

ABSTRACT

Among the parasitic Hymenoptera, the species belonging to the family Braconidae are not only known to keep pest populations under control in their natural habitats and are, therefore, extensively used in the classical biological control programmes directed against economically important pest species, mainly belonging to the order Coleoptera, Diptera, Hemiptera, Hymenoptera, Lepidoptera, Neuroptera and Psocoptera (Achterberg, 1993). Likewise species belonging to the Braconid subfamilies Alysiinae and Opiinae have also been successfully used in the classical bio-control programmes (Wharton and Gilstrap, 1983; Waterhouse, 1993; Ovruski *et al.*, 2000).

In order to facilitate correct identification of the Indian Braconid parasitoids, studies leading to comprehensive reviews and revisions of genera and species of the family Braconidae were initiated in the Department of Zoology, A.M.U., Aligarh. The present work is a continuation of such studies on the Indian Braconidae. It deals with the subfamilies Alysiinae and Opiinae of the family Braconidae.

The subfamilies Alysiinae and Opiinae are represented in India by 19 genera (of which Alysiinae is represented by 11 genera viz., *Alysiasta* Wharton, *Aphaereta* Foerster, *Asobara* Foerster, *Aspilota* Foerster, *Chorebus* Haliday, *Cratospila* Foerster, *Eurymeros* Bhat, *Idiasta* Foerster,

THESIS

Orthostigma Ratzeburg, *Phaenocarpa* Foerster and *Tanycarpa* Foerster) and (Opiinae is represented by 8 genera viz., *Biosteres* Foerster, *Bitomus* Szepliget, *Diachasmimorpha* Viereck, *Eurytenes* Foerster, *Fopius* Wharton, *Indiopus* Fischer, *Opius* Wesmael and *Psytalia* Walker). The present study is confined to 7 genera, namely, *Aphaereta*, *Chorebus*, *Idiasta*, *Orthostigma* of Alysiinae and *Bitomus*, *Indiopus* and *Opius* of Opiinae. Of these 3 genera viz., *Aphaereta*, *Chorebus* and *Orthostigma* are reported for the first time from India. Keys to the Indian genera of subfamilies Alysiinae and Opiinae are provided. Separate key to the Indian species of the genus *Aphaereta*, and key to the Indian subgenera and species of the genus *Opius* are proposed.

In all 35 species have been studied, of which 31 are new to science. The new species described are: *Aphaereta breviterebrata* sp. nov., *A. indica* sp. nov., *A. minys* sp. nov., *Bitomus areolatus* sp. nov., *Chorebus indicus* sp. nov., *Idiasta transiens* sp. nov., *Indiopus fischeri* sp. nov., *Opius (Allophlebus) tobiasi* sp. nov., *O. (Apodesmia) crenulatus* sp. nov., *poonchensis* sp. nov., *O. (Gastrosema) aligarhensis* sp. nov., *biharensis* sp. nov., *indicus* sp. nov., *O. (Hypocynodus) sternautilus* sp. nov., *O. (Lissosema) azamgarhensis* sp. nov., *bengalensis* sp. nov., *O. (Merotrachys) declivous* sp. nov., *shafeei* sp. nov., *whartoni* sp. nov., *O. (Nosopaeopus) longiterebrata* sp. nov., *O. (Opiothorax) bareilliensis* sp. nov., *gahani* sp. nov., *O. (Opius)*

mashhoodi sp. nov., *O. (Pendopius) achterbergi* sp. nov.,
O. (Phaedrotoma) pappi sp. nov., *patnaensis* sp. nov., *seticlypeus* sp.
nov., *O. (Phlebosema) pentaareolatus* sp. nov., *O. (Tolbia) granulatus* sp.
nov., *O. (Xynobius) hayati* sp. nov., and *Orthostigma barani* sp. nov. Two
species viz., *Opius (Pendopius) volaticus* Fischer and *O. (Phaedrotoma)*
diacriticus Fischer are recorded for the first time from India.

The thesis is supported by 170 photographs.