ponera affinis Jerdon</td>
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<td>Euponera (Trachymesopus) darwini (Forel)</td>
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<td>Cryptopone testacea (Motschulsky)</td>
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<td>Cryptopone rufotestaceus Donisthorpe</td>
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<td>Brachyponera jerdoni (Forel)</td>
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<td>Brachyponera luteipes (Mayr)</td>
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<td>Brachyponera luteipes var. continentalis Karawajew</td>
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<td>Mesoponera melanaria Emery</td>
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<td>Amblyopone belli Forel</td>
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<td>Lioponera parva Forel</td>
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<td>61. Tetraponera (Tetraponera) aitkeni (Forel)</td>
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<td>62. Tetraponera (Tetraponera) allaborans Walker</td>
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<td>63. Tetraponera (Tetraponera) rufonigra (Jerdon)</td>
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<td>68. Aphaenogaster rothneyi Forel</td>
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<td>70. Messor barbarus (Linnaeus)</td>
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<td>84. Myrmica caeca Jerdon</td>
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<td>87. Crematogaster dohrni Mayr</td>
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<td>89. Crematogaster flava Forel</td>
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<td>Crematogaster rothneyi Mayr</td>
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<td>Crematogaster subnuda Mayr</td>
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<td>93.</td>
<td>Crematogaster diffusa (Jerdon)</td>
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<td>Crematogaster rufa (Jerdon)</td>
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<td>Crematogaster brunnea var. nilgirica Forel</td>
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<td>Crematogaster brunnea contemta var. notabilis Forel</td>
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<td>Crematogaster aberrans Forel</td>
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<td>Crematogaster aberrans var. inglebyi Forel</td>
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<td>Crematogaster travancorensis Forel</td>
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<td>Crematogaster datyi Forel</td>
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<td>Crematogaster biroi Mayr</td>
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<td>Crematogaster biroi var. aitkeni Forel</td>
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<td>Crematogaster pradipi sp. nov.</td>
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<td>Strumigenys godeffroyi Mayr</td>
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<td>Myrmecina urbanii Tiwari</td>
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<td>Myrmecina vidyae Tiwari</td>
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<td>108.</td>
<td>Monomorium indicum Forel</td>
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<td>Monomorium glyciophilum (Smith)</td>
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<td>Monomorium mayri Forel</td>
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<td>111.</td>
<td>Monomorium floricola (Jerdon)</td>
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<td>Monomorium latinode Mayr</td>
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<td>Monomorium dichroum Forel</td>
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<td>114.</td>
<td>Monomorium pharaonis (Linnaeus)</td>
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<td>Monomorium wroughtoni Forel</td>
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<td>116.</td>
<td>Monomorium criniceps (Mayr)</td>
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<td>117.</td>
<td>Monomorium scabriceps (Mayr)</td>
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<td>Monomorium crinicibitoscapsibiceps (Forel)</td>
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<td>Monomorium glabrum (André)</td>
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<td>Formica vagans Jerdon</td>
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SUMMARY

The monograph deals with the ants collected from several states of Southern India, viz., Andhra Pradesh, Kerala, Karnataka and Tamil Nadu. Main collection on which work is based, is from Tamil Nadu and Kerala. Jerdon (1851) worked on Indian ants, particularly from Southern India and recorded 46 species under 8 genera from this region. Later on Rothney (1889), Forcl (1900a, b, c), Donisthorpe (1942c, 1943) contributed much to the ant fauna of Southern India. Bingham (1903) also made a significant contribution in this direction and recorded 498 species from this region. Although several workers have contributed to the knowledge of ant fauna of Southern India, no one has exclusively studied the ant fauna of this region.

This is the first attempt by the present author to consolidate the knowledge of ant fauna of Southern India. Altogether 219 species under 48 genera and 7 subfamilies have been reported in this monograph. Out of these, 22 species are reported for the first time from Southern India and 2 species are new records from India. This also includes the descriptions of Worker and Female of a new species, Crema
tagaster pradipli sp. nov., along with a new description of Female of a known species, Crema
tagaster flava Forcl, 1886 separately. The taxa marked with single asterisk (*) in "the list of Taxa in Systematic Account", are new records from the states of Southern India and those marked with double asterisks (**) are new records from India. Key to the identification of the subfamilies, genera and species dealt in the monograph from this region have also been incorporated. A separate table showing the distributional pattern of recorded species zone-wise, along with distributional analysis of the same is also provided to have a glimpse of the distribution of the species at a glance.

ACKNOWLEDGEMENTS

The author acknowledges Dr. J. R. B. Alfred, Director, Zoological Survey of India, Calcutta, for his assiduous guidance and constant supervision throughout the course of this investigation. The author expresses his sincere gratitude and thanks to Late Dr. O. B. Chhotani, former Jr. Director, Zoological Survey of India, Calcutta for his inspiration and keen interest in completion of this work.

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