## ANTS AS BIO-CONTROL AGENTS OF UZI FLY, BLEPHARIPA ZEBINA WALKER (DIPTERA: TACHINIDAE) AN ENDOPARASITE OF OAK TASAR SILKWORM IN MANIPUR

## M. VENKATACHALAPATHY AND B. PRASAD ENTROMOLOGY LABORATORY, DEPARTMENT OF LIFE SCIENCES, MANIPUR UNIVERSITY, IMPHAL-795003, INDIA.

Ants have been observed to be important predators of uzi fly maggots and pupae and thus reducing the uzi fly population in the oak tasar farms and grainages Four species of such ants were recorded and have been identified for the first time from North-East India.

Tachinid fly, *Blepharipa zebina* commonly known as Tasar uzi fly is a serious endoparasite of oak tasar silkworm, *Antheraea proylei* Jolly in Manipur. 20-40% crop loss has been noticed annually due to its infestation. Several physical and chemical control measures are under practice to minimise the uzi incidence. In recent years efforts are being made to control them through biological agents by releasing Hymenopteran parasitoids in the rearing fields and grainages. The parasitoids, predators and pathogens accounts 82%, 17% and 1% respectively in biological control programmes of insect pests (Lentern, 1983).

Ants are entomophagous in habit. They belong to the order Hymenoptera and family Formicidae. Several ant species like *Tapinoma melanocephalum* Fabricius, *Monomorium* sp. and *Camponotus pallidus* Smith have been reported predating on maggots and pupae of an uzi fly *Exorista bombycis* Louis in the rearing rooms, grainages and market yards (Siddappaji, 1985). In the life tables of uzi fly, *E. bombycis* prepared for 18 generations during 1990-91, the mortality during maggot, pre-pupal and pupal stages due to attack of ants was noticed to be 6.63%, 9.34% and 3.04% respectively (Narayanaswamy, 1992). Such predators like ants and spiders according to Moorthy *et al.* (1983) destroyed 17.5% of sugarcane internode borer eggs and the predation was estimated to be as high as 64.5%.

During spring crop rearing season in 1998, four species of ants were obseved attacking the maggots, pre-pupae and pupae of *B. zebina* both in the rearing fields and grainages. The ants dragged maggots and pupae to their nests for feeding. The identified species of ants are as under:

- Pheidologeton affinie Jordon (Sub-family : Formicinae)
- Tetramorium sp.(Sub-family : Formicinae)
- Camponotus compreassus Fabr. (Sub-family : Myrmicinae)
- Paratrechina longicornis Latr. (Sub-family: Myrmicinae)

## **ACKNOWLEDGEMENTS**

The authors are grateful to Dr. N. Ibohal Singh, Joint Director, (I/C), R.T.R.S., Imphal and Dr. T.M. Mustak Ali, Ecology Laboratory, University of Agricultural Sciences, Bangalore for providing facilities and identification of ant species respectively.

## REFERENCES

- LENTERN, J.C. 1983. The development of host discrimination on preventing of superparasitism in the parasite, *Psedeucoila bochei* Weld. *Agric. Ecosystem Environ.* 10: 143.
- MOORTHY, S.E., NANDAGOPAL, V. & DAVID, H. 1983. Seasonal importance of parasites and predators on sugarcane internode borer, *Chilo sacchariphagus indicus* (K). In: *Proc. Sym. Ins. Ecol. & Resource Manage* (Goel, S.C. Ed.). U.P. Zoological Society, Muzaffarnagar (India).
- NARAYANASWAMY, K.C. 1991. Population dynemics of uzi fly Exorista bombycis (Louis) (Diptera: Tachinidae). Ph. D. Thesis, University of Agricultural Sciences, Bangalore, India.
- SIDDAPPAJI, C. 1985. Biology and Management of the Indian uzi fly Exorista sorbillans (Wiedemann) (Diptera: Tachinidae), a parasite of mulberry silkworm. Ph. D. Thesis, University of Agricultural Sciences, Bangalore,