INTRODUCTION

The family Braconidae: Ichneumonoidea is one of the large families of Hymenoptera, widely distributed over the world, whereas from India it is known by about 500 species only. Most of the species are parasitic on other insects, belonging to Lepidoptera, Coleoptera, Hymenoptera, Diptera, Neuroptera, Psocoptera and Hemiptera, specially the family Aphididae (Achterberg, 1993).

The subfamily Cheloninae belongs to the microgastroid assemblage of Braconidae, with 800 described species from the world (Shenefelt, 1973; Papp, 1981, 1989, 1993; Huddleston, 1984; Walker & Huddleston, 1987a; Achterberg, 1990; Tobias, 1990, 1991, 1993, 1994, 1995a, 1995b, 1995c; Narendran et al., 1992; Huddleston & Walker, 1994; Tang & Marsh, 1994; He et al., 1994, 1997). The subfamily is represented by 116 species from the Indo-Australian region, of which, only 27 species have been reported from India, so far. Most of the species are of economic interest, since they are solitary egg-larval koinobiont endoparasitoids of lepiopterous pests of agriculture, horticulture and forestry. They keep the population of their respective host species under check in nature. The parasitoids lay their eggs into the eggs of the host and continues development within the larvae of the host. The final instar larvae consumes the host except for the skin and head capsule (Broodryk, 1969). The biology of the chelonine wasps has been reviewed by Shaw & Huddleston (1991).

A number of species of the subfamily Cheloninae have been tried in biological control projects. *Microchelonus blackburni* (Cameron), was released in Texas and Mexico between 1932 and 1944 against the pink bollworm *Pectinophora gossypiella* (Saunders), although the species was recovered in field collections, permanent establishment failed (Noble & Hunt, 1937; McGough & Noble, 1955). *Phanerotoma (Phanerotoma) fracta* Kokujev was introduced from Hungary into USA between 1936-38, for biological control of the lima bean pod borer *Etiella zinckenella* Trieitschke (Parker, 1951). *Microchelonus phthorimaeae* Gahan has been established in the field near Canberra, after its introduction from California (Annon, 1944). In 1953 and 1954 *Microchelonus heliopae* (Gupta) was released in Texas and Mexico to aid
pink bollworm control (McGough and Noble, 1957). Again the same species was released in Louisiana in 1954 against the sugarcane borer (Charpentier, 1958). But the establishment of this species apparently failed in all cases. *Chelonus scrobiculatus* Szepligeti has been established in Fiji where it was introduced to control banana scab-worm *Nacoleia octasema* (Meyrick) (Paine, 1964). In India, *Microchelonus blackburni* (Cameron) was released in Tamil Nadu, against cotton bollworm *Earias vitella* (Fabricius). The parasitoid considerably reduced numbers of *E. vitella* in the shed fruiting bodies and flowers with 11.5% recovery (Surulivelu, 1989).

Despite of great economic importance, little work has been done on the taxonomy of Indian Cheloninae and most of the literature consists of isolated descriptions of species (Rao & Chalikwar, 1971; Shenefelt, 1973; Narendran *et al.*, 1992; Kurhade & Nikam, 1993, 1994; Shujauddin & Varshney, 1997). The subfamily is represented by two tribes viz., Chelonini Nees and Phanerotomini Baker including the genera *Ascogaster* Wesmael, *Chelonus* Panzer, *Microchelonus* Szepligeti, *Phanerotoma* Wesmael and *Phanerotomella* Szepligeti. However, the latter genus is reported for the first time from India. The great diversity of chelonines in India and neighbouring regions necessitates an enormous amount of work. Further, keeping in view, the economic importance of the subfamily Cheloninae, the study on its taxonomy is undertaken. The present study is the first attempt on the systematics of the entire subfamily from India.

In the present work, brief diagnosis and key to the tribes and genera of the Indian Cheloninae is given. Separate keys to Indian species of all the genera are provided. A separate key to the males of the genus *Microchelonus* Szepl. is also provided. All forty-two Indian species of the subfamily representing five genera have been included, of which, fifteen new are fully described and illustrated. One new combination is also proposed. The terminology of Athterberg (1993) and for the microsculpture Eady (1968) is followed. Holotypes, paratypes and other material examined by the author has been deposited in the Zoological Museum, Aligarh Muslim University, Aligarh, India. IARI stands for Indian Agricultural Research Institute, Delhi and IFRI refers to Indian Forest Research Institute, Dehra Dun, India.