

**Summary of a PhD Thesis presented to obtain the scientific degree in Agricultural Sciences
at the Agrarian University of Havana**

**ENCYRTIDS ASSOCIATED TO PSEUDOCOCCIDS, SELECTION AND
REARING METHOD OF BIOLOGICAL CONTROL AGENT**

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Date: january 26th, 2006*

The recognition of Encyrtidae family species and the development of a methodology for the mass reproduction of the most promissory one in the pseudococcid management, will allow providing new biological control agents as a safe environmental alternative. In the present study, the identification of encyrtids associated to pseudococcid species was carried out in cultivations and plants of economical importance in the western, central and eastern regions of the country. Three new genera: *Leptomastix* Förster, *Coccidoxenoides* Girault and *Neodusmetia* Kerrich and 14 species were identified; eight of the species are new reports for the country. A key for the identification of Tetracneminae and Encyrtinae sub-family genera present in Cuba was elaborated. Field studies of parasitoidism percentage, frequency and relative abundance of the present species were carried out. A multiple attribute Heuristic method was applied for the parasitoid selection. Among them, the highest value in the additive model was found for *Leptomastix dactylopii* Howard, which allowed the selection of this species to evaluate its biological behaviour in our conditions. In the biological studies, *L. dactylopii* reached a fecundity average of $31,6 \pm 3.15$ eggs/ female on *Planococcus minor* Maskell, a mean development cycle of $17,1 \pm 0,9$ days and an average life cycle of $41,3 \pm 4,3$ days; and it was demonstrated that it has a type II functional response. Starting from these results, *L. dactylopii* was selected and a methodology for its mass reproduction was elaborated. Quality indicators for the species under the breeding conditions were studied and the methodology was introduced in the Plant Health Provincial Laboratories and in two scientific institutions. The results of the introduction were validated by a survey with satisfactory results, which facilitates that *L. dactylopii* could be used as a pseudococcid biological control agent using conservation or increasing strategies in emergent or introduced pests.