EFFECT OF RELEASING OOTHECAE PARASITIZED BY *TETRASTICHUS HAGENOWII* AND *EVANIA APPENDIGASTER* FOR THE CONTROL OF *PERIPLANETA AMERICANA.*

M. Manikkam *, J.P. Edirisinghe**
*Dept. of Zoology, University of Sri Jayewardenepura.
**Dept. of Zoology, University of Peradeniya.

Tetrastichus hagenowii and *Evania appendigaster* are two hymenopterans that parasitize the oothecae of the American cockroach, *Periplaneta americana*. The two species of parasites occur naturally where ever *P. americana* populations are found. Locations such as dwelling houses (6) restaurants (3) and kitchen cupboards (5) where cockroaches frequent were sampled for 3 months to determine the occurrance and the natural level of parasitism of *P. americana* oothecae by the two parasites.

Sampling for oothecae was done once a month, where 2h were spent at each location, searching for empty (following emergence) oothecae. All empty oothecae found at a site were carefully removed and brought into the laboratory. Based on the nature of the emergent hole, empty oothecae were classed as unparasitized, (presence of a split along the seam of ootheca), parasitized by *T. hagenowii* (diam. of emergence hole 0.25mm) or by *E. appendigaster* (diam. of emergence hole 3.2mm).

1-5 day old, *P. americana* oothecae parasitized in the laboratory, separately by the two parasites were placed at the sampled locations once a month for 3 months. The number of oothecae placed was based on the total number of live oothecae found at a location ie for every two live oothecae, a single parasitized oothecae of each type was placed (2:1:1 ratio). Sampling was continued for 6 months after release.

The natural level of parasitism by both parasites ranged from 33.2-66.6% in houses (n=6), 45.3-60% in restaurants (n=3) and 0.0-60.0% in kitchen cupboards (n=5). The post release level of parasitism at the three types of locations ranged from 80.0-90.0% Thus with the placing of parasitized oothecae in the ratio of 2:1:1, a reasonable level of control of *P. americana* oothecae can be achieved.

This research is being funded by NARESA Grant No. RG/84/B/5.