Pachycrepoideus vindemmiae (Rondani) (Hymenoptera: Pteromalidae) as parasitoid of Poecilosomella angulata (Thomson) (Diptera: Sphaeroceridae) in Brazil,

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Abstract

Pachycrepoideus vindemmiae (Rondani) (Hymenoptera: Pteromalidae) is a solitary parasitoid that controls a great number of Diptera in the families Anthomyiidae, Calliphoridae, Muscidae, Tachinidae and Tephritidae. This species presents diversified distribution and it has been found in North America, Canada and Africa. The present study determined a new host species of parasitoid P. vindemmiae in cattle manure in Brazil. The pupae were obtained using the flotation method. They were individually placed in gelatin capsules until the emergence of adult flies or their parasitoids. The percentage parasitism was 9.2%. Through this study, knowledge of the bioecology and geographical distribution of parasitoids of dipterous insects has increased.

Introduction

*Pachycrepoideus vindemmiae* (Rondani) (Hymenoptera: Pteromalidae) (Figure 2) is considered to be a solitary parasitoid that controls a great number of Diptera in the families Anthomyiidae, Calliphoridae, Muscidae, Sarcophagidae, Tachinidae and Tephritidae. This species presents diversified (cosmopolitan) distribution and it has been found in North America and Africa (Rueda and Axtell, 1985).

The present study determined a new host species of parasitoid *P. vindemmiae* in cattle manure in Brazil.

Material and Methods

The upper part the cans were coupled with nylon funnels, opened at the bottom, base pointing down and wrapped with plastic bags, so when removed would make possible the collection of dipterous and parasitoids. The following items were used as feces humans bait placed inside the cans, over a layer of land. Five traps were used and they were hanged in trees one meter from the ground, two meters apart from each other. The collected insects were taken to the laboratory, sacrificed with ethyl ether and kept in 70% alcohol for further identification. The content of the traps was placed in plastic containers having a layer of sand to be used as a substratum of larvae pupae. Therefore this sand was sifted after being 15 days in the fields and from this sand was extracted the pupae which were individually placed in gelatine capsules (00 number) to obtain dipterous and/or the parasitoids.

Results and Discussion

Forty specimens of *P. vindemiae* collected in 420 pupaes of *P. angulata* showing 9,5% of parasitism. Presently in Costa Rica *P. vindemiae* is being for its potential to control the dipterous muscoids (Hanson & Gaul, 1995). *Pachycrepoideus vindemmiae* is considered a parasitoid solitary of numerous Diptera in the families Anthomyiidae, Calliphoridae, Muscidae, Tachinidae and Tephritidae. This specie shows world distribution, being also found in the Nort America, Canada and Africa (Rueda and Axtell, 1985). As a possibly to control these artropods, the natural regulators can be used, such as parasitoids, that are the agents responsible for the reduction of the sinatropic dipterius populations.
References