

New ant records for Bangladesh

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Abstract. Ants of 22 genera and 39 species were collected from 11 districts of Bangladesh. The inclusion of the genus *Rhopalomastix* sp. is the first record for Bangladesh, and apparently the northernmost record of the genus globally. Six species (*Pachycondyla* (*Brachyponera*) *luteipes*, *Leptogenys birmana*, *Leptogenys diminuta*, *Meranoplus bicolor*, *Myrmecaria brunnea* and *Technomyrmex modiglianii*) of ants are confirmed as new records for the country. The total number of identified species of ants in Bangladesh is now 130. Nineteen more species are yet to be identified beyond genus level.

Keywords: Ant species, Formicidae, new records, eleven districts, Bangladesh

INTRODUCTION

Bangladesh (20°34' to 26°38'N and 88°01' to 92°42'E) includes diverse ecosystems comprising floodplains, river basins, wetlands, plains, hills and forests. A checklist compiled during the late 1960s recorded 108 species of ants from the country (Alam 1967; Hannan 2003). In the last few years successive surveys have raised this number to 124 (Hannan 2004, 2007). The aim of the current study was to generate an updated inventory of the country.

MATERIALS

The study was conducted in 16 sites of 11 districts of Bangladesh in 2005 e.g., Dhanmondi (Dhaka)-18.VII.05; Jahangir Nagar University, Savar (Dhaka)-22.II.05; Faridpur city (Faridpur)-5.XI.05; Shalbon Bihar (Cumilla)-29.VII.05; Lalmai Hill (Cumilla)-29.VII.05; Science Laboratory Campus (Rajshahi) and Bhinodpur (Rajshahi)-11-13.VII.05; Rajdia, Shirajdikhan (Munshigonj)-12.VIII.05; Nimali, Shirajdikhan (Munshigonj)-2.VIII.05; Jute Research Institute (Manikgonj)- 9.VIII.05; Ratangonj (Pabna)-28.VIII.05; Mithamoin (Kishoregonj)-24.IX.05; Pakundia (Kishoregonj)-27.IX.05; Thakurgaon- 29.VIII.05; Rangpur-29.VIII.05 and Mahastangarh (Bagura)- 30.VIII.05.

The survey areas were of diverse habitat, including hilly areas (Cumilla, Bagura and Savar), plains (Thakurgaon, Rangpur, Rajshahi and

Dhaka), floodplains (Faridpur, Munshigonj and Manikgonj), lowland wetlands known as haors (Kishoregonj District), and a river basin (Pabna). The northern districts are rarely flooded through rainfall, but southern districts are flooded every year for several months. The haors are distinctive in that natural habitats suitable for ants are scattered and disconnected during the monsoon by water and during the dry season by agricultural lands. The river basin is subject to regular erosion of land by water currents. Hilly areas are more stable in their ecological conditions than other regions of the country. The present surveys were conducted in or close to human habitation. The collection methods were similar to previous surveys of the author (Hannan 2003, 2004, 2007) and mostly comprised of hand collecting.

Species identification to the present stage of taxonomic knowledge was performed by Prof. Seiki Yamane, Kagoshima University, Japan. All the vouchers are kept in the possession of the author and in Kagoshima University, Japan for further identification.

RESULTS AND DISCUSSION

Altogether ants of 22 genera and 39 species were collected from 11 districts in Bangladesh (Table 1). Due to taxonomic difficulties most specimens could be confidently identified only to the level of genus. However, six named species are recorded from the country for the first time:

Pachycondyla (Brachyponera) luteipes (Mayr, 1862) was collected from Tepakhola, Faridpur City (5.XI.05) and Rangpur City (29.VIII.05). Locally this ant is well known because of its painful sting. The specimens were collected from the soil surface. The species is known from India, Sri Lanka, Burma, Nicobar Islands, Vietnam, Japan, the Philippines, Sumatra and Java (Bolton *et al.* 2005).

Leptogenys birmana Forel, 1900 was collected on soil from Lalmai Hill, Cumilla (29.VII.05) and Rajdia, Munshigonj (12.VIII.05). It has also been recorded from Assam, Burma and China (Bingham 1903; Bolton *et al.* 2005).

Leptogenys diminuta - complex (F. Smith, 1857) was collected on the soil from Ratangonj, Pabna (28.VIII.05). Bingham reported them from Lahoul frontier of Tibet (1903).

Meranoplus bicolor (Guérin-Ménéville, 1844) was found on the soil in Lalmai Hill, Cumilla (29.VII.05) and Rajshahi (13.VII.05). It is found in parts of India, Pakistan, Nepal, Bhutan and Sri Lanka, is common throughout Burma and extends to China, Taiwan and Indonesia (Bingham 1903; Bolton *et al.* 2005).

Myrmecaria brunnea Saunders, 1842 was collected on the soil from Faridpur City (5.XI.05), Rangpur City (29.VIII.05), Thakurgaon (29.VIII.05), and the Jute Research Institute, Manikgonj (14.VIII.05). It is also found in India, Sri Lanka, Burma, China and Vietnam (Bingham 1903; Zhou 2001; Bolton *et al.* 2005).

Technomyrmex modiglianii Emery, 1900 was collected on the trees from Mithamoin, Kishoregonj (24-25.IX.05), Pakundia, Kishoregonj (28.IX.05), and Jahangir Nagar University Campus (16.II.05). It was previously known from Sumatra, Java, Sulawesi, Laos, Thailand and Malaysia (Emery 1900; Bolton *et al.* 2005; Bolton 2007).

