

## Ant records from Savar, Dhaka, Bangladesh

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**Abstract.** During a survey on 16 and 22 February 2005, 19 species of ants were collected from six subfamilies (Ponerinae, Pseudomyrmecinae, Cerapachyinae, Myrmicinae, Dolichoderinae and Formicidae) and 17 genera from Savar, Dhaka, Bangladesh. Among them 14 species were new records for Bangladesh (*Odontoponera* sp. (cf. *denticulata* (F. Smith)), *Diacamma* sp. (cf. *indicum* Santschi), *Tetraponera aitkenii* (Forel), *Cerapachys* sp., *Lophomyrmex ambiguus* Rigato, *Vollenhovia* sp., *Dolichoderus* sp. (cf. *affinis* Emery), *Tapinoma melanocephalum* (Fabricius), *Technomyrmex albipes* (F. Smith), *Anoplolepis gracilipes* (F. Smith), *Paratrechina longicornis* (Latreille), *Plagiolepis* sp., *Camponotus (Tanaemyrmex)* sp., *Polyrhachis (Myrmhopla) caligata* Emery). Currently the total number of ant species identified in Bangladesh is 124.

**Keywords:** Formicidae, new records, Savar, Bangladesh

### INTRODUCTION

Bangladesh is situated between 20°34'N and 26°38'N, and 88°01'E and 92°42'E, and comprises a diverse array of habitats such as floodplains, wetlands, flat lands, hills and forests. Because of the subtropical environment there is good habitat for ants throughout the country. During the late 1960s Alam (1967) reported 108 species of ants from Bangladesh. In recent years through various surveys this number has increased and it is expected that the real number of species in the country is more than twice this (Hannan 2003, 2004).

The present survey was conducted in a very disturbed ecological area at Savar about 35 km north of the capital Dhaka at a relatively high elevation compared to the floodplains. Floods generally do not occur in the study sites, thus the species composition there might be a little different

from that in the floodplain areas. The areas are highly altered due to urbanization and industrialization, and only a few patches of natural vegetation still remain. The aim of this study was to clarify the ant fauna of the area, and add new records to the list of Bangladesh ants.

### MATERIALS AND METHODS

The survey was carried out in the Jahangir Nagar University Campus (23°53'N, 90°16'E) and in a highly degraded *sal* forest area nearby. A few decades earlier the collection sites were covered with dense bushes, but recently most of them have been cleared and the area has become gradually occupied by new structures. It is not unlikely that the present remnants will also disappear from the area in the coming future.

In the present study ants were collected from the ground and various trees at the sites. Ants

were more readily visible on trees than on the ground, but also collected from the ground when seen. No gyne or male was collected in the present study as no nest was dug to collect samples. The days (16 & 22 February 2005) of ant collection were sunny with very good weather. Ants were collected between 10:00 and 15:00h using a sieve, tray and forceps and kept in small plastic vials containing 80% alcohol. They were cleaned and sorted to subfamily level in the laboratory, and then sent to taxonomic specialists for identification.

## RESULTS AND DISCUSSION

The ant species (Formicidae) found during the survey are listed in Table 1. A total of 19 species were collected from the area in six subfamilies (Ponerinae, Pseudomyrmecinae, Cerapachyinae, Myrmicinae, Dolichoderinae and Formicinae) and 17 genera. Fourteen species are new records for the country; an additional five are new records for the studied area, but known from other parts of the country (see Table 1) (cf. Bingham 1903; Alam 1967; Ward 2001; Hannan 2003, 2004). Including the present records the current total number of ant species identified in Bangladesh is 124. As mentioned this survey is a part of a continued effort that will collect from all habitats of the country; therefore a comprehensive inventory of the ants of Bangladesh is ultimately envisaged.

*Odontoponera* sp. (cf. *denticulata* (F. Smith))<sup>1</sup> is a new record in Bangladesh, but is widespread in the Oriental region, especially in disturbed areas. *Diacamma* sp. (cf. *indicum* Santschi) is new to Bangladesh. *Tetraponera allaborans* (Walker) is found throughout Bangladesh (Alam 1967). The species is widespread in tropical Asia and Australia (Bingham 1903; Ward 2001). *T. rufonigra* (Jerdon) is a congener recorded from various parts of the country (Ward 2001; Hannan 2004) but not found

in the studied area. *Tetraponera aitkenii* (Forel) is new to Bangladesh. This species is known from southern India, and once in Malaysia (Ward 2001). *Cerapachys* sp. is a new record for the country; other species of the genus are found in Myanmar and India (Bingham 1903). *Lophomyrmex ambiguus* Rigato is new to Bangladesh. This species was also recorded from northern India and Nepal (Rigato 1994). *Monomorium pharaonis* (Linnaeus) is a tramp species found all over Bangladesh (Alam 1967). Bingham (1903) noted the species is widespread throughout the tropical regions of both hemispheres. *Pheidologeton diversus* (Jerdon) is common all over Bangladesh and also in India (Alam 1967, Bolton 1995). *Vollenhovia* sp. is a new record for the country. Species of the genus are found in the Old-World tropics except for Africa (Bolton 1995). *Dolichoderus* sp. (cf. *affinis* Emery) is a new record for the country and also found in Myanmar (Bolton 1995). *Tapinoma melanocephalum* (Fabricius) is a new record for Bangladesh. The species is widespread in tropical and subtropical regions of the world (Bingham 1903). *Technomyrmex albipes* (F. Smith) is new to the area, and possibly to Bangladesh. The species is found widely in tropical Asia.

