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A PRELIMINARY LIST OF PARASITIC WASPS (HYMENOPTERA: CHALCIDOIDEA: APHELINIDAE) OF BANGLADESH

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ABSTRACT

A list of 28 aphelinid parasitic wasps (Hymenoptera: Chalcidoidea: Aphelinidae) belonging to 8 genera under 5 subfamilies of Bangladesh has been prepared on the basis of published record and field survey made in different parts of the country. Four species, viz. *Encarsia clypealis* (Silvestri), *Encarsia opulenta* (Silvestri), *Encarsia pseudococci* (Agarwal), and *Coccophagus* sp. near *semicircularis* Foerster have been newly recorded from Bangladesh. Validity of all the listed species was checked.

Key words : Taxonomy, Chalcidoidea, Aphelinidae, Parasitoid, Bangladesh.

INTRODUCTION

The Aphelinidae is one of the most important families of Chalcidoidea as most of them are used as biological control agents (Gibson, 1993). They have been more successful in classical biological control than in any other group of entomophagous insects (Waage & Greathead, 1986). The family is cosmopolitan in distribution and comprises nearly 1000 described species within nearly 40 genera (Hanson & Gauld, 1995). Aphelinids are primary endoparasitoids or ectoparasitoids, or hyperparasitoids; mostly of Aleyrodoidea, Aphidoidea, Auchenorrhyncha, Psylloidea, and especially Coccoidea. They also parasitize the eggs of Lepidoptera and Orthoptera; the eggs, larvae, and pupae of Diptera; and the larvae of other Chalcidoidea and Dryinidae (Gibson, 1993). Hayat (1983) and Jasnosh (1983) worked on the world genera of Aphelinidae.

MATERIALS AND METHODS

The list has been prepared by consulting literatures on aphelinids of Bangladesh so far scatteredly published at home and abroad as well as the specimens collected by the authors from different parts of the country. Samples were collected on a number of casual surveys made during 1995 to 2010 from plants infested with host insects. Specimens were brought to the Department of Zoology and identifications were made following Hayat (1989, 1998). Aphelinids were fairly easily reared in the laboratory from scale and whitefly mummies collected from the field. They were also collected by sweep nets and Malaise Traps. The validity of the names were confirmed with Noyes (2010), Andrew Polaszek of the Natural History Museum, London and John LaSalle of the Australian National Insect Collection, CSIRO (pers. comm.).

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RESULTS

The list have been arranged under subfamilies followed by tribes (where known), species, previous record, authority, host record, previous record in Bangladesh and with taxonomic comments in parenthesis.

List of the aphelinid parasitoids of Bangladesh

Taxa : Host record/ Previous record in Bangladesh/ Taxonomic comments in third bracket

Family : APHELINIDAE Thomson 1876

1. Subfamily : Aphelininae Thomson 1876

Tribe: Aphytini Yasnosh 1976

Marietta leopardina Motschulsky 1863

Secondary parasitoid on *Pulvinaria psidii* Maskell (Bhuiya, *et al.,* 1997; Bhuiya, 2001; Hayat, 1983, 1986); *Saissetia hemisphericum* (Trag.) (Compere, 1936); *Aonidiella orientalis* (Hayat, 1998). Alam, 1967, 1974; Alam, *et al.,* 1964; Ali, 1982; Ali *et al.,* 1993, 1995; Chowdhury & Ullah, 1985; [Alam, 1967, identified *Marietta javansis* Howard 1907 which is now synonimized with *M. leopardina* Motschulsky 1863; Gapud, 1992].

Aphelinus basilicus Hayat 1998

Parasitoids of Aphidiidae (Hemiptera); Bangladesh, India, Sri Lanka (Hayat 1998). [Key characters are given by Hopper, *et al.,* 2012].

Aphelinus mali (Haldeman 1851)

Alam 1967; Alam *et al.,* 1964; Ali *et al.,* 1993, 1995.

Aphelinus gossypii Timberlake 1924

Alam *et al.,* 1964; Ali *et al.,*1995.

Aphytis chrysomphali (Mercet 1912)

Alam 1974; Alam & Sattar (1964) wrongly mentioned it under family Encyrtidae.

Aphytis diaspidis (Howard 1881)
Habib *et al.,* 2001.

2. Subfamily : Azotinae Nikol'skay & Yasnosh 1966

Ablerus macrochaeta Silvestri 1927
Bhuiya *et al.,* 1999, 2000; Hayat, 1998

3. Subfamily : Coccophaginae Foerster 1878
Tribe: Pteroptricini Ashmead 1904

Encarsia clypealis (Silvestri 1927)*
New record from Bangladesh

Encarsia lutea (Masi 1909)
Kajita & Alam 1996

Encarsia muliyali Mani 1941
Habib *et al.,* 2001

Encarsia narayanani Agarwal 1964
Habib *et al.,* 2001

Encarsia opulenta (Silvestri 1927)*
New record from Bangladesh

Encarsia pseudococci (Agarwal 1964)*
New record from Bangladesh

Encarsia smithi (Silvestri 1926)
Bhuiya, *et al.,* 1999

Encarsia tristis (Zehntner 1896)
Hayat, 1989

Encarsia sp.
[Ahmed & Jalil, 1997 recorded *Prospaltella* Ashmead 1904, valid name of which is *Encarsia*]

Tribe Coccophagini Foerster 1878

Coccophagus ceroplastae (Howard 1895)
Ali, 1978; Bhuiya *et al.,* 1997; Bhuiya, 2001; Khan & Mannan 1991; Ullah & Chowdhury, 1990, 1991; [Ullah & Chowdhury, 1990, 1991 mentioned it as *Aneristus ceroplastae* Howard, 1895, valid name of which is *C. ceroplastae*)]

Coccophagus silvestrii Compere 1931
Bhuiya *et al.,* 1997; Bhuiya, 2001.

Coccophagus pseudococci Compere 1933
Bhuiya *et al.,* 1997; Bhuiya, 2001.

Coccophagus sp. near *semicircularis** Foerster 1841
New record from Bangladesh

Coccophagus redini Girault 1924
Habib *et al.,* 2001.

4. Subfamily : Eretmocerinae Shafee & Khan 1978

Eretmocerus mundus Mercet 1931
Kajita & Alam 1996.

Eretmocerus serius Silvestri 1927
Alam & Hossain 1964; Alam 1967 [Spelled it as serious]; Alam *et al.,* 1964; Kajita & Alam 1996.

5. Subfamily : Eriaporinae Ghesquiere 1955

Promuscidea unfasciativentris Girault 1917
Ali 1978; Ali *et al.* 1995; Khan & Mannan 1991 [Spelled it as *Promuscidea ?unfasiativentris*]

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