PRELIMINARY STUDIES ON THE BIOLOGY AND BEHAVIOUR OF *EVANIA APPENDIGASTER* (L) (HYMENOPTERA : EVANIIDAE), AN OOTHECAL PARASITE OF THE COCKROACH *PERIPLANETA AMERICANA* (L), IN SRI LANKA

N. C. Kumarasinghe, D. Manawadu *and* **J. P. Witanachchi**
(*Department of Biological Sciences, University of Sri Jayawardenapura, Nugegoda*)

Evania appendigaster (Hymenoptera : Evaniidae) and *Tetrastichus hagenowii* (Hymenoptera : Eulophidae) are two parasites of the common cockroach, in Sri Lanka.

Studies are being carried out to evaluate the efficiency of *Evania*, in the contral of the cockroach. A preliminary study of the biology of *Evania* indicated that each female lays only a single egg within the ootheca of cockroach and a total of 10 eggs are laid during her life time. Longevity of the adult is 2 weeks. The entire life cycle of the parasite (egg to adult) takes 39 days, and is sent within the ootheca. The mature adult emerges from the ootheca by boring and emergent hole.

During the oviposition young oothecae are preferred to old oothecae, however in the absence of young oothecae females lay eggs in oothecae of any age. But only those eggs that are laid in oothecae that are less than 28 days old, would develop into adult parasites.

Two methods were employed to sample the oothecal population, to determine the percentage of natural parasitism : (1) Unemerged oothecae were collected and emergence of *Evania* was observed in the laboratory ; (2) Empty oothecae were collected and examined for emergent holes characteristic for *Evania*.

A mean percentage parasitism of 10.11 ± 4.44, 12.45 ± 7.65, 8.33 ± 4.53, was obtained for the three sampling sites respectively. Previous observations indicated that *Tetrastichus* competes with *Evania* for development when both oviposite in the same oothecae. The results of the field survey indicate that *Tetrastichus* is responsible for the low percentage parasitism by *Evania*.