Rhopalomastix sp. was collected from Mithamoin, Kishoregonj (24.IX.05). It represents the first record of the genus from Bangladesh. The genus has previously been recorded from India, Sri Lanka, Thailand, China, Japan, Java and Singapore (Bolton *et al.* 2005). The present record appears to be the northernmost distribution of the genus globally. Another 19 unidentified species are suspected to be new for Bangladesh and await identification (Table 1).

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Table 1. Ant species collected from the study sites in 2005. + New to Bangladesh, – found elsewhere in the country.

Species	Collection areas	New country record
Ponerinae		
<i>Diacamma</i> sp. (<i>aff. pallidum</i> F. Smith, 1858)	Faridpur City; Science Laboratory, Rajshahi; Mithamoin, Kishoregonj	+
<i>Leptogenys birmana</i> (Forel, 1900)	Lalmal Hill, Cumilla; Rajdia, Shirajdikhan, Munshigonj	+
<i>Leptogenys diminuta</i> (F. Smith, 1857) -complex	Ratangonj, Pabna	+
<i>Leptogenys kitteli</i> (Mayr, 1870)	Lalmal Hill, Cumilla	–
<i>Odontoponera denticulata</i> (F. Smith)	Lalmal Hill, Cumilla	–
<i>Pachycondyla (Brachyponera) luteipes</i> (Mayr, 1862)	Faridpur City and Rangpur City	+
<i>Pachycondyla</i> sp. aff sp. 17 of SKY	Science Laboratory, Rajshahi	+
Pseudomyrmecinae		
<i>Tetraponera rufonigra</i> (Jerdon, 1851)	Science Laboratory, Rajshahi; Jahangir Nagar University Campus, Savar; Ratangonj, Pabna; Manikgonj, Jute Research Institute	–
<i>Tetraponera</i> sp. 1	Dhanmondi, Dhaka	+
<i>Tetraponera</i> sp. 2	Faridpur City; Jahangir Nagar University Campus, Savar	+
Myrmicinae		
<i>Crematogaster</i> sp.	Bagura, Mahastangarh	+
<i>Lophomyrmex ambiguus</i> Rigato, 1994	Lalmal Hill, Cumilla	–
<i>Meranoplus bicolor</i> (Guérin-Méneville, 1844)	Lalmal Hill, Cumilla; Science Laboratory, Rajshahi	+
<i>Monomorium destructor</i> (Jerdon, 1851)	Lalmal Hill, Cumilla	–
<i>Monomorium latinode</i> (Mayr, 1872)	Science Laboratory, Rajshahi; Pakundia, Kishoregonj	–
<i>Myrmecaria brunnea</i> Saunders, 1842	Faridpur City; Rangpur city; Dinajpur, Thakurgaon; Jute Research Institute, Manikgonj	+
<i>Pheidole</i> sp. 1	Lalmal Hill, Cumilla	+
<i>Pheidole</i> sp. 2	Mithamoin, Kishoregonj; Mithamoin, Kishoregonj	+
<i>Pheidole</i> sp. 3	Science Laboratory, Rajshahi	+
<i>Pheidole</i> sp. 4	Nimtal, Shirajdikhan, Munshigonj; Mithamoin, Kishoregonj	+
<i>Pheidole</i> sp. 5	Science Laboratory, Rajshahi	+
<i>Pheidologeton affinis</i> (Jerdon, 1851)	Shalbon Bihar, Cumilla	–
<i>Pheidologeton diversus</i> (Jerdon, 1851)	Shalbon Bihar, Cumilla	–
<i>Rhopalomastix</i> sp.	Mithamoin, Kishoregonj	+
<i>Solenopsis geminata</i> (Fabricius, 1804)	Pakundia, Kishoregonj; Rangpur city; Dinajpur, Thakurgaon; Mithamoin, Kishoregonj; Binodpur, Rajshahi	–
<i>Tetramorium simillimum</i> (F. Smith, 1851)	Mithamoin, Kishoregonj; Jute Research Institute, Manikgonj	–
Dolichoderinae		
<i>Tapinoma</i> sp. 1	Dhanmondi, Dhaka	+
<i>Tapinoma</i> sp. 2	Lalmal Hill, Cumilla; Jahangir Nagar University Campus, Savar	+
<i>Technomyrmex modiglianii</i> Emery, 1900	Pakundia, Kishoregonj; Jahangir Nagar University Campus, Savar; Mithamoin, Kishoregonj	+

Formicinae		
<i>Anoplolepis gracilipes</i> F.Smith, 1857	Lalmal Hill, Cumilla	–
<i>Camponotus</i> sp. 1	Science Laboratory, Rajshahi; Mahastangarh, Bagura	+
<i>Camponotus (Tanaemyrmex)</i> sp. 2	Nimtal, Shirajdikhan, Munshigonj; Science Laboratory, Rajshahi; Jahangir Nagar University Campus, Savar; Jute Research Institute, Manikgonj; Mahastangarh, Bagura	+
<i>Camponotus rufoglaucus</i> (Jerdon, 1851)	Science Laboratory, Rajshahi	–
<i>Camponotus</i> sp.	Science Laboratory, Rajshahi	+
<i>Oecophylla smaragdina</i> (Fabricius, 1775)	Lalmal Hill, Cumilla; Faridpur City	–
<i>Paratrechina longicornis</i> (Latreille, 1802)	Jute Research Institute, Mannikgonj	–
<i>Paratrechina</i> sp. 1	Lalmal Hill, Cumilla	+
<i>Paratrechina</i> sp. 2 aff <i>bourbonica</i> (Forel, 1886)	Mithamoin, Kishoregonj; Pakundia, Kishoregonj	+
<i>Plagiolepis</i> sp.	Lalmal Hill, Cumilla	–

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