



## FIRST RECORD OF ANT (INSECTA : HYMENOPTERA : FORMICIDAE) FROM LAKSHADWEEP ISLANDS, INDIA

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### INTRODUCTION

The formerly known Laccadive, Amini and Minicoy group of Islands in the Arabian sea were named as Lakshadweep in the year 1973 to form one of the smallest Union Territories of India. Lakshadweep archipelago consists of 12 atolls, three reefs and five submerged banks with 10 of its 36 Islands (area 32 sq.km.) being inhabited. Scientific expeditions in the area as such can never be restricted to small land mass but must cover a lagoon area of 42 sq. km., territorial waters of 20,000 km. and the exclusive economic zone of 4,00,000sq. km.

Lakshadweep remained biologically one of the least explored regions in the Indian Ocean. Like other oceanic atolls in the circumtropical region, these coral islands are also known to support exceptionally rich and varied forms of life more in the sea round them on their land. Because of the great abundance of food fish in the Lakshadweep sea playing an important role in the economy of the islands, subsequent investigations in this region were mainly concerned with the fish and fisheries by various Scientists of the Fisheries Institutes.

The Zoological Survey of India has in the past during the years 1982-1987 also made some frequent surveys of these islands and collected materials on diverse groups of land and marine animals. The economy of the islands is solely dependant on living natural sources *viz.*, Tuna in the seawater and Coconut Palms on the land.

These islands lie irregularly scattered in the South-Arabian sea about 200-400 km. off-stretched along the south-west coast of India. They are situated between latitudes 8° and 13°N and longitude 71° and 74° E. The Lakshadweep comprises in all 36 islands, islets, reefs and sand banks distributed north to south in the Arabian sea. Ten of these islands, *viz.*, Bitra, Chetlat, Kiltan, Kalmat, Amini, Agatti, Androth, Kavaratti, Kalpeni and Minicoy are inhabited by man. The ten inhabited islands has a land area of 28.5 sq. kms. and important because they offer suitable land and limited ground water resources for human settlement. These islands also support a rich variety of fauna in their reefs and lagoons.

**Agatti island :** Agatti island is the most westerly located islands lies between 10° 51'N and 72° 11' E. It is club shaped, with a broad northern part and the narrow southern strip. The island is 6 kms. long, 1 km wide at its broadest point and 27 sq. kms. in area. As an exception, there are no storm beaches on its eastern side and clean sandy belt occur in the intertidal zone. Thick coconut growed occur on the northern side, while the southern part supports short shrub jungles ending with spiny grasses on the shore. Separated by a narrow channel in the lagoon on the southern side lies the small uninhabited islet Kalpitti, with rocks all around.

Ants have the most highly organized social life among all the insects. The major factor responsible for their ecological success is division

of labour. Ants live in highly organized and integrated units in the societies or colonies.

Bingham, s (1903) published detailed account of ants of British India, Including Ceylon and Burma under the 'Fauna of British India' series and that document is considered as the main source of knowledge of Indian ants. Zoological Survey of India has published the faunal account of Lakshadweep Island in 2005. The volume under the State Fauna Series No. 2, included the species under seven orders of class Insecta except Hymenoptera. Considering the fact while conducting a tour to Lakshadweep few ant specimens (Hymenoptera : Formicidae) comprising three species were collected from Agatti island by the second author and reported here as first record from the Island.

#### SYSTEMATICS OF THE STUDIED SPECIMENS

##### Family FORMICIDAE

Subfamily DOLICHODERINAE Forel

Genus : *Tapinoma* Forster

##### *Tapinoma (Micromyrma) melanocephalum* Fabricius

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

1983. *Tapinoma melanocephalum* : Mathew, Bull. zool. Surv. India, 5 (1): 125-127.

*Material examined* : Workers – 3 exs., Agatti island near Agriculture office, from dry litter, 2.vii.2011, coll. A. K. Sanyal. (Regd. No. 12802/H3).

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

*Elsewhere* : Spread through both the hemispheres.

*Remarks* : Reported for the first time from Lakshadweep Island.

Sub-family : FORMICINAE Lepeletier

Genus : *Paratrechina* Motschoulsky

##### *Paratrechina longicornis* (Latreille)

1802. *Formica longicornis* Latreille, Nat. Hist. Fourmis, 113.

1903. *Prenolepis longicornis* Bingham, Fauna Brit. India, Hym., 2: 326.

1987. *Paratrechina longicornis* (Latreille) : Devi & Singh, Entomon, 12(4): 309-313.

*Material examined* : Workers – 5 exs., Agatti Island near Agriculture office, from dry litter, 2.vii.2011, coll. A.K. Sanyal. (Regd. No. 12801/H3).

*Distribution* : India : Uttarakhand, Rajasthan, Western India, Maharashtra, Orissa, West Bengal, Uttar Pradesh, Tamil Nadu.

*Elsewhere* : All tropical countries, Europe.

*Remarks* : Reported for the first time from Lakshadweep Island.

Sub-family : MYRMICINAE Lepeletier

Genus : *Monomorium* Mayr

##### *Monomorium mayri* Forel

1902. *Monomorium mayri* Forel, Rev. Suisse Zool., 10 : 209.

*Material examined* : Workers – 6 exs., Agatti island near Agriculture office, from dry litter, 2.vii.2011, coll. A.K. Sanyal. (Regd. No. 12803/H3).

*Distribution* : India : Rajasthan, Gujarat, Tamil Nadu, Kerala.

*Elsewhere* : Sri Lanka, North Africa, Arabia, Myanmar.

*Remarks* : Reported for the first time from Lakshadweep Island.

#### SUMMARY

The manuscript deals with the family Formicidae comprising three subfamilies viz., Dolichoderinae, Formicinae and Myrmicinae each with one genus and one species. This is the first record of the Formicidae and all the taxa under this family from Lakshadweep Islands.

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