*Oecophylla smaragdina* (Fabricius) was recorded in Bangladesh from Karamjal, Sundarbans, and Khulna (Hannan 2004). This species is widely distributed in India, Myanmar and Sri Lanka. The range of this species extends through the Malayan subregion to Australia and New Guinea (Bingham 1903). *Anoplolepis gracilipes* (F. Smith) is a pantropical species, which is recorded for the first time in the study site and also in Bangladesh. *Paratrechina longicornis* (Latreille) is another pantropical species that has not been recorded from Bangladesh before the present study. *Plagiolepis* sp. was collected from a tree. *Plagiolepis dichroa* Forel is common throughout Bangladesh (Alam 1967), but it is not certain that the present record is of this species. Foragers of *Camponotus rufoglaucus* (Jerdon) were also recorded before from Sylhet (Alam 1967). This species is found in various parts of India and Myanmar (Bingham 1903). The species has a very

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<sup>1</sup> Editors' note: this species was synonymised with *O. transversa* (F. Smith) (Dalla Torre CG de 1893. *Catalogus Hymenopterorum, hucusque descriptorum systematicus et synonymicus* 7: 30.) but is considered distinct by Seiki Yamane (unpublished).

**Table 1:** Ant species (Formicidae) collected from the study sites at Savar, Bangladesh in 2005.

<i>Species</i>	<i>Stratum collected</i>	<i>Collection record<sup>1</sup></i>
<b>Ponerinae</b>		
<i>Odontoponera</i> sp. (cf. <i>denticulata</i> (F. Smith, 1858))	Jackfruit tree	N
<i>Diacamma</i> sp. (cf. <i>indicum</i> (Santschi, 1920))	Jackfruit tree	N
<b>Pseudomyrmecinae</b>		
<i>Tetraponera allaborans</i> (Walker, 1859)	Mango trees	W
<i>Tetraponera aitkenii</i> (Forel, 1902)	Mango trees	N
<b>Cerapachyinae</b>		
<i>Cerapachys</i> sp.	ground	N
<b>Myrmicinae</b>		
<i>Lophomyrmex ambiguus</i> Rigato, 1994	ground	N
<i>Monomorium pharaonis</i> (Linnaeus, 1758)	ground	W
<i>Pheidologeton diversus</i> (Jerdon, 1851)	ground	W
<i>Vollenhovia</i> sp.	tree <sup>2</sup>	N
<b>Dolichoderinae</b>		
<i>Dolichoderus</i> sp. (cf. <i>affinis</i> Emery, 1889)	tree <sup>2</sup>	N
<i>Tapinoma melanocephalum</i> (Fabricius, 1793)	ground	N
<i>Technomyrmex albipes</i> (F. Smith, 1861)	ground	N
<b>Formicinae</b>		
<i>Oecophyla smaragdina</i> (Fabricius, 1775)	Jackfruit tree	W
<i>Anoplolepis gracilipes</i> (F. Smith, 1857)	ground	N
<i>Paratrechina longicornis</i> (Latreille, 1802)	ground	N
<i>Plagiolepis</i> sp.	tree <sup>2</sup>	N
<i>Camponotus rufoglaucus</i> (Jerdon, 1851)	<i>Ficus</i> tree	W
<i>Camponotus (Tanaemyrmex)</i> sp.	<i>Ficus</i> tree	N
<i>Polyrhachis (Myrmhopla) caligata</i> Emery, 1895	<i>Ficus</i> tree	N

<sup>1</sup>N=new to the area and to Bangladesh; W=new to the study area but recorded elsewhere in Bangladesh.<sup>2</sup>Unidentified tree species.

wide range of occurrence from Australia to Africa. *Camponotus (Tanaemyrmex)* sp. foragers were collected from a *Ficus* tree. This may be the first record of a *Tanaemyrmex* species from Bangladesh. *Polyrhachis (Myrmhopla) caligata* Emery is new to Bangladesh.

Some of the species that were collected in the disturbed areas are tramp or pantropical species, which implies the survey site was severely altered by human activities, even though some patchy vegetation (shrubland and sparse forest) still remained. The literature on the ant fauna in Bangladesh is scarce. However, it is important to compile an accurate list of the ants of Bangladesh based on new collections from throughout the whole country. This paper constitutes a step to such a goal.

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